

Minutes of Meeting to review the progress of associated transmission system of Singoli Bhatwari (3X33MW) HEP and Tapovan Vishnugad (4X130MW) HEP of PTCUL

A list of participants is attached at **Annexure-I**.

Representative of Himachal Pradesh Power Transmission Corporation Limited (HPPTCL) could not attend the meeting due to some other urgent engagement and has requested to defer the meeting to 31/07/2019. Therefore, the progress of Associated Transmission System (ATS) of Sawra Kuddu HEP (3x37 MW) and Bajoli Holi HEP (3x60 MW) will be done on 31/07/2019. Chief Engineer (PSPM) welcomed all the participants and after brief introduction he stated that the meeting has been called to assess the progress of ATS of Singoli Bhatwari (3X33MW) HEP and Tapovan Vishnugad (4X130MW) HEP. The execution of ATS of Both projects are running behind schedule of generation project and has become matter of concern as Singoli Bhatwari (3X33MW) HEP, being constructed by L&T is likely to be commissioned in the March 2020 and Tapovan Vishnugad (4X130MW) HEP, being constructed by NTPC, is likely to be commissioned in Dec'2020 as per assessment of CEA. The gist of discussion held with representative of Power Transmission Corporation of Uttarakhand Limited (PTCUL) is as under:

1. Singoli Bhatwari HEP (3x33 MW):

Baramwari – Srinagar (Khandulkhal) 220 kV D/C line and LILO of this line at Singoli Bhatwari HEP are required for transfer of power from Singoli Bhatwari HEP up to Srinagar pooling station.

PTCUL representative stated that Baramwari – Srinagar 220 kV D/C line was previously awarded to M/s Lanco Infratech Ltd but due to contractual issues with M/s Lanco Infratech Ltd, the contract was terminated on 25.10.2017 and the balance work was awarded to M/s L&T on 28.03.2018. The line is scheduled to be completed in Dec'19. The progress of the same is as under:

Stringing done	: 72 Ckm out of 180 Ckm
Foundations completed	: 210 out of 260
Towers Erected	: 182 out of 260

PTCUL representative stated that works of Phata Byung (2x38 MW) being constructed by M/s Lanco have been severely affected due to flash floods in June, 2013 and all works are stalled since July, 2017 due to Funds constraints with the developer. In view of this Baramwari switching station is not being constructed, therefore currently above line is being constructed from 400kV Srinagar substation to interconnection point of 99MW Singoli Bhatwari HEP. The progress of the same is as under:

Stringing done	: 72 Ckm out of 150 Ckm
Foundations completed	: 210 out of 228
Towers Erected	: 182 out of 228

PTCUL representative stated that from Singoli Bhatwari HEP to LILO point, 220kV D/C line is being constructed by developer.

2. Tapovan Vishnugad HEP (4x130 MW):

Following Transmission lines are associated with Tapovan Vishnugad HEP:

(a) Tapovan Vishnugadh – Kunwari Pass (Pipalkoti) 400 kV D/C line (18Km)

PTCUL representative stated that clearance of Forest proposal has been submitted to Nodal Office, Forest Dept. on dated 10.06.2018. Forest proposal was discussed in 39th Regional Empowered Committee (REC) meeting held on 20.06.19. REC accorded in principle approval for diversion of 61.479 Ha land subject to submission of clear enumeration of total trees proposed to be felled and looped separately. Tree counting is under process. He further stated that in Principle approval of forest proposal is expected by Aug-2019. Thereafter, the construction work will be started. The progress of this line is as under:

Stringing done	: 0 Ckm out of 36 Ckm
Foundations completed	: 0 out of 52
Towers Erected	: 0 out of 52
Scheduled date of commissioning	: Sept'2020

(b) Kuwari Pass (Pipalkoti)- Karanprayag –Srinagar 400 kV D/C line (92Km)

The progress of the line is as under:

Stringing done	: 0 Ckm out of 184 Ckm
Foundations completed	: 0 out of 222
Towers Erected	: 0 out of 222
Scheduled date of commissioning	: Sept'2020

PTCUL representative stated that Construction of Pipalkoti-Srinagar 400KV D/C Line (Apprx 92 Km) was awarded in 3 Packages in Sep'2017. Packages I & II have been awarded to M/s Tata Projects Ltd. and Package III to M/s Ranjit Singh & Co. with completion time schedule of Sep'2020.

Package-I

Proposal for forest clearance for Package-I was submitted to Nodal Office, Forest Dept. on 23.11.2018. Regional forest office raised certain queries on dt.23.05.19 regarding density of land for Compensatory Afforestation, clarification of CWLW from Kedarnath Wildlife Division, FRA etc. Clarifications on queries raised are under preparation.

Execution Plan

Foundations Completion (72Nos)	- Expected by June/July-2020.
Erection completion (72 no. towers)	- Expected by July/August-2020.
Stringing, testing & Commissioning (28.50Km)	- Expected by Sept-2020

In principle approval of forest proposal is expected by Aug-2019. Thereafter construction work will be started.

Package-II

Proposal for forest clearance for Package-II was submitted to Nodal Office, Forest Dept. on 24.10.2018. Forest proposal was put up in 39th Regional Empowered Committee (REC) meeting held on 20.06.19. REC accorded in principle approval for diversion of 87.311 Ha land subject to submission of clear enumeration of total trees proposed to be felled and looped separately. Tree counting is under process.

Execution Plan

Foundations Completion (70 Nos)	- Expected by June/July-2020.
Erection completion (70 no. towers)	- Expected by July/August-2020.
Stringing, testing & Commissioning (27.90 Km)	- Expected by Sept-2020

In principle approval of forest proposal is expected by Jul-2019. Thereafter construction work will be started.

Package-III

Proposal for forest clearance for Package-III was submitted to Nodal Office, Forest Dept. on dated 23.02.2019. Nodal office forest raised certain queries on 27.06.19. The clarification on queries raised are under preparation.

Execution Plan

Foundations Completion (80 no. towers)	- Expected by July/August-2020.
Erection completion (80 no. towers)	- Expected by July/ August-2020.
Stringing, testing & Commissioning (29.38Km)	- Expected by Sept-2020.

In principle approval of forest proposal is expected by Sep-2019. There after construction work will be started

(c) LILO of Vishnu Prayag – Muzaffarnagar 400 kV D/C line at Tapovan Vishnugarh HEP.

PTCUL representative stated that approval is pending for discussion in Standing Committee of NR. The forest proposal and other activities shall be taken up after due approval from competent authority.

(d) Srinagar (Khandulkhal) – Kashipur (Ranpura) 400 kV D/C line (131 Km):

PTCUL representative stated that NIT was floated on 08/03/2019. Technical Bid was opened on 07/05/2019 and technical bid evaluation report has been submitted on 09/07/2019. Financial bid is likely to be opened in August, 19. The transmission project is likely to be awarded in Oct'19 with the commissioning schedule of 22 months from the date of award of contract.

CE (PSPM) stated that Srinagar (Khandulkhal) – Kashipur (Ranpura) 400 kV D/C line with Quad Moose ACSR conductor is an important link for evacuation of power from number of Hydro generation projects around Srinagar (Khandulkhal). PTCUL has to expedite the process of awarding the contract for execution of above line and has to compress the commissioning schedule to match the commissioning schedule of Tapovan Vishnugarh (4x130 MW) HEP so that power from HEP can be evacuated smoothly. At the same time, PTCUL may discuss the matter regarding feasibility of LILO of Vishnu Prayag – Muzaffarnagar 400 kV D/C line at Tapovan Vishnugarh HEP in the Standing Committee of Northern Region for immediate evacuation of power from Tapovan Vishnugarh HEP.

Meeting ended with thanks to chair.

List of participants of the meeting held on 12.07.2019 to review the progress of associated transmission system of Singoli Bhatwari HEP and Tapovan Vishnugad HEP of PTCUL

Central Electricity Authority (CEA)

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|--------------------------|------------------------------------|
| 1. Sh. S.K Ray Mohapatra | Chief Engineer (PSPM).....in chair |
| 2. Sh. Sanjay Jain | Director(PSPM) |
| 3. Sh. R K Tiwari | Dy. Director(PSPM) |
| 4. Sh. Avinash Pathak | Asst. Director(PSPM) |

PTCUL

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| 1. Sh. Ravishankar | SE |
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Minutes of Meeting taken by Chief Engineer (PSPM) on 31/07/2019 at CEA, New Delhi to review the progress of ATS of Hydroelectric Projects (HEPs) in Himachal Pradesh, which are in pipe line including Sawra Kuddu (3x37 MW) HEP and Bajoli Holi (3x60 MW) HEP

A list of participants is attached at **Annexure-I**.

Chief Engineer (PSPM) welcomed all the participants and after brief introduction he stated that the meeting has been called to assess the progress of ATS of Hydroelectric Projects (HEPs), which are being monitored by CEA including Sawra Kuddu (3x37 MW) HEP and Bajoli Holi (3x60 MW) HEP which are in advance stage of completion. The execution of ATS of both projects are running behind schedule of generation project and has become matter of concern as Bajoli Holi HEP (3x60 MW), being constructed by GMR is likely to be commissioned in March 2020 and Sawra Kuddu HEP (3x37MW), being constructed by HPPCL, is likely to be commissioned in Feb'20 as per assessment of CEA. CE (PSPM) raised concern regarding non updation of the progress of transmission projects of HPPTCL on National Power Portal (NPP) and requested HPPTCL representative to update the same on regular basis. HPPTCL representative agreed and assured to do so on regular basis. The gist of discussion held with representative of Himachal Pradesh Power Transmission Corporation Limited (HPPTCL) is as under:

1. Bajoli Holi HEP (3x60 MW):

Following Transmission system is associated with Bajoli Holi HEP:

(a) Bajoli Holi HEP – Lahal Pooling Station 220 kV D/C line (18Km):

HPPTCL representative stated that Bajoli Holi HEP – Lahal 220 kV D/C line was awarded in Dec'17 and its construction is delayed as connecting road from Chamba to Bharmour has been severely damaged in Sept'18. He stated that the forest clearances have been obtained and construction work is under progress. 33/220/400 kV Lahal Pooling Station is likely to be commissioned in Dec'19 and above 220 kV line is likely to be commissioned in June'20.

The progress of the line is as under:

Stringing done	: 0 Ckm out of 36 Ckm
Foundations completed	: 15 out of 59
Towers Erected	: 3 out of 59

(b) Lahal Pooling Station – Chamera 400 kV D/C line (35Km):

HPPTCL representative informed that Lahal – Chamera 400 kV D/C line has been awarded to Apar Engineering & Construction Pvt. Ltd. Thirtysix (36) locations out of 113 have been handed over to the company and 20 foundations have been completed. The construction progress is slow due to hilly terrain and constraints in availability of manpower. Hence the line is likely to be commissioned in Oct'21.

He stated that, the interim arrangement for evacuation of power from Bajoli Holi HEP will be via Lahal substation through Lahal Pooling Station – Budhil 220 kV S/C line (1.8 km) which is likely to be completed in Oct'19. This power would be further transmitted through Budhil HEP–Chamera-III 220 kV S/C line on D/C Towers [dedicated line for Budhil generating station (60 MW) of M/s GREENKO] and Chamera-III–Chamera Pooling station 220 kV D/C line (existing ISTS transmission system).

Stringing of 2nd circuit of existing Budhil HEP–Chamera-III 220 kV S/C line on D/C Towers would be required to evacuate full power of Bajoli Holi HEP and same has already been discussed in 3rd Meeting of Northern Region Standing Committee on Transmission (held on 24.05.2019). As per decision in the Standing Committee, HPPTCL have to submit the proposal for stringing of 2nd ckt of Budhil HEP - Chamera 220 kV S/C line on D/c towers in consultation with M/s GREENKO for proper planning to avoid long shut down of the line for carrying out stringing works. HPPTCL was requested to expedite the process of execution of stringing of 2nd circuit of the line. HPPTCL agreed to put effort for completion of 2nd circuit of Budhil HEP–Chamera-III 220kV S/C line on D/C Towers before Mar’20 to match with commissioning schedule of Bajoli Holi HEP

2. Sawra Kuddu HEP (3x37 MW)

Following Transmission system is associated with Sawra Kuddu HEP:

(a) Snail (Sawra Kuddu) – Hatkoti 220 kV D/C line (14 km):

HPPTCL representative stated that the construction of this line is under progress and is likely to be commissioned in Sept’19 before the commissioning schedule of Sawra Kuddu HEP. The progress of this line is as under:

Stringing done	: 17 Ckm out of 28 Ckm
Foundations completed	: 34 out of 37
Towers Erected	: 32 out of 37

He also stated that 220 kV Hatkoti switching station has been awarded to GE with completion schedule of 18 months and is likely to be commissioned by Feb’21. As an interim arrangement, evacuation of power from Sawra Kuddu HEP can be done by linking the generating station directly with Guma substation, by passing Hatkoti switching station, till the substation at Hatkoti is commissioned.

(b) Hatkoti – Gumma 220 kV D/C line (26 Km):

The construction of this line has been completed.

(c) LILO of both circuit of Jhakri – Abdullapur 400 kV D/C line at Gumma (1.5Km)

HPPTCL representative stated that the construction of this line is under progress and is likely to be commissioned in Oct’19. The progress of this line is as under:

Stringing done	: 0 Ckm out of 3 Ckm
Foundations completed	: 12 out of 15
Towers Erected	: 9 out of 15

He also stated that testing of 400/220 kV Gumma s/s is in progress and likely to be completed by Aug’19.

3. Other HEPs:

CE (PSPM) enquired about status of construction of ATS of other HEPs in Himachal Pradesh, which are in pipe line. The representative of HPPTCL informed about status of ATS as under:

(i) Tangnu Romai-I HEP (2x22 MW)

The project has been stopped due to fund issue. However, the status of ATS is as under:

- (a) Tangnu Romai-I HEP - Sunda (220/132 kV substation) 132 D/C line (24 ckm)
Line is being constructed by HPPTCL under Green Energy Corridor Scheme and work is under progress.
- (b) Sunda-Hatkoti 220 KV D/C line (51 ckm)
Line is being constructed by HPPTCL and work is under progress.
- (c) 220/132, 100MVA Sunda S/S
The work is under progress.

(ii) Tidong –I HEP (2x50 MW):

ATS of this HEP is as under:

- (a) LILO of 220 kV D/C Kasang – Bhabha line at Tidong –I (32 Ckm)
This line is being constructed by M/s NSL and the work is under progress.
- (b) Kasang-Bhabha 220 kV D/C line (39 Ckm)
This line has already been commissioned in Apr' 16.

(iii) Uhl-III HEP (3x33.3 MW):

ATS of this HEP is as under:

- (a) Uhl-III – Hamirpur 132 kV D/C (71 Ckm)
The line has already been commissioned in Mar' 14.

CE (PSPM) stated that Hydro Power is precious in present scenario of large scale integration of generation from Renewable Energy Sources (RES). He further stated the total power from Bajoli Holi HEP cannot be evacuated via Budhil meeting (N-1) criteria and hence Lahal Pooling Station – Chamera 400 kV D/C line is an important link for evacuation of power from Bajoli Holi HEP. He requested HPPTCL to expedite the process for execution of above 400kV line at the earliest and put extra effort to complete the execution of Lahal Pooling Station – Budhil 220 kV D/C line in compressed time schedule matching with the commissioning schedule of Bajoli Holi HEP i.e. March 2020 to avoid bottleneck in evacuation of power from the generating station. HPPTCL have assured to expedite the execution of the transmission system associated with Bajoli Holi HEP and Sawra Kuddu HEP to avoid constraints in evacuation of power.

Meeting ended with thanks to chair.

List of participants

Central Electricity Authority (CEA)

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|--------------------------|------------------------------------|
| 1. Sh. S.K Ray Mohapatra | Chief Engineer (PSPM).....in chair |
| 2. Sh. Sanjay Jain | Director(PSPM) |
| 3. Sh. Ajitesh Kumar | Dy. Director(PSPM) |
| 4. Sh. R K Tiwari | Dy. Director(PSPM) |
| 5. Sh. Dhanesh Kumar | Asst. Director(PSPM) |
| 6. Sh. Avinash Pathak | Asst. Director(PSPM) |

HPPTCL

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|--------------------|----|
| 1. Sh. Jatin Rana | GM |
| 2. Sh. Umesh Gupta | SE |