

भारतसरकार
उत्तरक्षेत्रीयविद्युतसमिति
18-ए,श.जीतसिंहमार्ग, कटवारियासराय,
नईदिल्ली- 110016
Government of India
Northern Regional Power Committee
18-A, S. Jeet Singh Marg, Katwaria Sarai,
New Delhi-110016

NRPC/OPR/105/09/2014/

दिनांक:17.12.2014

To,

1. Director (Operation), POWERGRID, Gurgaon-122 001, (Fax-0124-2571802)
2. Member (Power), BBMB, Chandigarh-160 019, (Fax-0172-2549548)
3. Director (Operation), DTL, New Delhi-110 002, (Fax-011-23232721)
4. Director (Tech.), PSTCL, Patiala, (Fax-0175-2304017)
5. Director (Operation), UPPTCL, Lucknow-226 001, (Fax-0522-2286476)
6. Director (Technical), HVPNL, Panchkula-134 109, (Fax-0172-2585266)
7. Director (Technical), RVPNL, Janpath, Jaipur-302 005, (Fax-0141-2740920)
8. GM (O&M), POWERGRID, NR-I (Fax 26601058)
9. GM (O&M), POWERGRID, NR-II (Fax – 0191- 2477413)
10. Director (Electrical Engineering-PS), Railway Board, Rail Bhavan, New Delhi-110001, (Fax -011- 23387045)
11. CED, North Central Railway, Allahabad (Fax-0532-2223211, 2230204)
12. CED, Northern Railways, New Delhi, (Fax-No 011-23387045)
13. Managing Director, Adani Power Ltd. (Fax - 0124-2555113, 2555342)

Subject:SummaryRecord of the meeting taken byMember Secretary, NRPC on Replacement of Porcelain Insulators with Polymer/ Anti-fog Insulators and Cleaning of Porcelain Insulators in Northern Region

Sir,

A meeting on the above subject was held with the utilities of Northern Region on10thDecember 2014.SummaryRecord of the meeting is enclosed. Copy of the same is also available on website of NRPC (www.nrpc.gov.in).

Yours faithfully,

Encl: As above

-sd/-
(Ajay Talegaonkar)
SE (Operations)

Copy to GM, NRLDC

Summary Record of Discussions in the meeting on “Replacement of Porcelain Insulators with Polymer/ Anti-fog Insulators and Cleaning of Porcelain Insulators in Northern Region” held on 10.12.2014 at NRPC, New Delhi

List of Participants is enclosed at **Annex – I**.

Member Secretary, NRPC welcomed the participants and mentioned that fog has already set in at some places in the Northern Region and the forecast is that fog will cover NCR in the coming days. He requested the constituents to expedite the work of replacement of conventional insulators with polymer insulators and complete the cleaning of porcelain insulators by 15th December so that fog related tripping due to flashovers on insulators can be minimized during this winter. He also expressed concern that no representative of UPPTCL, RVPNL and Adani Power Ltd was present in the meeting.

2. SE(O), NRPC stated that fog related tripping have been reported in Eastern UP on 05.12.2014. For effective monitoring of fog related tripping, NRPC Secretariat has devised a format and same is enclosed as **Annex-II**. He requested all the utilities to submit the details of suspected tripping/auto-reclosure due to fog within 24 hours to NRLDC and NRPC in the prescribed format.

3. Representative of PSTCL submitted list of 45 transmission lines (enclosed as **Annex-III**) identified for replacement of porcelain insulators with polymer insulators under Stage-IV. He informed that tender opening was scheduled for January 2015 and the work of replacement was likely to be completed by March 2015. SE (O), NRPC stated that the time frame of March 2015 indicated by PSTCL appears too optimistic as inspection and delivery of insulators may take few months. He requested PSTCL to prioritize the lines for replacement with polymer insulator based on criticality. Member Secretary, NRPC suggested that pollution mapping done by CPRI can be used as a guide for this purpose. He requested PSTCL to complete the work at least before the next winter.

4. Representative of PSTCL further informed that 75% of cleaning planned on critical lines had been completed. SE (O), NRPC requested PSTCL to speed up the work and complete the cleaning of porcelain insulators by 15th December 2014. He also advised that cleaning of insulators on 400 kV lines should be taken up first.

5. Representative of POWERGRID informed that cleaning of insulators has been completed on all the identified lines. He also informed that overall progress in replacement of porcelain insulators in all the four stages is 89.6%. He stated that getting requisite shut down was the major constraint in completing the work. Representative of NRLDC stated that they would ensure maximum feasible outages for replacement of insulators.

7. Representative of HVPNL informed that out of 55 lines on which cleaning were planned, the work had been completed on 28 lines. Work of cleaning on one 400 kV line had been completed. SE (O), NRPC expressed concern at sluggish progress on cleaning of insulators in Haryana and requested HVPNL to take up the work of cleaning on war footing. Representative of HVPNL stated that 06 nos. of lines had been identified for replacement of porcelain insulators under stage-IV. The list is enclosed as **Annex-IV**.

8. Representative of BBMB stated that 93% cleaning has been completed on identified lines and balance cleaning work was likely to be completed by 15.12.2014.

9. Representative of DTL stated that out of 50 lines identified for cleaning, work had been completed on 47 lines. Cleaning will be completed in the remaining lines by 15.12.2014. Regarding the replacement of insulators at 220 kV lines, DTL informed that technical evaluation of the bids received was under progress. SE (O), NRPC expressed concern at the slow progress of procurement of insulator. MS, NRPC requested DTL to expedite the work as all lines in NCR are critical.

10. AGM, NRLDC requested utilities to submit information regarding % of a line that has been converted from conventional insulators to polymer insulators or % of the conventional insulators cleaned. He informed that list of important lines for which this information was required to NRLDC is available with the minutes of the meeting convened by NRLDC on 26.11.2014 for winter preparedness.

11. SE (O), NRPC requested all the utilities to expedite the work of replacement & cleaning of insulators and submit status on fortnightly basis as on 1st and 15th day of every month. He requested all the constituents to submit data on replacement of insulators in the format devised by NRPC, as some constituents were using different formats for submitting information.

Overall progress of replacement insulators is enclosed as **Annex-V**.

Annex-I

| Meeting on Replacement and Cleaning of Insulators on 10.12.2014 at NRPC, New Delhi | | | | | |
|-------------------------------------------------------------------------------------------|-------------------|--------------------|---------------------|--------------------------|----------------------------------------------------------------------------|
| List of Participants | | | | | |
| Sl. No. | Name | Designation | Organisation | Phone/ Mobile | e-mail id |
| 1 | SurendraPratap | Engineer | NRLDC | 9560539555 | spyadav.954@gmail.com |
| 2 | Brajesh Kumar | Sr.Xen | BBMB | 9810607673 | xenomdlh@gmail.com |
| 3 | RajinderGrover | SE | PSTCL | 96461-18204 | rkg.pec@gmail.com |
| 4 | Aakash Mittal | ADDL.SE | PSTCL | 96461-18221 | XENPM_GOBINDGARH@YAHOO.COM |
| 5 | Ravi Sher Singh | XEN/SLDC | HVPNL | 9316369243 | sesldcop@hvpn.gov.in |
| 6 | VivekSundariyal | Sr.Engr(AM) | POWERGRID | 9650293196 | Viveks@powergridindia.com |
| 7 | Rajeev Kumar | Asst.GM(AM) | POWERGRID | 9560890362 | rajeev@powergridindia.com |
| 8 | Y.S. Sai Prasad | Asst. GM/OS | POWERGRID | 9419211897 | yssai4664@rediffmail.com |
| 9 | PrabhatRastogi | Dy.GM(O&M) | POWERGRID NR-I | 9650769393 | rastogi_prabhat@yahoo.in |
| 10 | A.K.Arora | GM | -do- | 9873549214 | anilarorapgcil@gmail.com |
| 11 | D.K.Jain | Addl.GM | NRLDC | 9910344127 | dkj2009@yahoo.co.in |
| 12 | Loveleen Singh | DGM(T) | DTC | 9999533659 | dgmosdtl@gmail.com |
| 13 | P.S.Mhaske | MS | NRPC | | |
| 14 | Ajay Talegaonkar | SE(O) | | | |
| 15 | Gopinadhan Pillai | EE | | | |
| 16 | Naresh Kumar | EE | | | |
| 17 | Ratnesh Kumar | AEE | | | |
| 18 | SukhvinderKumar | Addl.SE | | | |

Sub: Report on tripping of transmission elements in NR during foggy weather conditions**Date of Report:** -----

| Sr.No | Element Name | Voltage Level | Owner | Outage/ auto-reclosure | Revival | | Relays/ Indications | Location of fault and Type of insulator Porcelain/ Glass/ polymer/ antifog | Whether covered under insulators replacement or manual cleaning programme (please give details) | Action being taken to avoid such type of trippings in future | Whether this element had tripped in the last winter season? (Y/N) |
|-------|--------------|---------------|-------|---------------------------|---------|------|------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| | | | | Date | Time | Date | Time | | | | |
| | | | | | | | | | | | |

(Signature with Name &
Designation)

Contact No:

Email:

8017
25/11/14

ANNEX-III



PUNJAB STATE TRANSMISSION CORPORATION LIMITED

(Office: Chief Engineer/P&M PSTCL, Ludhiana)

FAX

To

Chief Engineer / SLDC
PSTCL, Patiala

Memo no: _____/DRPM-23

Dated: _____.

Sub:- Replacement of Porcelain insulator strings with Polymer insulator strings in respect of P&M Organization PSTCL Ludhiana.

The subject cited information is as under please:-

| Sr No | Name of Circuit | No. of Porcelain insulators strings to be replaced with polymer insulators before ensuring winter (i.e. before 15.2.2014) | Length (km) | Polymer insulator strings Required (Nos) | No. of days of outage required | Likely date of completion of work |
|-------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|--------------------------------|-----------------------------------|
| 1 | 220KV Moga-Firozepur | 6 | 55.500 | 6 | 2 | 31/03/2015 |
| 2 | 220KV Mukatsar-Ghubaya | 6 | 40.304 | 6 | 2 | 31/03/2015 |
| 3 | 132KV Moga-Panjgrain | 12 | 30.000 | 12 | 4 | 31/03/2015 |
| 4 | 132KV Mukatsar-Malout | 18 | 32.500 | 18 | 6 | 31/03/2015 |
| 5 | 132KV Moga-Sosan | 9 | 3.064 | 9 | 3 | 31/03/2015 |
| 6 | 220KV Bathinda-Lehra Mohabat | 6 | 25.000 | 6 | 2 | 31/03/2015 |
| 7 | 220KV Bathinda-Katorewala | 3 | 49.000 | 3 | 1 | 31/03/2015 |
| 8 | 220KV Lehra - Bajakhana | 3 | 57.290 | 3 | 1 | 31/03/2015 |
| 9 | 132KV GNDTP-IGC Bathinda | 6 | 04.000 | 6 | 2 | 31/03/2015 |
| 10 | 132KV GNDTP-MES Bathinda | 6 | 06.000 | 6 | 2 | 31/03/2015 |
| 11 | 132KV GNDTP-Balluana | 3 | 0.300 | 3 | 1 | 31/03/2015 |
| 12 | 220KV Mahilpur-Jamsher & 220KV Rehana Jattan-Jamsher | 24 | 47.375 | 24 | 8 | 31/03/2015 |

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| | | | | | | |
|----|---------------------------------------------------|----|--------|----|----|------------|
| 13 | 220KV Line RTP-Gobindgarh-1 Ckt.1 | 27 | 61.000 | 27 | 9 | 31/03/2015 |
| 14 | 220KV RTP-Gobindgarh-1 ckt-2 | 27 | 61.000 | 27 | 9 | 31/03/2015 |
| 15 | 220KV RTP-Gobindgarh ckt-3 | 27 | 63.194 | 27 | 9 | 31/03/2015 |
| 16 | 220KV Bassi Pathana-Gobindgarh-1 | 27 | 77.000 | 27 | 9 | 31/03/2015 |
| 17 | 220KV Ganguwal-Gobindgarh.2 Ckt-I | 12 | 76.000 | 12 | 4 | 31/03/2015 |
| 18 | 220KV Ganguwal-Gobindgarh-2 Ckt-2 | 12 | 76.000 | 12 | 4 | 31/03/2015 |
| 19 | 220KV Phagan Majra - Nabha Ckt-I | 15 | 65.768 | 15 | 5 | 31/03/2015 |
| 20 | 220KV Phagan Majra - Nabha Ckt-2 | 15 | 65.768 | 15 | 5 | 31/03/2015 |
| 21 | 220KV Gobindgarh-Patiala ckt-I | 15 | 67.200 | 15 | 5 | 31/03/2015 |
| 22 | 220KV Gobindgarh-Patiala ckt-2 | 15 | 67.200 | 15 | 5 | 31/03/2015 |
| 23 | 220KV Link circuit between Gobindgarh.1 & 2 | 24 | 07.000 | 24 | 8 | 31/03/2015 |
| 24 | 220KV Link circuit between Gobindgarh.1 & 3 | 21 | 04.200 | 21 | 7 | 31/03/2015 |
| 25 | 220KV Line circuit between Gobindgarh.2 & 3 | 9 | 04.000 | 9 | 3 | 31/03/2015 |
| 26 | 220KV Link circuit between Gobindgarh.1 & Amloh | 15 | 10.000 | 15 | 5 | 31/03/2015 |
| 27 | 220KV Link circuit between Gobindgarh-1 & Ikolaha | 15 | 18.000 | 15 | 5 | 31/03/2015 |
| 28 | 220KV Phagan Majra-Patiala ckt. 1 | 12 | 20.660 | 12 | 4 | 31/03/2015 |
| 29 | 220KV Phagan Majra-Patiala ckt.2 | 12 | 20.660 | 12 | 4 | 31/03/2015 |
| 30 | 220KV Dhandari Kalan –Lalton Kalan | 72 | 20.220 | 72 | 24 | 31/03/2015 |
| 31 | 220KV Dhandari-Power Grid | 72 | 22.357 | 72 | 24 | 31/03/2015 |
| 32 | 220KV Jamalpur-Dhandari Ckt-I&II | 30 | 3.53 | 30 | 10 | 31/03/2015 |
| 33 | 220KV RTP Ghulal | 6 | 63.092 | 6 | 2 | 31/03/2015 |
| 34 | 220KV Lalton Kalan Power Grid Ckt-I | 15 | 19.320 | 15 | 5 | 31/03/2015 |
| 35 | 220KV RTP Gaunsgarh | 6 | 77.071 | 6 | 2 | 31/03/2015 |


| | | | | | | |
|----|--------------------------------------|-----|--------|-----|----|------------|
| 36 | 132KV RTP-GACL + Gantry | 117 | 15.730 | 117 | 39 | 31/03/2015 |
| 37 | 132KV RTP-Asron + Gantry | 54 | 06.003 | 54 | 18 | 31/03/2015 |
| 38 | 132KV RTP-Ropar + Gantry | 54 | 21.707 | 54 | 18 | 31/03/2015 |
| 39 | 220KV RTP-Mohali + Gantry | 48 | 48.900 | 48 | 16 | 31/03/2015 |
| 40 | 220KV RTP-Kharar + Gantry | 48 | 11.230 | 48 | 16 | 31/03/2015 |
| 41 | 220KV Mohali-Rajpura + Gantry | 36 | 32.860 | 36 | 12 | 31/03/2015 |
| 42 | 220KV Banur-Rajpura + Gantry | 36 | 32.860 | 36 | 12 | 31/03/2015 |
| 43 | 220KV Derabassi-Mohali-2 + Gantry | 51 | 73.421 | 51 | 17 | 31/03/2015 |
| 44 | 220KV Derabassi-Lalru + Gantry | 45 | 21.185 | 45 | 15 | 31/03/2015 |
| 45 | 220KV Derabassi-Ghaggar RLY + Gantry | 32 | 04.921 | 33 | 11 | 31/03/2015 |

Note: Work of replacement of above porcelain insulator strings with polymer insulator strings will be completed in due date subject to availability of material.

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17-11-14

C.C.

SE/ Operation (NRPC)
18-A S.Jeet Singh Marg, Katwaria Sarai,
New Delhi, Fax No. 011-26865206


Addl SE/ Work-cum-Admn
O/O Chief Engineer/ P&M,
PSTCL, Ludhiana.

Format for Insulator replacement

Annexure-I

Status of replacement of porcelain insulators with POLYMER/Antifog insulator

(Status as on : 30.11.2014)

Name of Organization: HVPNL

| Sr. No. | Name of line, Voltage, S/C of D/C | Voltage Level | Line Detail | | | Insulator planned to be replaced by Antifog/Polymer | | | Progress (Work Completed) | | | Remarks (if only partial location replacement planned/done then may please indicate the Location numbers | Target date by which work would be completed |
|---------|-------------------------------------------|---------------|---------------|------------------------------|-------------------------------|-----------------------------------------------------|------------------------|-------------------------|---------------------------|------------------------|-------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | | | Length (Kms.) | Total Tower Locations (Nos.) | Total Insulator Strings (Nos) | Length (Kms.) | Tower Locations (Nos.) | Insulator Strings (Nos) | Length (Kms.) | Tower Locations (Nos.) | Insulator Strings (Nos) | | |
| | Panchkula | | | | | | | | | | | | |
| 1 | DCRTPP-Salempr Ckt-I | 220 kV | 39.5 | 91 | 273 | 39.5 | 91 | 273 | 0 | 0 | 0 | NIL | P.O. placed. work will be carried out after availability of material during Feb-2015. |
| 2 | DCRTPP-Salempr Ckt-II | 220 kV | 39.5 | 91 | 273 | 39.5 | 91 | 273 | 0 | 0 | 0 | NIL | |
| 3 | 2 phase Abd- Railway traction line ckt-I | 220 kV | 6.915 | 9 | 19 | 6.915 | 9 | 19 | 0 | 0 | 0 | NIL | |
| 4 | 2 phase Abd- Railway traction line ckt-II | 220 kV | 6.915 | 9 | 19 | 6.915 | 9 | 19 | 0 | 0 | 0 | NIL | |
| 5 | Jorian- Abd. Ckt-I | 220 kV | 10.9 | 28 | 84 | 10.9 | 28 | 84 | 0 | 0 | 0 | NIL | |
| 6 | Jorian- Abd. Ckt-I | 220 kV | 10.9 | 28 | 84 | 10.9 | 28 | 84 | 0 | 0 | 0 | NIL | |
| Hisar | | | | | | | | | | | | | |
| 1 | 220KV D/C Hisar PG -- Fatehabad | 220 kV | 67.5 km | 205 | 825 x 2 =1650 | 67.5 km | 205 | 825 x 2 =1650 | NIL | | | | P.O. placed. work will be carried out after availability of material during Feb-2015. |

| Summary of Replacement of Porcelain Insulators by Polymer / Antifog Insulators | | | | | | | | | | |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------|-------------------------------------------------|--------------------------------------------------|-------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------|
| | Stage-I (Lines identified after grid incidence on 8th March 2008) | | Stage-II (Lines identified after grid incidence on 2nd January 2010) | | Stage-III(Identified critical lines on their own) | | Stage-IV(Identified critical lines on their own) | | | Status as on |
| Utility | Lines Identified (Nos) | Progress of Replacement of Insulator String (%) | Lines Identified (Nos) | Progress of Replacement of Insulator String (%) | Lines Identified (Nos) | Progress of Replacement of Insulator String (%) | Lines Identified (Nos) | Progress of Replacement of Insulator String (%) | Overall Progress | |
| HVPNL | 27 | 89 | 23 | 58 | Nil | - | 6 | -- | 74 | 10.12.2014 |
| POWERGRID | 49 | 99.7 | 39 | 78 | 12 | 100 | 10 | 80 | 84 | 10.12.2014 |
| BBMB | 30 | 90.47 | 5 | 94.21 | Nil | | | | 80.45 | 30.11.2014 |
| DTL | 6 | 100 | 18 | - | Nil | - | | | 26 | 220 kV lines identified. Tender for procurement opened. Delivery expected by March '15.(status as on 21.10.14.) |
| UPPTCL | 17 | 100 | 35 | 95 | 59 | 91 | | | 94 | 01.10.2014 |
| PSTCL | 20 | 100 | 35 | 100 | 22 | 100 | 45 | To be completed by March '15 | 100 | 10.12.2014 |
| POWERLINK | 1 | 100 | - | - | Nil | - | | | 100 | Work Completed |
| RVPNL | 2 | 100 | - | - | Nil | - | | | 100 | Work Completed |
| North Central Railways | - | - | - | - | - | - | | | 100 | 1126 Insulator strings replaced - 100 % |
| Northern Railways | 2 | 100 | - | - | Nil | - | | | 100 | 28.10.2014 |
| Adani Power Ltd. | - | - | - | - | 2 | 88 | | | 88 | 23.09.2014 |