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भारत सरकार

उत्तर क्षेत्रीय विद्युत समिति

18-ए, शहीद जीत सिंह मार्ग, कटवारिया सराय नई दिल्ली - 110016

Government of India

**Northern Regional Power Committee**

18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016

Fax Message

No. NRPC/SE(O)/insulator/2009-10

Date: 27-10-2009

To:

1. CMD, POWERGRID, Gurgaon
2. CMD, DTL, New Delhi Fax No 011 23234640
3. MD, HVPNL, Panchkula Fax No 0172 2560640
4. CMD, RRPVNL, Jaipur Fax No 0141- 2740168
5. MD, UPPTCL, Lucknow Fax No 0522- 2287880/ED UPPTCL, Lucknow
6. Chairman, BBMB, Chandigarh, Fax No 0172- 2549186, 2652820
7. Executive Director & CEO, Powerlinks Transmission Limited, New Delhi, Fax-011-66306377/66306375

**Sub:- Special meeting to review the progress of replacement of porcelain insulators by polymer insulators in high pollution areas of Northern Region and preparedness the system for ensuing winter months.**

**Sir,**

A special meeting was held on 09/10/2009 with the constituents to review the progress of replacement of porcelain insulators by polymer/antifog insulators in high pollution areas of Northern Region.

Minutes of the meeting are enclosed herewith.

Yours faithfully,

अशोक कुमार राजपूत (A K Rajput)  
SE (O)

**Copy for information to:**

- SA to Chairperson, CEA, New Delhi
- SA to Member (GO&D), CEA, New Delhi
- Director (O&M), MoP, New Delhi
- General Manager, NRLDC, New Delhi

**Minutes of the special meeting taken by Member Secretary, NRPC on 9<sup>th</sup> Oct, 2009 regarding replacement of porcelain insulators by polymer/antifog insulators of transmission lines**

**List of participants is enclosed at Annexure-I.**

MS, NRPC welcomed the participants in the special meeting to discuss the progress of replacement of porcelain insulators by polymer/antifog insulators of transmission lines as per the recommendations made by a Committee on Grid Disturbance in NR on 7<sup>th</sup> & 9<sup>th</sup> March, 2008. He mentioned that as per the decision taken in the meeting held by Secretary (Power) MoP on 9<sup>th</sup> March, 2008, Chairman, CEA on 30<sup>th</sup> April, 2008 and also in the 10<sup>th</sup> NRPC meeting held on 30<sup>th</sup> Sep. 2008, the status of replacement of porcelain insulators with polymer/antifog type insulators on critical transmission lines as per the plan submitted by States/POWERGRID, is being monitored by the NRPC. He further informed that as per decision taken in the 12<sup>th</sup> NRPC meeting held on 22<sup>nd</sup> April, 2009, the replacement of porcelain insulators in high pollution areas was to be completed by October, 2009. But from the analysis of the data submitted by CTU/STUs, there would be likely some slippage of completion of replacement of porcelain insulators. He requested the constituents to expedite and complete replacement of porcelain insulators at all critical locations before the onset of winter. He also requested the constituents to update the current status and the time frame for completing the balance works.

**POWERGRID**

Representative of POWERGRID (NR-I) stated that out of 42282 strings (including HVDC Balia-Bhiwadi), 16234 strings have already been replaced. Majority of the work would be completed by Dec, 2009.

Representative of POWERGRID (NR-II) stated that out of 13157 polymer insulator strings planned, they have replaced 5365. The work of Phase -I would be completed by Nov, 2009 and work of Phase-II & III would be completed by March 2010. Rigorous clearing of porcelain insulators would be carried out till the replacement work is completed.

Work of replacement of insulators on seven lines in NR-I (out of 17 lines planned in phase-I) has been completed. The work on remaining lines, except 400 kV Mainpuri-Ballabhgrah is scheduled to be completed by November, 2009.

They also intimated that the newly constructed line 400 kV Moga-Bhiwadi D/C would also be provided with polymer insulators.

## **POWERLINKS**

POWERLINKS stated that they had completed the work of their 400 kV, Bareilly-Mandola D/C line in April, 2009.

## **DTL**

DTL stated that they are procuring polymer insulators for 400 kV lines through POWERGRID. If polymer insulators are immediately supplied by POWERGRID, they would replace the porcelain insulators on the critical locations in their system before the onset of winter. The tender for replacement work has been opened and would be awarded soon.

MS, NRPC requested POWERGRID to explore the possibility of providing polymer insulators from their stock on exchange basis to DTL for replacement of porcelain insulators at the critical locations of DTL system. POWERGRID agreed for the same.

DTL intimated that they had decided to carry out hotline washing of porcelain insulators of their 400 kV and 220 kV lines as was done last year and also assured to carry out periodic operation and maintenance of their network.

## **Haryana**

HVPNL stated that they had completed the replacement of porcelain insulators with antifog insulators on seven lines out of eighteen 220 kV lines planned by them. Out of total insulator strings of 13198, they had replaced 2902 insulator strings till 30<sup>th</sup> September, 2009. The work was under progress on 220 kV Samaypur-Palwal D/C line and would be completed by 31<sup>st</sup> Oct, 2009.

HVPNL stated that they had procured around one lakh antifog discs. Purchase order for additional 70000 antifog discs had been placed, delivery is expected in

Nov/Dec, 2009. Replacement work would be completed by February/March, 2010.

MS, NRPC requested HVPNL to complete the replacement of porcelain insulators at all critical locations specially in NCR area and also ensure to carry out periodic cleaning of all porcelain insulators of their system to avoid fog related tripping during ensuing winter.

### **PSEB**

PSEB intimated that till 31<sup>st</sup> Aug, 2009 they had replaced 334 strings with antifog insulators on critical transmission lines at 220 kV/132 kV voltage levels. They further informed that the replacement of porcelain insulators with antifog insulators on identified 220 kV/132 kV lines (37Nos.) would be completed by 20th Dec., 2009. They had 12,484 Nos. antifog insulators available in stock. 3000 Nos. were under inspection and delivery expected in November, 2009.

### **Rajasthan**

RVPNL stated that around 2301 Nos. of porcelain insulator strings had been changed with Antifog insulator strings on 220 KV Alwar-BTPS line till Sept 2009. 4641 strings were yet to be replaced out of which about 940 Nos. would be replaced by the end of Nov. 09.

RVPNL was requested to complete the work by 15<sup>th</sup> Nov, 2009 and priority should be given to sections of BTPS side on 220 kV BTPS-Alwar line.

### **BBMB**

Representative of BBMB stated that on the issue of replacement of existing porcelain insulators with polymer insulators on 400 kV S/C Dehar-Bhiwani and 400 kV Dehar-Panipat lines, the matter regarding feasibility of replacement of porcelain insulators with polymer insulators was discussed in the 14<sup>th</sup> NRPC meeting held on 19<sup>th</sup> September 2009. Accordingly they would seek the expert opinion of CEA, CPRI & POWERGRID for its implementation. However, BBMB decided to carry out cleaning of porcelain insulators of these lines regularly.

BBMB had installed 11000 Nos. antifog insulators (at 400 kV & 220 kV levels) in light pollution areas. Purchase order for 37000 antifog insulators had already been placed. Inspection carried out in Sept, 09 and materiel was expected by 15<sup>th</sup> Oct, 2009. The replacement work would be completed before 15<sup>th</sup> Dec, 2009.

## **UPPTCL**

No representative attended the meeting from UPPTCL.

MS, NRPC stated that ten number of 400 kV and 220 kV lines of UPPTCL in NCR area were proposed by them for replacement of porcelain insulators. In the meeting taken by Chairperson, CEA on 30<sup>th</sup> April, 2008 they also agreed to include additional lines connected to Narora and Harduaganj power plants and lines emanating from Muradnagar and Moradabad substations. It was decided that the matter would be taken with UPPTCL to get the latest status.

The summary of status of replacement of porcelain insulators by polymer/antifog insulators of transmission lines by the constituent States and POWERGRID is given at **Annexure-II**.

MS, NRPC requested that all the STUs and CTU to submit the details of procurement and replacement of porcelain insulators by polymer/antifog insulators of transmission lines every week to NRPC secretariat through e-mail: **nrebops@yahoo.com** as per applicable formats available at NRPC website: [www.nrpc.gov.in](http://www.nrpc.gov.in).

He also requested constituents to complete the pre-winter maintenance of lines before onset of winter to ensure reliable and safe operation of NEW Grid.

Meeting ended with thanks to the chair.

## Annexure-I

<b>List of Participants for Special Meeting on Replacement of Porcelain Insulators by Ploymer/Antifog Insulators : In Chair Sh A.K. AGGARWAL, MS, NRPC</b>		
<b>Name (S/Sh)</b>	<b>Designation</b>	<b>Contract No.</b>
<b>NRPC</b>		
A.K. Aggarwal	MS	26868681
A.K. Rajput	SE	26868681
Rishika Sharan	EE	26868681
Vikram Singh	EE	26868681
<b>NRLDC</b>		
D.K. Jain	DGM	9910344127
Rajiv Porwal	Ch. Mgr.	9871581133
M M Hasan	Manager	9910952965
Rajesh Kumar	Manager	9811397471
Alok Kumar	Dy Manager	999903932
Manas Das	Engineer	9650657722
<b>PGCIL</b>		
B.B. Sharma	GMO&M	9958555761
Mithlesh Kumar	DGM(O&M)	9873637111
N.L. Jain	Ch. Mgr-upcc	9873119512
Ranjan Bhola	Managr(OS)	9419173968
<b>BBMB</b>		
R.S. Lamba	Director/PR	9417216058
<b>PSEB</b>		
A.K. Matharu	Dir(PR&C)	9646118004
<b>RVPNL</b>		
Dinesh Khandelwal	XEN(PO)	9413383191
G.L. Gupta	AAE	9413383208
<b>HVPNL</b>		
N.K. Makkar	EE	9466219042
<b>DTL</b>		
B B Sharma	GM	9540040610
Loveleen Singh	DGM	9540040659
<b>SLDC DELHI</b>		
B. C. Mathur	GM	9818648217
V. Venugopal	DGM	9871093102
<b>CEA</b>		
Md. Afzal	Dy.Dir, GM Divn	26732637
<b>Power Links</b>		
P. K. Pal	GM	9415009321
Anupam Gupta	Manager QA	9871371628

## Annexure-II

<b>Status of Replacement of Porcelain Insulators with Polymer/Antifog Insulators</b> (As reported by constituents)						
<b>Name of the constituent</b>	<b>Voltage level</b>	<b>Lines where insulators to be replaced</b>			<b>Type of insulator (polymer/antifog)</b>	<b>Remarks</b>
		<b>Total Insulator Strings (Nos)</b>	<b>Insulator Strings replaced (Nos)</b>	<b>Scheduled completion date for replacement of balance insulators \$</b>		
<b>DTL</b>	400kV	8212	nil	Dec, 09	Polymer	Procurement for 400kV in process through PGCIL, ordered in 04/09, supply of first lot by Nov 09. Tenders for installation being awarded.
	220kV	&	nil		Antifog	Taking action for procurement of Antifog insulators
<b>HVPNL</b>	220kV	13198	2902	Feb/March, 2010.	Antifog	Work on seven lines completed. Balance by Feb/March, 2010.
<b>UPPTCL</b>	400kV	1000	80	NA	Polymer	1165 insulator strings received,
	220kV	1000	629	NA	Polymer	799 insulators received.
<b>PGCIL NR-I</b>	400kV	27568	16194	12/09	Polymer	Would be completed by Dec, 09
	HVDC Rihand-Dadri	10138	40	11/09	Polymer	Delivery of insulators expected in 3 <sup>rd</sup> week of Oct, 09.
	HVDC Balia-Bhiwadi	4576	0	11/09	Polymer	HVDC Balia-Bhiwadi line would also be provided with polymer insulators. Pole-I expected in May, 2010.
<b>PGCIL NR-II</b>	400kV	13157	5365	10/09	Polymer	5365 Strings installed, 2600 Strings available in store. Replacement for balance would be done by Nov'09. Procurement order placed for Phsae-II (12615 Nos.) and Phase-III (10000 Nos.) polymer insulator strings. Expected delivery Dec'09-Jan'10. 400 kV Moga-Bhiwadi line (expected in Dec 2009) would also be provided with polymer insulators.
	220kV	377	377	Completed	Polymer	

<b>BBMB</b>	400kV	2016	*	11/09	Polymer	Matter referred to CEA for advise on clearances of lines for use of polymer insulators.
	220kV	3541	*	06/10	Polymer	Delivery of insulators expected in March
	400kV	264	264	12/09	Antifog	About 11000 insulators discs replaced. PO for 37000 antifog placed. Inspection carried out in Sept 09 and material expected in Oct/Nov 09.
	220kV	2654	455	12/09	Antifog	
<b>POWERLINKS</b>	400kV	1956	1956	04/09	Polymer	Work Completed
<b>PSEB</b>	220 & 132 kV	13000	334	Nov/Dec 09	Antifog	334 strings with antifog insulators replaced. Replacement on 37 lines would be completed by 20th Dec., 2009. 12,484 Nos. antifog insulators available in stock. 3000 Nos. under inspection, delivery expected in November, 2009
<b>RVPNL</b>	220 kV	6942	2301	Nov/Dec 09	Antifog	940 Nos likely to be replaced by Nov, 2009.
Note: \$ The schedule was decided as 31-03-2009 in the 10 <sup>th</sup> NRPC meeting held on 30-09-2008.						
& Actual information to be submitted.			* Procurement under process.			