



भारत सरकार / Government of India
विद्युत मंत्रालय / Ministry of Power
केन्द्रीय विद्युत प्राधिकरण / Central Electricity Authority
विद्युत प्रणाली योजना एवं परियोजना मूल्यांकन प्रभाग - I
Power System Planning & Project Appraisal Division-I
सेवा भवन, आर.के.पुरम, नई दिल्ली - 110066
Sewa Bhawan, R. K. Puram, New Delhi-110066



[ISO: 9001:2008]

No. 1/9/38/2016/PSP&PA-I

Date: 19-10-2016

-As per list enclosed-

Sub: 38th meeting of the Standing Committee on Power System Planning of Northern Region
-Corrigendum-II to Minutes of the meeting

विषय: उत्तरी क्षेत्र के विद्युत प्रणाली की योजना पर स्थायी समिति की 38 वीं बैठक- बैठक कार्यवृत्त का शुद्धिपत्र -II

Sir/Madam,

The Minutes of 38th meeting of the Standing Committee on Power System Planning of Northern Region were issued vide our letter No. 1/9/38/2016/PSP&PA-I/721-739 dated 8th June, 2016.

Subsequently observations/comments have been received from PGCIL and RRVNL. Corrigendum to the minutes is enclosed at **Annexure-I**.

It is also available at CEA's website (www.cea.nic.in).

Encl: As above

Yours faithfully,


(अवधेश कुमार यादव /Awdhesh Kumar Yadav)

निदेशक/Director

1. Member, Secretary, NRPC, 18-A Shajeed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi - 110016 (Fax-011-26865206)	2. Director (W &P) UPPTCL, Shakti Bhawan Extn,3rd floor, 14, Ashok Marg, Lucknow - 226 001 (Fax:0522-2287822)	3. Director (Projects) PTCUL, Urja Bhawan Campus, Kanawali Road Dehradun-248001. Uttrakhand Fax-0135-276431
4. Director (Technical), Punjab State Transmission Corperation Ltd. (PSTCL) Head Office The Mall Patiala -147001 Fax-0175-2304017	5. Member (Power) BBMB, Sectot-19 B Madhya Marg, Chandigarh-1 60019 (Fax-01 72-2549857	6. Director (Operation) Delhi Transco Ltd. Shakti Sadan, Kotla Marg, New Delhi-110002 (Fax-01123234640)
7. Director (Technical) RRVPL, Vidut Bhawan, Jaipur-302005. Fax-:0141-2740794	8. Director (Technical) HVPNL Shakti Bhawan, Sector-6 Panchkula-134109 Fax-0172-256060640	9. Director (Technical) HPSEB Ltd. Vidut Bhawan, Shimla -171004 Fax-0177-2813554
10. Managing Director, HPPTCL, Barowalias, Khalini Shimla-171002 Fax-0177-2623415	11. Chief Engineer (Operation) Ministry of Power, UT Secretariat, Sector-9 D Chandigarh -161009 Fax-0172-2637880	12. Development Commissioner (Power), Power Department, Grid Substation Complex, Janipur, Jammu, Fax: 191-2534284
13. Chief Engineer (Transmission) NPCIL,9-S-30, Vikram Sarabhai Bhawan, Anushakti Nagar, Mumbai-400094 Fax-022-25993570	14. Director (T&RE) NHPC Office Complex, Sector-33,NHPC, Faridabad-121003 (Fax-0129-2256055)	15 Director (Projects) NTPC, NTPC Bhawan, Core 7, Scope Complex-6, Institutional Area, Lodhi Road. New Delhi (Fax-011-24361018)
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**Corrigendum-II to Minutes of 38th Meeting of
Standing Committee on Power System Planning in Northern Region (SCPSPNR)
held on 30th May, 2016 at NRPC, Katwaria Sarai, New Delhi**

The Minutes of 38th meeting of the Standing Committee on Power System Planning of Northern Region were issued vide 1/9/38/2016/PSP&PA-I/721-739 dated 8th June, 2016. PGCIL vide letter No C/CTU/N/PLG dated 23-6-2016 and RRVPNL vide their letter no RVPN/SE(P&P/PSS/D.596 dated 16.6.2016 had given the observations on the minutes. Following corrigendum is issued based on the observations/Comments received from PGCIL and RRVPNL:

Corrigendum-II# 1

Observations on the Minutes of 38th Standing Committee Meeting on Power System Planning held on 30/05/2016 made by RRVPNL:

10.0 Operational Feedback on Transmission Constraint: April 2016

In the minutes of 38th SCPSPNR following has been mentioned Under Item No. 10.1 I (8) regarding **Under lying 220 kV network of Bhiwadi:**

220 kV Bhiwadi (Pg) - Bhiwadi (Raj) D/C line to be commissioned by July, 2016

The above sentence of the minutes under Item No. 10.1 I (8) is replaced as:

Second circuit of Bhiwadi(PG) – Bhiwadi(RVPN)D/C line to be commissioned by July 2016

Corrigendum-II# 2

Observations on the Minutes of 38th Standing Committee Meeting on Power System Planning held on 30/05/2016 made by Powergrid

11.0 OPGW on main transmission line being LILOed

Under para 11.2 (a) OPGW following has been mentioned:

“Thus, it is proposed that the provision of OPGW in the main line may be taken up by the respective owner of the transmission system to provide communication connectivity to these new substations.”

Powergrid has made the observation that in the above, provision of Approach Cable, FODP and Communication Equipment at both ends needs to be added. Accordingly, the above sentence of the minutes under para 11.2 (a) OPGW is replaced as:

Thus, it is proposed that the provision of OPGW in the main line along with Approach Cable , FODP and Communication Equipment at both ends may be taken up by the owner of the transmission system to provide communication connectivity to these new substations.

Similarly, under para 11.2 (b) **Communication equipment** following has been mentioned: “In these cases, end to end communication establishment will not be possible unless the communication equipment including for other end is commissioned.”

In the above also, Powergrid has made the observation that provision of approach cable and FODP needs to be added. Accordingly, the above sentence under para 11.2 (b) **Communication equipment** is replaced as:

In these cases, end to end communication establishment will not be possible unless the communication equipment including approach cable and FODP for other end is provided.

Also the following is included in para 11.2:

‘POWERGRID further informed that for some of the lines being implemented under TBCB, it has been observed that planning for OPGW is considered between Gantry of one station to Gantry of other station under RfP document but FODP, approach cable and Communication Equipment at end stations is not covered. In these cases, end-to-end communication establishment will not be possible. Hence provision of FODP, approach cable is required to be made accordingly by the respective owners.

Members deliberated on above points and agreed for the same.’

*In addition to above POWERGRID provided the status update of URTDSM Project and the same is enclosed at **Annexure-I**.*

15.0 Transmission system for Ultra Mega Solar Park in Fatehgarh, distt. Jaisalmer, Rajasthan

Powergrid has made the observation that the 400kV line bays at Bhadla (PG) for termination of 765kV Fatehgarh PS- Bhadla (PG) D/c line (initially to be op at 400kV) has been missed out from the transmission scheme’s scope mentioned in para 15.5 of the 38th SCM minutes. Accordingly, the scope of the scheme ‘**Transmission system for Ultra Mega Solar Park in Fatehgarh, distt. Jaisalmer, Rajasthan**’ to be taken up for implementation under ISTS through TBCB route **is as follows:**

- i). 765 kV Fatehgarh Pooling station - Bhadla (PG) D/C line (initially to be operated at 400kV)
- ii). Establishment of 400kV Pooling Station at Fatehgarh (with a provision to upgrade at 765kV level)
- iii). 2 nos of 400kV line bays at Fatehgarh Pooling station
- iv). 1x125 MVAR Bus reactor at 400kV Fatehgarh Pooling station

Note: (i) Park Developer to construct 400 kV line from M/s AREPL solar park to Fatehgarh Pooling station.

(ii) Powergrid to provide two number of line bays at Bhadla(PG)

18.0 220kV bays at 400/220 kV Baghpat (PG) and Saharanpur (PG) substations:

PGCIL has made the observation that the time frame of the 220 kV works informed by UPPTCL, has been missed out in the Minutes. Accordingly, Para 18.3 and Para 18.5 of the minutes are modified as follows:

18.3 In addition to above, UPPTCL plan to connect further as follows:

- (i) Stringing of 220kV IInd ckt of Baghpat (PG) to Baghpat (UP) 220kV line – July 2016*
- (ii) Stringing of 220kV IInd ckt from Baghpat (PG) to Baraut (UP) 220kV line – July 2016*
- (iii) Baghpat (PG) – Modipuram (II) 220kV D/c line(to be commissioned alongwith Modipuram II which is expected by Mar.'17)*
- (iv) LILO of Moradnagar II (UP) – Shamli 220kV S/c line at Baghpat (PG) – July 2016*

Thus, remaining 8 nos 220 kV would be utilised.

18.5 CE, UPPTCL further informed that for utilization of bays at Saharanpur (Pg), the following downstream elements are planned:

- (i) LILO of Saharanpur -Nanauta 220kV S/c line at Saharanpur PG (400kV) S/s: commissioned*
- (ii) LILO of Khara - Shamli 220kV S/c line at Saharanpur (PG) (by July 2016)*
- (iii) Saharanpur(PG) - Saherswa (UPPTCL 220kV) 220kV D/c line (by July'17)*
- (iv) LILO of one ckt. of Khodri-Saharanpur 220kV D/c line at Saherswa (220/132/33 kV 2x160, MVA Saherswa S/s is under construction)*
- (v) Thus, the remaining 4 nos 220 kV would be utilised.*

21.0 Mismatch of network at the time of deceleration of Date of Commercial Operation (DOCO)

The expected schedule of 7x105 MVA Kala Amb S/S mentioned at Sl. No.8 of Para 21.4 has been in inadvertently recorded as Oct', 2018, which is corrected as July 2017.

31.0 Augmentation of 400/220 kV Agra (PG) substation

Following is included as **para 31.3** of the minutes:

*31.3 CTU informed that that second 315MVA ICT at Agra (PG) has been agreed under NRSS XXXIV and is under implementation. It is expected to be commissioned by July 2017. Keeping this in view, it was there is no requirement of 500 MVA ICT. **Members agreed to the same.***

Status of URTDSM Project for 38th Standing Committee meeting of Power System Planning of Northern Region:

<ul style="list-style-type: none"> • Engineering Progress: <ul style="list-style-type: none"> ▪ Engineering completed. • Present Status of Supply and Installation of PMUs, Control Center equipment: 									
S. No	Region	PMUs (No of Substations)				Development System PDS (No of Control Centers)			Remarks
		Total	Supplied	Commissioned	Integrated	Total	Supplied	Installation	
1	NR	113	72	54	10	13	13	10	
<ul style="list-style-type: none"> • Balance supply of PMUs in NR likely to be completed by Aug'16 • Plan for Commissioning of Substations – average of 6 substations per month in NR • Number of trained personnel in NR: 46 • Control center Development system (PDS) commissioned and integration testing of PMUs in progress • Demo testing of Control Center software applications is in progress by ALSTOM R&D and Project teams. • Control Center Integrated FAT likely by: Oct-Nov 2016 • Development of Analytical Tools Using PMU Based Phasor Measurements by POWERGRID in association with IIT-B 									
Sr. No.	Analytics				Status				
1.	Line Parameter Estimation				Prototype Completed				
2.	On line vulnerability analysis of distance relays				Prototype Completed				
3.	Linear State Estimator				Under development				
4.	Supervised Zone-3 distance protection scheme to prevent unwanted tripping				Prototype completed, Pilot Scheme under implementation				
5.	CT/CVT Calibration				Under development				
6.	Control for improving system security (Based on angular, voltage & frequency stability)				Under development				