



भारत सरकार

उत्तर क्षेत्रीय विद्युत समिति

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

Government of India

Northern Regional Power Committee

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

No. SE(O)/NRPC/40

dated 01-07-2009

Subject: Agenda for 40th OCC Meeting. (प्रचालन समन्वय समिति की 40 वीं बैठक की कार्य सूची)

The 40th OCC meeting will be held at 11:00 AM on 10th July, 2009 at New Delhi.

The Agenda can be down loaded from NRPC website at <http://www.nrpc.gov.in>.

NDPL is hosting the meeting. Coordinator for the Meeting Sh. A K Dutta, Sr. Manager from NDPL Delhi, Mob No. 09871798566, Fax No. 011-66112473, 011-27468023.

Venue: Hotel Oberoi Maidens, Civil Lines, Delhi

Kindly make it convenient to attend the meeting.

(अशोक कुमार राजपूत)

(Ashok Kumar Rajput)

SE (Operations) & Member Convenor, OCC

09868202176

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Agenda for the 40th Meeting of the Operation Coordination Sub-Committee (OCC) of NRPC

Date **10th July, 2009**
Time **11:00 AM**
Venue: **Hotel Oberoi Maidens, Civil Lines, Delhi**

1.0 Confirmation of Minutes

The Minutes of the 39th meeting of the OCC held on 15th June, 2009 at New Delhi, have been issued and circulated vide letter No. NRPC/SE (O)/OCC/39/2009 dated 26.06.2009 and the same can be downloaded from NRPC's website at <http://nrpc.gov.in>. As no comments have been received from any of the constituents, the Committee may confirm the same.

2.0 Emergency Conditions in Northern Grid on Account of Low Voltage

The heavy power demand in Northern Region on account of extreme weather conditions is placing a severe stress on the network in Northern Region. For instance, the voltage at several 400 kV buses such as Dadri (NTPC), Ballabgarh and Mandaula had gone to 370 kV and below at 13:45 hours on 26-06-2009. Despite the persistent intervention of NRLDC and issue of messages to SLDCs, there is little or no affirmative action at the SLDC level.

System operation under these conditions is highly insecure as any tripping of a 400 kV line or HVDC Rihand-Dadri single pole or any large generating unit has the potential to cause a grid collapse. This would result in great public suffering, which has to be mitigated at all costs not to mention the loss of credibility of the Electricity Supply Industry (ESI). The situation would get aggravated when the hydro units on different river basins in Northern Region have to go for periodic flushing of reservoirs. It is understood from NRLDC that they have already received such requests from Jhakri (1500 MW), Salal (890 MW), Chamera-II (800 MW) Dhauliganga (280 MW) and Dharashu (304 MW) hydro stations.

It is requested that efforts be made to ensure the voltage profile of the Northern Grid above 385 kV under all conditions so that the system is able to withstand contingencies. The challenge to meet the increasing consumer demand should not be at the cost of lowering the grid security. South West Monsoon forecast dated 24th June, 2009 by the India Meteorological Department (IMD) indicates further challenges in the months ahead. It might be extremely difficult to operate the grid in an intergraded manner if such low voltage conditions persist.

Members may deliberate.

3.0 Load Crash in Rajasthan on 15th June 2009

During the late evening of 15th June, 2009 due to bad weather conditions and heavy dust storm/thunder storms, Rajasthan system had a load crash of the order of 1800 MW. It was observed that in spite of such heavy load crash, there was no generation backing down in the Rajasthan system and under drawl from the grid had increased touching up to 2800 MW. This resulted in

critically high voltage in the Rajasthan system and also resulted into tripping of important lines/transformers.

Due to multiple tripping of lines, Anta (250 MW) and RAPP-B (300 MW) got islanded at 22:31 hrs along with some nearby loads at Bhilwara, Swaimadhopur and Chittorgarh. Since, the island was surplus in generation (SCADA data recorded a high frequency of 52.12 Hz in the islanded system), units at RAPP-B tripped on high frequency. The island survived with a load of about 200 MW and generation at Anta was subsequently synchronized to the grid after 45 minutes at 23:16 hrs. Because of prevailing high voltage in the system RAPP-B could not bring back its units and these were poisoned out.

Following are the points of concern in this context:

- i. Heavy under-drawl by Rajasthan for a long duration touching up to 2800 MW resulting into high voltage and critical loading of some of the evacuation elements.
- ii. No backing down of Rajasthan own generation even under the condition of heavy under drawl and depleted network conditions.
- iii. Synchronization of Kota units (3 & 6) at 00:45 hrs and 00:54 hrs of 16th June 2009 respectively, when Rajasthan was under-drawing from the grid heavily and system frequency was running above 50 Hz.

Members may deliberate.

4.0 Low Grid Frequency and Low Voltage at Several Locations

Energy consumption and the peak demand in Northern Region during the month of June, 2009 was 13-14 % higher than that of last year and it had crossed 700 MU and 30,000 MW respectively. However, the condition of grid frequency and voltage at several 400 kV buses were alarming. On certain number of days in the month of June, 2009, the grid frequency had been below 49.2 Hz for 70-80% of the time while the voltage at several nodes also went as low as 360 kV on several occasions in the month.

The constituents had resorted to over-drawl from the grid at one time or the other even while the frequency was below 49.2 Hz. In the time blocks when frequency was below 49.2 Hz the maximum over-drawl by Uttar Pradesh was as high as 1500 MW and even the average over-drawl in those time blocks was in the range of 550 MW. In the time blocks when frequency was below 49.2 Hz the instantaneous maximum over-drawls by Haryana, Punjab and Rajasthan were in the range of 500-1000 MW with average over-drawl in the range of 150-200 MW. This was followed by Himachal and Uttarakhand whose average over-drawl was in the range of 80-100 MW with instantaneous maximum over-drawl values up to 300 MW.

Load power factor of around 0.7 pu around NCR was causing voltage collapse like situations in the grid even for an 'n-1' outage. Incident of voltage sag of 15-16 kV at Dadri, Agra, Kanpur within 10 minutes subsequent to the tripping of FSC of 400 kV Kanpur-Ballabgarh followed by tripping of 400 kV Anpara-Unnao is cited as an incident in this regard. Under such situations on

account of low voltages collapse is imminent unless the constituents exercise self-restraint on the over-drawl from the grid. Over-drawl by Northern region constituents from the grid is inviting strong protests from the neighbouring regions viz. Western and Eastern regions and by acts of indiscipline; the Northern Region constituents are endangering the security of the entire N-E-W grid.

Members may deliberate.

5.0 Telemetry Issues

Non-availability of data from several locations is resulting in poor visibility of those locations at NRLDC and also causing inaccuracy in calculation of actual drawl during real-time.

NRLDC informed that due to telemetry/communication problem, some of the RTUs are not reporting. Also some RTUs are not integrated in the system. It was indicated that 31 sub stations/generating stations are without RTUS and about 30 RTUs are not reporting due to telemetry problem. Constituents have been requested to take corrective action immediately. The status as given in 39th OCC meeting is given at **Annex-XIII**.

Members may deliberate.

6.0 Revival of 400 kV and 220 kV Transmission Lines Which Suffered Damage/Outage Due to Dust Storm

Availability of transmission lines on normal towers

POWERGRID has informed that the schedule for restoration of transmission lines on normal tower is as under:

400 kV Kanpur-Ballabgarh:	24 th June 2009
400 kV Dadri-Mandaula-I:	19 th June 2009
400 kV Dadri-Mandaula-II:	5 th July 2009
400 kV Allahabad-Mainpuri-I:	28 th June 2009
400 kV Allahabad-mainpuri-II:	03 rd July 2009
400 kV Dadri-Maharanibagh:	29 th June 2009
400 kV Ballabgarh-Greater NOIDA:	30 th June- 2009

Details of lines which suffered damage/outage due to dust storm during May 2009 and their revival status is at **Annex-I**.

Members may update.

7.0 Adequacy of Transmission Capacity at Certain Sub-stations in Delhi

In view of the higher load growth being experienced in areas being fed by the sub-stations of Najafgarh, Pappankalan and Okhla the adequacy of transformation capacity at these sub-stations may be ensured. Delhi Transco Limited (DTL) may update on the issue.

8.0 Reliability of Power Supply Position of Delhi – Preparation for Common Wealth Games

Delhi sub-system, particularly the system elements comprising of Rajghat Thermal Power Station (TPS), Indraprastha and Pragati Gas Turbine (GT) along with loads of Patparganj and Geeta Colony areas have been frequently facing isolation. Particularly on 22nd May, 2009 and 15th June 2009 the system as mentioned above collapsed. During the 39th OCC meeting held on 15-06-2009 at New Delhi it was deliberated that the area was frequently getting islanded, but the island was not able to survive. SLDC Delhi was requested to share the Islanding Schemes available in Delhi System and make efforts to minimize such trippings.

DTL/SLDC Delhi may give a presentation of the existing islanding scheme(s) and suggest points for the revision to increase the availability and reliability of the power supply position.

Members may deliberate.

9.0 Reliability Issues in Respect of NAPS

It has been reported by NAPS that NAPP is connected to UPPTCL system through five numbers 220 kV circuits. NAPPS-Khurja D/C and Muradnager, Simbhaoli and Atrauli single circuit lines. There have been frequent trippings on these lines in the NAPS area. On account of high reactive load and non-availability/non-functioning of adequate shunt capacitors, the area around NAPS experiences low voltage problem. Further, NAPS has reported that since May, 2009 PLCC links between 220 kV NAPS-Atrauli line is out of order. PLCC is essential not only for instant verbal communication but also for fast clearance of line faults through carrier inter trip signal.

These reliability issues related to NAPS need immediate attention.

Members may deliberate.

10. Tripping of Jhakri and Baspa Hydro Generating Stations Alongwith all the 400 kV Circuits Emanating From Jhakri on 19-05-2009

An expert group comprising of following has been constituted to analyze the above incidents in details and submit the report in four weeks time.

- 1) Sh Sunil Grover, SE (PR), SLDC Shimla;
- 2) Sh Anoop Singh Chief Manager, POWERGRID, NR-II, Jammu;
- 3) Sh R K Aggarwal, NJPS;
- 4) Sh V K Agrawal, General Manager, NRLDC or his representative, New Delhi;
- 5) Sh A K Rajput, SE (O), NRPC, New Delhi

Meeting of the above sub-group would be held on 10-07-2009 after the meeting of OCC. For information of Members.

10.1 Coordination Problem at 400 kV Kankroli (PGCIL) During Overloading and Trippings of Inter-regional Line

400 kV Kankroli-Kansari D/C inter regional lines are in operation since

22.04.2009. GETCO has informed that they are not receiving prompt response from 400 kV Kankroli in the event of tripping of this line or overloading of other connected lines. The following instances have been cited by GETCO.

400 kV Kansari – Kankroli line – II tripped on 14.06.2009 with direct trip, carrier fail, carrier receive and 400 kV Kansari-Kankroli line-I tripped on 15.6.09 at 22:32 hrs on direct receive and 86A, 86B in both the cases 400 kV Kankroli did not provide relay indication in spite of frequent communication by 400 kV Kansari S/S and SLDC of Gujarat. It is necessary to know relay indication to analysis the fault on line and to restore the line on priority.

On 21.06.2009 load of 400 kV Soja – Kansari line reached upto 625 MW and 16:30 hrs. because of increased loading of 400 kV Kansari-Kankroli lines. In spite of frequent communication by 400 kV Kansari and SLDC with Kankroli and WRLDC, no positive action were taken by 400 kV Kankroli to restrict load.

In this regard WRPC has also shown the concerned and they have impressed upon that heavy drawl by Rajasthan on this line, at times, causes overloading of connected GETCO system and as such, prompt action is required for controlling flow on this line as and when requested Gujarat SLDC.

For smooth operation of inter connecting system calls for close co-ordination between different utilities and prompt inter change of system related information. A close co-operation by the concerned authorities is requested.

Members may deliberate.

11.0 Review and Discussion Power Supply Position

The provisional Power Supply Position for the month of June, 2009 will be circulated in the meeting.

Representative of NRLDC may give a brief presentation on the performance of the Grid Operation during the last month.

12.0 Performance of UFR and df/dt Relays

- i. Constituents to submit the details of the Under Frequency Relays (UFRs) operations during the month of June, 2009 to NRPC secretariat via e-mail at **nrebops@yahoo.com**
- ii. The constituents are requested to furnish the data as per **Annex-II** regarding relief obtained from under frequency relays (UFRs) and df/dt relays when the frequency went below 48.8 Hz on 10th, 17th and 18th June, 2009.
- iii. Constituents to confirm the revised setting of df/dt relays as approved in the 23rd OCC Meeting.

12.1 Action for Procurement of Additional 30% UFRs and df/dt Relays by the Constituents to be installed on Feeders

(A) Constituents have submitted the following details:

- i. **Rajasthan:** RRVPNL intimated that purchase order (PO) for 52 Nos. UFRs and 17 Nos. df/dt relays to cover more feeders for load relief in Rajasthan system had been placed on 13-03-2009 on M/s Areva T&D India Ltd. The lot of 52 Nos. UFRs were rejected during inspection as the same was found not meeting the specifications. However, the lot of 17 df/dt relays has been cleared for dispatch.
- ii. **Punjab:** PSEB stated that additional 21 UFRs had already been installed in PSEB system and rest 4 would be kept in spare. PSEB intimated that order for 35 numbers df/dt relays had been placed and inspection completed, consequently the delivery is expected.
- iii. **Himachal Pradesh:** HP stated that they had installed 3 Nos. df/dt relays in their system.
- iv. **Delhi:** Delhi Transco Limited (DTL) stated that all 5 Nos. stage-I df/dt relays with 0.1 Hz/sec setting had been installed in their system.
- v. **Haryana:** HVPNL had intimated that out of 22 UFRs required, purchase order for 13 UFRs had been placed and 5 UFRs (out of 13) had been received and commissioned, remaining 8 UFRs would be commissioned later, status may be updated. They further stated that 4 relays were being repaired. For six Nos. df/dt relays, they informed that these would be installed during July, 2009.
- vi. **Uttar Pradesh:** UPPTCL stated that as they had sufficient relays in their system, they were not planning for new relays.
- vii. **Uttarakhand:** In 37th OCC meeting, PTCUL was asked to provide load relief for 3rd stage UFR (100 MW). PTCUL had stated that UFRs had been arranged and would be commissioned. For df/dt relays, PTCUL had stated that the numerical relays already installed in their system are to be set for df/dt operation.
- viii. **Jammu & Kashmir (J&K):** No information.
- ix. **Chandigarh:** Rely settings have been made a 48.20 Hz to give a relief of 5 MW at each step.

During the 39th Meeting held on 15-06-2009 following decisions were taken:

- Constituents were requested to ensure to provide at least the recommended relief through df/dt and UFRs.
- Constituents were also requested to submit a report for the incident of 13th May, 2009 at 23:03 Hrs when frequency was below 48.8 Hz and send it to NRPC/NRLDC.

- Constituents were also requested to analyse their load before and after when frequency goes below 48.8 Hz for authentication of actual load relief obtained.

Constituents may submit the report for deliberation in the meeting.

12.2 Notified Power Cuts on Industry and Supply of Power to Agricultural sector

Details of Notified power cuts on Industries and supply of power to Agricultural Sector, Commercial and Domestic categories of consumers for the month of June, 2009 will be circulated in the meeting.

Members may update and also furnish the required information through email at nrebops@yahoo.com.

13.0 Performance of Shunt Capacitors

13.1 Status of Shunt Capacitors' installation for 2009-10 is enclosed at Annex-III.

All Constituents were requested to furnish the month-wise programme of installation of new capacitors/reviving of defective capacitors indicating bottlenecks, if any, in meeting the targets. The information is required in following format:

New Capacitors installed during June, 2009	Defective Capacitors in the system at the end of June, 2009	Defective Capacitors brought back in to service during June, 2009

Month wise targets and achievement (as per **Annex-III**) of capacitor installation may be furnished to NRPC.

The constituents were requested to update the status for following:

- Capacitor under installation and time schedule of installation;
- Order placed (with delivery schedule); and
- Under Procurement with likely date of placement of order.

Constituents had submitted the following details:

- Rajasthan:** Rajasthan had submitted that tenders for purchase of 324 MVAR HT Shunt Capacitor Banks were opened and the case was processed but no bidder could qualify the technical bid. Retendering is under process. The balance capacitor banks are to be installed by the Discoms.
- Haryana:** HVPNL had informed that 470 MVAR shunt capacitors would be installed in their system but tenders were rejected on account of commercial issues, and re-tendering is being done. NIT placed on 10th June 09. Additional 430 MVAR shunt capacitors would be installed by their Discoms.

- iii. **Punjab:** PSEB intimated that they had placed the purchase order on M/s ABB on 04.12.2008 for supply of 138.682 MVAR capacitor banks. 26 MVAR capacitors have been received in June, 2009. They had further intimated that a tender inquiry floated for procurement of capacitor units (333.25 MVAR) was opened on 30.04.2009 and bid evaluation was under progress.
- iv. **Uttarakhand:** In 37th OCC meeting PTCUL had intimated that 33.2 MVAR Capacitor Banks had been ordered on M/s BHEL Bhopal and M/s Shreem Capacitors, Maharashtra. They had also stated that banks are expected to be delivered in one and half months and defective capacitors in the system would be revived by the end of June, 2009.
- v. **Delhi:** DTL informed that they had only 10 MVAR (33 kV) defective Capacitor Bank in their system, which will be replaced in four months time. DTL has also constituted a committee to look into the working of capacitors and other issues for maintaining the voltage profile. NDPL intimated that all capacitors in their system are functional.
- vi. **Jammu & Kashmir (J&K):** During the 39th OCC meeting J&K informed that they have received the bid offers from three vendors for 932 MVAR shunt capacitors. Out of which they have planned to procure 531 MVAR in phase –I and 401 MVAR in phase-II. The order for installation of capacitors would be placed after completing the process of evaluation of tenders. Price bid is to be opened in June, 2009 and installation would be done in three months time, thereafter. Earlier due to poor response of the bidders they were not able to add any capacitors in their system.

Each utility may update the status to NRPC Secretariat through e-mail nrebops@yahoo.com.

Constituents may update the information.

13.2 Extremely Slow Progress of Installation of Shunt Capacitors

Installation of Shunt Capacitors in the system is very slow. Revival of defective capacitors should be given priority. Capacitor installation /revival in the system of UP, J&K, Haryana and Punjab are very crucial for providing voltage stability to the grid.

It has decided in the 13th RPC meeting held on 27-06-2009 at Lucknow that each state SLDC may identify critical locations of low voltage and submit the proposal of installing 10% capacitors of the respective state's requirement during 2009-10, at priority on those locations to NRPC Secretariat. The cost of these capacitors would be reimbursed from Reactive Energy Pool Account subject to the availability of fund in the pool. Reimbursement would be made only after submission of invoices and certificate of commissioning of capacitors by the concerned agency as per the finalized critical locations scrutinized by NRLDC/NRPC Secretariat and accepted by the NRPC.

STATE / UT	New Capacitor to be added in to the system during 2009-10 (MVAR)		Priority locations (to be indicated by states) for installation of 10% of total capacitors and the MVAR to be installed at these locations
	Total	10% of total	
Delhi	0	0	
Haryana	816	81.6	
Punjab	766	76.6	
Rajasthan	508	50.8	
Uttar Pradesh	1449	144.9	
Uttarakhand	233	23.3	
Himachal Pradesh	37	3.7	
Jammu & Kashmir	1124	112.4	
Chandigarh	30	3.0	
Total	4963	496.3	

Haryana have sent a proposal of installation of capacitors to NRPC. HVPNL is requested to prioritize the capacitor requirement as per identified critical locations by SLDC/NRLDC.

Members may deliberate.

13.3 Monthly Target for Revival of Defective Capacitors

During the 39th OCC meeting held on 15-06-2009 PSEB had intimated that about 282 MVAR capacitor banks are defective in their system and action is being taken by them to revive the defective capacitors. DTL informed that they had only 10 MVAR (33 kV) defective Capacitor Bank in their system, which will be replaced in four months time. Rajasthan had submitted that the 368.896 MVAR capacitors were defective in their system.

Status/details about bringing back the defective capacitors in to service may be submitted to NRPC Secretariat on regular basis.

Constituents may submit the information.

14.0 Maintenance Programme of Generating Units and Transmission Lines Generating Units

- 14.1** NTPC's (NCR-HQ) has submitted the maintenance schedule of generating units for July, August and September, 2009. Details are at **Annex-IV (A)**. NTPC-NR has also submitted the details in this regard and the details are at **Annex-IV (B)**.

Members may deliberate.

14.2 Transmission Lines

POWERGRID has submitted the programme for shutdown of lines and other elements during July, 2009 and the same are at **Annex- V and VI**.

Members may deliberate.

15.0 Outage of Important System Elements in NR for a Long Period

- 15.1 Availability of Spare Converter Transformer for HVDC Bi-Pole Rihand-Dadri Line**

POWERGRID had informed as:

15.1.1 The status of four spare converter transformers in Rihand-Dadri HVDC system is as follows:

- i. One transformer is available as ready spare at Rihand end.
- ii. 2nd transformer was available at Dadri since 13-11-2007. PGCIL informed that a converter transformer failed at Dadri end due to winding fault. The same was replaced by the spare converter transformer on 14th February, 2008. Order had been placed for its repair in the second week of August, 2008. Outcome of the joint inspection carried out by BHEL and Powergrid on the failed transformer may be submitted. Maintenance schedule may also be submitted.
- iii. 3rd transformer (ABB make) is now available as ready spare at Dadri.
- iv. 4th transformer had been dispatched from Vadodara to Rihand on 16-01-2009 and had reached Rihand on 20-02-2009.

15.1.2 Status of supply of two new converter transformers ordered on M/s BHEL

- i. New converter transformer had been delivered by M/s BHEL and reached Dadri.
- ii. The second converter transformer was under transit and would be delivered in June, 2009.

POWERGRID may update the status.

15.2 Outage of Other System Elements

Status of Line/Bus reactors which were not available since long time is given as under:

(a) 50 MVAR Bus Reactor at Gorakhpur

UPPTCL intimated that two phases have been set right and work on the third phase is being done. The work is expected to be completed by 10th July, 2009.

UPPTCL may update.

(b) Tertiary Reactors

UPPTCL had earlier informed in 28th OCC meeting held in July, 2008 that there were 28 tertiary reactors in Eastern UP system, out of which 5 numbers are defective. Following status may be updated:

Sl. No.	Location	No. of Tertiary Reactors	Status
1	Mau	2	Will be completed in 2 months

2	Bareilly	1	Brought in service in May 2009
3	Sultanpur	1	Expected by end of July 2009.
4	Agra	1	Completed, working

UPPTCL may update

(c) **Bus Reactor at Sarojini Nagar, Lucknow (UPPTCL)**

This element is out since 10-07-2008. In the 33rd OCC meeting, UPPTCL informed that Bus Reactor at Sarojini Nagar Lucknow was beyond economical repair (BER) and a new one needs to be purchased for this location. UPPTCL intimated that a meeting with PGCIL to discuss the issue has been proposed in near future to address the issue.

UPPTCL may update.

(d) **High Voltage Problem at Anpara TPS**

In the 34th OCC meeting, UPRVUNL intimated that as CB of Unit #4 was faulty, it had been replaced with the transfer CB. M/s Hitachi had submitted offer for repair of Circuit Breaker. UPRVUNL intimated that delivery of the requisite equipment would be by August, 2009. UPRVUNL is requested to expedite the work.

UPRVUNL may update.

(e) **315 MVA ICT at Bamnauli**

DTL intimated that the 315 MVA ICT at 400 kV S/S Bamnauli had reached at the S/S site in June, 2009 and commissioning would be done by August, 2009
DTL may update.

(f) **100 MVA 220/66 kV ICT at Narela**

The transformer has been commissioned on 22nd June, 2009.

(g) **Revival status of the following system elements of UPPTCL is as under:**

- i. **400/220 kV ICT-2 at Obra:** UPRVUNL informed that purchase order for ICT had been placed on M/s BHEL. Work is expected to be completed by March, 2010.
- ii. **50 MVAR Bus Reactor at Bareilly:** UPPTCL informed that it had been decided to install a new bus reactor (the defective one is BER) at this location. The financial approval for the same has been obtained.
- iii. **Bus Reactor at Sarnath:** Bus Reactor at Sarnath which was normalized after a long time was again out of order for a considerable time (since 16th February, 2009) due to a reported problem in 'Y' phase bushing (damage) at Sarnath. During 39th OCC meeting held on 15th June, 2009, UPPTCL

intimated that the inspection of the defective reactor has been carried out by M/S Compton Greaves Limited. The report of M/s Compton Greaves Limited is awaited.

UPPTCL may update the status.

(h) Outage of ICTs

Sl. No.	Name	Voltage Level (kV)	Outage Date	Expected Revival Date
1	ICT - III at Mandaula	400/220	19.05.2009	30 th June, 2009
2	ICT - I at Mandaula	400/220	05.06.2009	12th July 2009

16.0 Tripping at Bahadurgarh Substation Due to Tripping of 220 kV Line of HVPNL

At Bahadurgarh Substation, 315 MVA CGL make ICT has been replaced by 315 MVA BHEL make new ICT and put on load on 18-05-2009 at 08:24 Hrs. Frequent tripping of 220 kV line of HVPNL is affecting this ICT. After commissioning of the above said new ICT, the details of DR triggering and tripping are given at **Annex-VII**.

Members may deliberate.

17.0 Operation of 4x100 MW Koteshwar HEP in Peaking Mode

4x100 MW Koteshwar HEP is under advance stage of execution. The first unit is expected to be commissioned by October, 2010 and all the units shall be operational by March, 2011.

As per DPR of Koteshwar HEP, it is to operate practically on uniform daily releases to be determined by the need of irrigation.

Koteshwar HEP can operate in peaking mode if storage capacity of 5 MCM available at Chilla-Rishikesh barrage can be utilized. It is suggested that Uttarakhand Jal Vidyut Nigam Ltd. (UJVNL) should make suitable arrangement for the same. This will also benefit Chilla Hydro station of UJVNL.

Members may like to deliberate on the issue.

18.0 Status of Commissioning of New Generating Units and Transmission Works

18.1 The status of commissioning of new generating units in 2009-10 is given at **Annex-VIII**. The details of the units to be commissioned during 2010-11 may also be submitted. While reporting the generation capacity addition CoD as well as the date of stabilization may be specifically mentioned.

18.2 Transmission Work

18.2.1 Following information may be updated:

- i. **400 kV Kankroli–Jodhpur:** For Kankroli–Jodhpur line, the commissioning schedule is October, 2009 (PowerGrid).
- ii. **220 kV Kankroli-Dewari:** The work is expected to be completed by July, 2009 (RRVPNL).

18.2.2 Delay in Commissioning of 220 kV Nalagarh-Mohali D/C line (100 ckt kms)

220 kV Nalagarh-Mohali D/C line is a part of the Jhakri transmission system and was scheduled to be commercial by December-2004. The commissioning was delayed due to pending forest clearance and court case etc.

PSEB informed that they have constituted a committee to settle the issue regarding acquisition of disputed land. HPSEB informed that as per Gazette notification dated 24-12-2003 PGCIL is empowered to acquire any land for their use. PSEB was advised to explore all options to resolve the long pending issue. HPSEB suggested that PSEB may approach them with the draft notification for acquisition of land under the Telegraph Act/the Electricity Act, 2003.

PSEB may update.

19.0 Strengthening and Up-Gradation of the Transmission, Sub-transmission and Distribution System by Constituents.

Constituents have been requested to furnish the programme for strengthening and up gradation of their transmission, sub-transmission, and distribution system matching with the load growth and generation capacity addition programme during the financial year 2009-10. The constituents should furnish the requisite information along with the status of various works and the time line of completion of the targeted activities.

The information is to be submitted as per **Annex-IX**.

20.0 Under Voltage Load Shedding Relays (UVLSRs)

The status submitted by different constituents is as under:

- (i) **Punjab:** PSEB stated that 10 Nos. relays have been installed in their system.
- (ii) **Haryana:** During the 39th OCC meeting held on 15-06-2009 Haryana stated that the report of study of their system had come and as per this study there was no problem of low voltage in their system. However, if there was an apprehension of low voltage in their system, HVPNL might consider installing UVLSRs at lower voltage level, particularly on feeders with high reactive load so that these loads might be disconnected in case of low voltage situations, to maintain appropriate voltage at grid locations.

HVPNL may indicate the numbers and locations where they would like to provide UVLSRs with time line to NRPC Secretariat.

- (iii) **Delhi:** DTL stated that UVLSRs had been commissioned in their system and settings were finalized and submitted to NRPC Secretariat.

- (iv) **Uttarakhand:** In 39th OCC meeting held on 15-06-2009 PTCUL had intimated that they had one relay at Rishikesh sub-station with setting at 176 kV (220 kV level) with reactive load relief of 50 MVAR.
- (v) **Uttar Pradesh:** UPPTCL informed that out of 13 UVLSRs, 6 had already been installed and balance 7 UVLSRs have been received and are under installation.
- (vi) **Rajasthan:** NRLDC stated that some parts of Rajasthan such as Heerapura, Bassi etc are experiencing low voltage problem, so Rajasthan should install UVLSRs in their system. Rajasthan was requested to install relays in consultation with NRLDC/PGCIL.

Constituents may update.

21.0 Replacement of Porcelain Insulators by Polymer/Antifog insulators in High pollution Area of Northern Region

NRPC secretariat is monitoring the tasks of line wise cleaning of insulators and that of replacement of Porcelain Insulators by Polymer/Antifog insulators. All the constituents are requested to update the status through e-mail as per the Performa available on NRPC website. The status is enclosed at **Annex-X**.

Constituents may update.

22.0 Implementation of Recommendations of the Inquiry Committee on Grid Disturbance in Northern Region of 27th January, 2007

RRVPL stated that their Legal Department is facing hurdles as to under which legal provisions they should bring out the notification to ban brick kiln or any industrial unit or biomass or diesel based power plant having chimney height up to 30 meters be set up within 0.5 km of the 220 kV or higher voltage transmission lines. The States should send their comments in the matter to CEA, so that the matter could be taken up with the Central Govt. by CEA through Ministry of Power.

All the constituents have implemented the recommendation regarding provision of bird guards on transmission line towers.

The status as given in Annex-XI may be updated.

23.0 Implementation of Recommendations of Report of Inquiry Committee on Grid Disturbance in Northern Region on 7th and 9th March 2008.

The status as submitted by the constituents in last meeting for implementation of recommendations of report of Inquiry Committee on grid disturbance in NR on 7th and 9th March, 2008 is given at **Annex-XII**.

Constituents may update

24.0 (A) Captive Power Injections in the Grid

All SLDCs and NRLDC are requested to submit the information regarding details of short term/long term open access rejected by them for captive power plants as well as intra-state, inter-state and inter-regional transaction

details of captive power during every month in the following format for deliberation in meeting.

Table A: Details of Rejection of Open Access for Captive Power
(Month/Year-----)

Sl. No.	Name of firm/ Plant/location	MW	Reasons for Rejection

Table B: Details of Transactions for Captive Power
(+ Import) MU/(-Export) MU
(Month/Year-----)

Intra-State		Inter-State		Inter-Regional	
Firm/plant/ location	MU	Firm/Plant/ Location	MU	Firm/Plant/ Location	MU

SLDCs/NRLDC may submit the information.

Punjab had intimated that no open access application was rejected during May, 2009. UP has intimated that no organization had yet approached for sale of power from their captive power plant to UP or to other States. However, various sugar mills located in UP and having co-generation plant sell power to UP. During the month of May, 2009 the total energy and average power received from the co-generation plants of sugar mills in UP in terms of energy was 37.20 MU (operational figures) and average power was 50 MW (operational figures).

Status may be updated.

(B) Power Injection in the Grid from Renewable Energy Sources (RES)

All constituents are requested to submit the information regarding injection of power in the Grid by Renewable Energy Sources (RES) during every month for onward transmission to CEA/MoP. Rajasthan has submitted the information for May, 2009.

Constituents may submit the information on regular basis.

25.0 Power Supply Position for the Areas of State's Falling Under National Capital Region (NCR)

The NCR Planning Board is closely monitoring the power supply position of National Capital Region. A monthly Power supply Position of the Union Territory of Delhi, Haryana Sub-Region, Rajasthan Sub-Region and UP Sub-Region falling under NCR is required to be submitted by Delhi, Haryana, UP and Rajasthan in the following format every month to NRPC secretariat.

(Month/Year.....)

Sl. No.	Sub-Region	Requirement (MW)	Availability (MW)	Shortage (MW)	Energy Requirement (MU)	Energy Availability (MU)	Shortage (MU)

The members may submit the information.

Delhi, Rajasthan and Haryana submitted following details for May, 2009.

Sl. No.	Sub-Region	Requirement (MW)	Availability (MW)	Shortage (MW)	Energy Requirement (MU)	Energy Availability (MU)	Shortage (MU)
1	Delhi	3818	3690	128	1905	1880	25
2	Alwar (Rajasthan)	330	300	30	2683	2439	244
3	Haryana						
A	Panipat	350	300	50	8.4	7.2	1.2
B	Sonipat	280	220	60	6.7	5.2	1.5
C	Rohtak	250	210	40	6	5	1.0
D	Jhajjar	230	200	30	5.5	4.8	0.7
E	Gurgaon	490	456.6	33.4	11.40	10.96	0.44
F	Faridabad	425	400	25	10.21	9.6	0.61
G	Rewari	114	111.5	2.5	2.74	2.68	0.06

26.0 Report in Respect of Planned Outage of Generating Units

Exception Report in respect of deviation of actual outage with respect to the scheduled outage programme has to be furnished to CEA/MoP along with the reasons thereof. In view of the above all the constituents are requested to send monthly exception report to NRPC in the following format.

Sl. No.	Name of Power Station	Unit No.	Planned Maintenance Schedule		Actual Maintenance Schedule		Reasons for Deviation
			From	To	From	To	

27.0 Any Other Item with the Permission of the Chair

28.0 Date and Time of Next Meeting

The date and venue for 40th OCC meeting would be intimated later.

STATUS OF LINES TRIPPED ON 10th MAY-11th May 09,19th May09 ,21th & 22nd May09,28thMAY IN STORMS .				
NORTHERN REGION				
POWER GRID Lines				
	Name of Line	Trippng time/date	Reasons of tripping	Status of restoration
1	400 kV Ballabgharh-G.Noida	1551 hrs / 10.05.09	6 Nos. D/Ckts Towers (loc.no.70 to 75 , 4nos. A type , 1no.B type & 1 no.C type) damaged	Due to Right Of Way problems ERS erection could not be carried out and normal towers shall be erected /rectified for charging the line. Expected date of Restoration is 30.06.09 .
2	400 kV Ballabgharh-Maharani Bagh	1551 hrs / 10.05.09	At the same D/Ckts towers as above.	All 9 no. ERS erected stringing completed. Single conductor (bersimis) instead of 4 conductors is placed between these spans. Line charged on 17.05.09 at 1926hrs. Expected in normal mode by 29-06-2009.
3	400 kV Allahabad-Mainpuri-1 & 2	1851 hrs / 11.05.09	5 Nos. D/Ckts Towers (loc.no.798 to 802 , 5nos. A type) damaged (2 towers at 1st seccion and 3 towers at stub level).	CKT-2 charged on 19.05.09 at 2041hrs on 6 nos. ERS on single conductor (moose,85 °C) . Likely to come on normal towers by 03-07-2009. CKT-1 charged on 23.05.09 at 1416hrs on 6 ERS on single conductor (moose,85 °C). Likely to come on normal towers by 28-06-2009.
4	400 kV Dadri-Mandaula-1	2128 hrs/ 19.05.09	2 Nos. D/Ckts Towers (loc.no.32 to 33 , DA type) damaged	In CKT-1 - 6 no. ERS erected and line charged on 26.05.09 /1507 hrs.on (twin bersimis) instead of 4 conductor. To be normalised on normal towers, expected date is 19.06.09 .
5	400 kV Dadri-Mandaula- 2	2128 hrs/ 19.05.09	At the same D/Ckts towers as above.	Ckt -2 shall be normalised on normal towers expected date is 05.07.2009 .
6	400 kV Kanpur- Ballabgharh	2129 hrs/ 19.05.09	Insulator hardware fitting of B-Phase at loc.no. 928 (suspension tower, Yamuna River x-ing tower)	Line charged on 20.05.2009 at 2350hrs. Schedule for normal towers on 24-06-2009.
7	400 kV Kanpur-Ballabgharh	1736 hrs/ 28.05.09	3Nos. S/ Ckts Towers (loc. No. 455 to 457, 3 Nos. A type) damaged	Line charged on 05.06.2009 at 1352hrs on 4 nos. ERS on twin moose conductor. Likely on 24-06-2009.
UPPCL Lines				
1	400 kV Unnao-Bareilly-1&2	2310 hrs / 10.05.09	2 Nos.D/Ckt Suspention Towers (LOC. No.700 to Loc .No. 701) damaged (1 towers at middle seccion and 1 tower at stub level).	Work completed. Ckt-1 charged at 1327hrs/05.06.09 and Ckt-2 charged at 1335hrs/05.06.09 on normal towers.
2	220 kV Bareilly- Dohna-C.B. Gunj	2302 hrs / 10.05.09	1 Nos. Tower(loc.no.15- Type A+5) damaged(twisted)	Line charged on 14.05.09 at 1821hrs. On skipping one tower so loading restriction due to more sag.
3	220 kV Sitapur -Shahjahanpur	2310 hrs/ 10.05.09	1No. Tower damaged.	Line Restored on normal towers and charged at 2110hrs on 10.06.09 .
4	220 kV Merrut(PG)- Shatabdinagar	2057 hrs/ 19.05.09	3Nos. D/C Towers (loc.no.63,64 &75) damaged.	Line Restored and charged at 2310hrs on 27.05.09 .

5	220 kV Shatabdinagar-Modipuram	2057 hrs/ 19.05.09	at the same D/Ckts towers as above.	Line Restored and charged at 2255hrs on 27.05.09 .
6	220 kV Orai - Kanpur	0135 hrs/ 20.05.09	9 Nos. towers damaged.	It has been informed by UPPCL that tower replacement work is under progress. Likely date is 10-07-09.
7	220 kV Orai - Parichha ckt-1	1710 hrs/ 28.05.09	3Nos. D/C towers (LOC.NO. 71,72,73) damaged.	Line made directly from Parichha to Mainpuri by jumpering after by passing the DC tower on 29.06.09. Then again normalised as same as earlier configuration on 09.06.09/1235hrs.
8	220 kV Orai - Mainpuri (UP)	1710 hrs/ 28.05.09	on same tower as above	---do----
9	220 kV Orai - Parichha ckt-2	1710 hrs/ 28.05.09	3Nos. D/C towers (LOC.NO. 268,269,270) damaged.	Line Restored on normal towers and charged at 2045 hrs on 11.06.09 .
10	220 kV Orai - Parichha ckt-3	1710 hrs/ 28.05.09	on same tower as above	Line Restored on normal towers and charged at 2045 hrs on 11.06.09 .
RRVNL Lines				
1	220 kV S/Ckt Mandawar-Bharatpur	1810 hrs/ 21.05.09	4Nos. Suspension towers and 1no. Tension tower damaged.	Normalised
2	132 kV S/Ckt Bharatpur-Nagar	1810 hrs/ 21.05.09	5 Nos. towers damaged.	---do----
3	132 kV S/Ckt Bharatpur-Nadbai	1810 hrs/ 21.05.09	2 Nos. towers damaged.	---do----
PTCUL Lines				
1	220 kV Bareilly - Pantnagar	2259 hrs/ 10.05.09	1 Nos. Tower (Loc. No. 56- Type A) damaged.	Line charged on normal tower at 2015hrs./ 15.05.09
DTL Lines				
1	220 kV South of Wazirabad-Kashmiri Gate D/C	1438hrs/ 22.05.09	3Nos. D/C Towers (Loc. No. 12, 13 &14) twisted and damaged.	Work under progress. Mean while supply on 220 kV level to Kashmiri gate (ONE CKT) has been given on 24.05.09/1655hrs by making T-OFF Connection in Wazirabad-Geeta colony ckt-2 . Likely date is 7-07-09.
Western Region				
1	400 kV Jabalpur – Itarsi D/C	14/05/09	20 towers damaged	At present on ERS. Likely revival on normal towers by end of July, 2009.
2	400 kV Jabalpur Vindhaychal	24/05/09	3 towers damaged	At present on ERS. Likely revival on normal towers by end of July, 2009.
	Korba (NTPC)-Bhilai {PGCIL Line}	06/06/2009	2 towers damaged	Expected by 18-06-2009.
	Korba (W)-Bhilai {Chhattisgarh Line}	06/05/2009	2 towers damaged	Expected by 18-06-2009.
Other line outages reported in Eastern Region				
1	220 kV Joda-Jamshedpur (DVC),	18.05.09		14-06-2009
2	220 kV Bakreshawer- Bidhannagar D/C	27.05.09		NA
3	220 kV Farakka-Lalmathiya (NTPC)	NA	3 towers damaged	Restored on normal towers on 03-06-2009.

Details of Under Frequency Operations Due to df/dt During the Month of June-2009 (10, 17 and 18 June 2009 When Frequency Touched 48.8 Hz)

Sl. No.	Date/ Tripping Time	Name of Sub-Station	Name of Feeder / Equipment	Load (MW)

Details of Under Frequency Operations Due to RLSE During the Month of June, 2009

Sl. No.	Date/ Tripping Time	Name of Sub-Station	Name of Feeder / Equipment	RLSE Group No.	Load (MW)

Annex-III

Progress of Installation of HT Shunt Capacitors (Rated 11 kV and above) in NR as on (31-05-2009)

STATE / UT	Requirement as per NRPC Studies	Installed as on 31.3.2009	Assuming 10 % defective & to be revived	Effective capacitors in service	New Capacitor to be added during 2009-10	Installed during 2009-10 upto 31 st May 09	Capacitors installed as on 31 st May 09	Balance to be installed during 2009-10	Capacitor revival till 31 st May 09	Capacitors to be revived 2009-10
	1	2	3	4	5=1-2	6	7=2+6	8=5-6	9	10=3-9
DELHI	2097	3476	348	3128	0	0	3476	0	0	348
HARYANA	4175	3359	336	3023	816	0	3359	816	0	336
PUNJAB	6479	5713	571	5142	766	27	5740	739	10	561
RAJASTHAN	4269	3761	376	3385	508	24	3785	484	0	376
UP	7261	5812	581	5231	1449	0	5812	1449	0	581
UTTARAKHAND	586	353	35	318	233	0	353	233	0	35
HP	551	514	51	463	37	0	514	37	0	51
J&K	1271	147	15	132	1124	0	147	1124	0	15
CHANDIGARH	157	127	13	114	30	0	127	30	0	13
TOTAL	26846	23262	2326	20936	4963	51	23313	4912	10	2316

Monthly Progress of Installation of Shunt Capacitors in NR During 2009-10 (T=Target, A=Achievement)

STATE / UT	April		May		June		July		Aug		Sept		Oct		Nov		Dec		Jan		Feb		March		Total		
	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	
DELHI		0																									
HARYANA		0																									
PUNJAB		0		27.15																							27.15
RAJASTHAN		24		0																							24
UP		0																									
UTTARAKHAND		0																									
HP		0																									
J&K		0																									
CHANDIGARH		0																									
TOTAL		24																									51.15

Monthly Progress of Revival of Defective Shunt Capacitors in NR DURING 2009-10

STATE / UT	Total defective capacitors	Capacitors revived during												TOTAL (Revived)													
		APRIL	MAY	JUN E	JULY	AUG	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR														
DELHI	10																										0
HARYANA		0	0																								0
PUNJAB	282	0	10.262																								10.262
RAJASTHAN	368.896	0	0																								0
UP		0	0																								0
UTTARAKHAND		0	0																								0
HP		0	0																								0
J&K		0	0																								0
CHANDIGARH	6	0	0	1																							1
TOTAL	666.896																										11.262



From: DGM (OS)
NCR-HQ, Noida

To: SE (Operation)
NRPC, New Delhi.

Ref. No.: NCR-OS/RCC/

Date: 01.07.2009

Planned maintenance programme of units at NTPC NCR Stations for July-Aug-Sept'09

Station	Unit	Capacity (MW)	Shutdown Period		No. of days	Work to be undertaken
			From	To		
Badarpur	1	95	01/08/09	25/08/09	25	Boiler Maintenance
Badarpur	2	95	01/09/09	15/10/09	45	Major Overhaul
Dadri (Coal)	4	210	15/09/09	09/10/09	25	Boiler Maintenance
Anta	GT#1	88.71	04.07.09	11.07.09	08	8000 VOH Inspection
	GT#2	88.71	20.07.09	15.09.09	(52+6)	Major O/H (R&M) including 3 days each for pre-& post-O/H PG Tests
	ST	153.20	20.07.09	31.07.09	12	Minor Inspection
Auraiya	GT#1	111.19	18.07.09	01.08.09	15	Hot Path Inspection
Dadri (Gas)	GT#3	130.19	06.07.09	12.07.09	07	8000 EOH Inspection
	GT#2	130.19	03.08.09	09.08.09	07	8000 EOH Inspection
	GT#4	130.19	31.08.09	02.09.09	03	2000 EOH Inspection
Faridabad	GT#1	137.75	08.09.09	12.09.09	5	Small Inspection
	GT#2	137.75	18.09.09	22.09.09	5	Small Inspection

Annex-IV(B)

NTPC Ltd.
Northern Region Headquarter – Lucknow

FAX MESSAGE

Date :01-07-2009

To,

Smt. Sarita Sewak
EE(O), NRPC
Katwaria Sarai
New Delhi


Sub : Maintenance program of NTPC-NR stations for the month of Jul-09 , Aug-09 & Sep-09.

Please refer to telephonic discussion you had with our GM(OS) , NR on 01-07-09 find below the planned maintenance program for NTPC NR stations for the month of Jul-09 , Aug-09 & sep-09.

Station / Unit / Capacity	Period			BLR date
	From	To	Days	
Singrauli /Unit-1 200 MW	01-08-09	27-08-09	27	24-01-10
Singrauli /Unit-6 500 MW	26-08-09	19-09-09	25	07-05-09 **
Singrauli / Unit-2 200 MW	21-09-09	27-09-09	7	24-10-09
Rihand / Unit-1 / 500 MW	25-07-09	31-07-09	07	26-08-09
Rihand / Unit-3 / 500 MW	01-08-09	25-08-09	25	21-08-09
Rihand / Unit-4 500 MW	16-09-09	10-10-09	25	16-09-09
Unchahar / Unit-1/210 MW	18-08-09	20-08-09	03	17-08-09
Unchahar / Unit-2/210 MW	26-08-09	04-10-09	40	01-07-09 **
Tanda / Unit-3 / 110 MW	01-07-09	20-07-09	20	21-08-09
Tanda / Unit-4 /110 MW	25-07-09	08-10-09	75	08-05-10

** Boiler License exemption applied.

Regards,


(J. K. Agrawal)

**LIST OF SHUTDOWNS PROPOSED FOR APPROVAL IN JULY'09
(PLANNED SHUTDOWNS)**

Sl. No.	LINE/EQUIPT	DURATION				MODE	PURPOSE
		FROM		TO			
		DATE	TIME	DATE	TIME		
400 kV LINES							
1	400kv KNP-Auraiya-I line	24/07/09	07:00	24/07/09	16:00		For AMP work.
2	400kv Bareilly-Lucknow(UP)	09/07/09	09:00	09/07/09	17:00		For AMP work.
3	400kv KNP-All-I line	17/07/09	10:00	17/07/09	18:00		For AMP work.
4	400kv KNP-All-II line	21/07/09	10:00	21/07/09	18:00		For AMP work.
5	400kv KNP-I bay at Panki end	14/07/09	10:00	14/07/09	18:00		For AMP work.
6	400kv LKO-Unnao-II	17/07/09	08:00	17/07/09	17:00		For AMP work.
220 KV LINES							
1	220kv All-I-Phoolpur line	25/07/09	10:00	25/07/09	18:00		For AMP work.
2	220KV rappb-Chittor-II	01/07/09	06:00	03/07/09	18:00	Daily	For replacement of insulator strings.
ICT , B/R, HVDC & SVC							
1	ICT-I at Ballabgarh	07/07/2009	09:00	07/07/2009	18:00		For AMP work.
2	ICT-IV at Ballabgarh	09/07/09	09:00	09/07/09	18:00		For AMP work.
3	ICT-I at Bhiwadi	07/07/2009	09:00	07/07/2009	18:00		For AMP work.
4	ICT-II at Bhiwadi	09/07/09	09:00	09/07/09	18:00		For AMP work.
5	ICT-I at Meerut	14/07/09	08:00	14/07/09	18:00		For AMP work.
6	ICT-II at Meerut	21/07/09	08:00	21/07/09	18:00		For AMP work.
7							
400 kV & 220 kV BUS							
1	220kv Bus-I at Meerut	07/07/09	08:00	07/07/09	18:00		For AMP work.

LIST OF SHUTDOWNS PROPOSED FOR APPROVAL IN JULY'09 for construction activities
(PLANNED SHUTDOWNS)

S.N.	LINE/EQUIPT	DURATION				MODE	PURPOSE
		FROM		TO			
		DATE	TIME	DATE	TIME		
400KV LINES							
1	Agra-Bassi-II&III		06:00		18:00	Daily	2 days shut down ON 5/7 & 7/7 is required with a notice of 3 days for stringing of Agra-Bhiwadi line
2	Mainpuri - BLB D/C		06:00		18:00	Daily	2 days shut down is required with a notice of 3 days for stringing of Balia-Bhiwadi HVDC line
3	Sing-Anpara & Sing - Allid-I		06:00		18:00	Cont	20 days continuous shut down is required for diversion of line for construction of Anpara-D project of UP subject to readiness by UP..
500KV HVDC Line							
1	Rihand - Dadri both poles		06:00		18:00		1 day shut down is required with a notice of 3 days for stringing of Balia-Bhiwadi HVDC line
220KV LINES							
1	220KV Mainpuri-Harduaganj & 132 KV Mainpuri Etah line of UPPCL		06:00		18:00	Daily	2 days shut down with a difference of 3 days in between is required with a notice of 3 days for stringing of Balia-Bhiwadi HVDC line

Details of DR triggering of Bahadurgarh Sub-station

Sl.No	Name of Line/Relay	Date & Time of Fault	Type of fault	Distance	Fault Current
Tripping					
1	220kV Line -I	03-Jun-09 08:32Hrs	Y-B phase	4 km	2.39kA
2	220kV Line -II	03-Jun-09 08:32Hrs	Y-B phase	3.9 km	2.48kA
Relay pick up/DR trigerring					
3	ICT HV over current E/F relay pick up	19-May-09 1952 Hrs	B phase		1.2 kA
4	ICT HV over current E/F relay pick up	19-May-09 2103 Hrs	B phase		3.38 kA
5	ICT HV over current E/F relay pick up	19-May-09 2113 Hrs	B phase		1.97 kA
6	ICT HV over current E/F relay pick up	19-May-09 2114 Hrs	B phase		1.93 kA
7	ICT HV over current E/F relay pick up	19-May-09 2115:16 Hrs	B phase		1.96 kA
8	ICT HV over current E/F relay pick up	19-May-09 2115:27 Hrs	B phase		1.96 kA
9	ICT HV over current E/F relay pick up	19-May-09 2154 Hrs	B phase		1.94 kA
10	ICT HV over current E/F relay pick up	19-May-09 2155 Hrs	B phase		4.8 kA
11	ICT HV over current E/F relay pick up	20-May-09 1349 Hrs	B phase		5.37 kA
12	ICT HV over current E/F relay pick up	20-May-09 1355 Hrs	B phase		3.23 kA
13	ICT HV over current E/F relay pick up	20-May-09 1521 Hrs	B phase		2.28 kA
14	ICT HV over current E/F relay pick up	22-May-09 1348:15 Hrs	R phase		3.88 kA
15	ICT HV over current E/F relay pick up	22-May-09 1348:27 Hrs	R phase		3.33 kA
16	ICT HV over current E/F relay pick up	22-May-09 1358:12 Hrs	Y phase		1.17 kA
17	ICT HV over current E/F relay pick up	22-May-09 1423 Hrs	Y phase		1.14 kA
18	ICT HV over current E/F relay pick up	23-May-09 1329 Hrs	B phase		3.6 kA
19	ICT HV over current E/F relay pick up	23-May-09 1330:32 Hrs	B phase		3.65 kA
20	ICT HV over current E/F relay pick up	23-May-09 1330:59 Hrs	B phase		3.68 kA
21	ICT HV over current E/F relay pick up	23-May-09 1912 Hrs	Y phase		1.23 kA
22	ICT HV over current E/F relay pick up	23-May-09 1926 Hrs	Y phase		1.39 kA
22	ICT HV over current E/F relay pick up	23-May-09 1931 Hrs	R phase		3.33 kA
22	ICT HV over current E/F relay pick up	23-May-09 1932 Hrs	R phase		3.3 kA
22	ICT HV over current E/F relay pick up	24-May-09 1107 Hrs	B phase		5.38 kA

Status of Commissioning of New Generating Units in 2009-10

Sl. No	Unit	State	Company	Capacity (MW)	Expected Date of Commissioning
1	Barsingsar Lignite	Rajasthan	NLC	2x125	08/2009 and 01/2010
2	Chhabra TPS	Rajasthan	RRVUNL	2x250	U#1 Synchronized on 16 th April 09 (on oil fire) Unit #2 12/2009
3	Kota TPP	Rajasthan	RRVUNL	195	Syn. On 30 th May 09
4	Suratgarh TPS	Rajasthan	RRVUNL	250	Synchronized on 31.03.09
5	RAPP-5 and 6	Rajasthan	NPCIL	220	U#5: December, 2009 U #6: Feb, 2010. (Depending upon availability of fuel) Revival of U#2: Sept, 2009
6	Jallipa Kapurdi TPP	Rajasthan	Raj West Power Ltd (JSW)	8x135	One unit each in 07/2009 and 09/2009
7	Kahalgaon Stage-II, U#3	Bihar	NTPC	500	Synchronisation by July, 2009, CoD by Sep, 2009
8	NCP Project St-II U#5 &6	U.P.	NTPC	2X 490	11/2009 03/2010
9	Rithala CCPP	Delhi	NDPL	108	01/2010
10	Rajiv Gandhi Thermal Project (Khedar)	Haryana		2X600	Dec 2009 Feb 2010

Constituents may like to update the status. The details of the units to be commissioned during 2010-11 may also be submitted. While reporting the generation capacity addition CoD as well as the date of stabilization may be specifically mentioned.

Strengthening and Up-Gradation of the Transmission, Sub-transmission and Distribution System

Name of Constituent:

Table A

Power Evacuation/Dedicated Lines From Generating Stations

Name of line	Voltage Level (kV)	Commissioning schedule during FY 2009-10

Table B

(Inter Regional/ Inter-State Lines)

Name of line	Voltage Level (kV)	Commissioning schedule during FY 2009-10

Table C

(Intra-State System: Transmission Lines)

Voltage Level (kV)	Total (ckt kms)	
	Target (FY 2009-10)	Actual as on
220 kV		
132 kV		
66 kV/33 kV		
11 kV		

Intra-State System: Sub-stations

Voltage Ratio (kV)	Total Sub-station Capacity	
	Target 2009-10	Actual as on
220/132		
220/66		
132/33		
66/11		
33/11		
Distribution Transformers		

Annex-X

**Status of replacement of porcelain insulators with polymer / antifog insulators
(As reported by constituents)**

As on :11/06/09

Name of the constituent	Voltage level	Lines where insulators to be replaced			Type of insulator (polymer/antifog)	Remarks
		Total Insulator Strings (Nos)	Insulator Strings replaced (No.s)	Scheduled completion date for replacement of balance insulators		
DTL	400kV	8212	nil	Sep-09	Polymer	Procurement for 400kV in process through PGCIL, order in 04/09, supply of first lot by June 09. Tenders for installation being floated . Work completion by Sep-09
	220kV	&	nil	*	Polymer/Antifog	Taking action for procurement of Antifog insulators
HVPNL	220kV	58050	*	May-09	Antifog	Work completion by Sept 2009
UPPTCL	400kV	1000	80	in progress	Polymer	total 1282 will be replaced , work in progress, 1165 insulators received, 117 awaited
	220kV	1000	629	in progress	Polymer/ antifog	total 1000 will be replaced , work in progress, 799 insulators received, 201 awaited
PGCIL NR-I	400kV	23102	10643	Sep-09	Polymer	12295 received so far.
	HVDC	4608	40	Oct-09	Polymer	
PGCIL NR-II	400kV	19512	2500	Sep-09	Polymer	11000 received so far, installation start from May 09
	220kV	360	0	15th Jun-09	Polymer	Insulators received
BBMB	400kV	2016	*	Nov-09	Polymer	Specifications to be finalised
	220kV	3541	*	Dec-09	Polymer	
	400kV	264	42	May-09	Antifog	Purchase order for 37000 insulators shall be placed in May 09, Expected receiving Oct.,09,replacement work completion Nov/Dec 09
	220kV	2654	224	May-09	Antifog	
POWERLINKS	400kV	1956	1956	Apr-09	Polymer	All insulators received.work completion : Apr-09
PSEB	220 &132 kV	13000	322	Oct/Nov 09	Antifog	Order placed for 13000 antifog insulators in April 09, Expected delivery- 3 months,. 5072 antifog type insulators are available in stock and are being replaced

Note: 1) * - " Procurement is under process. Actual information to be submitted by respective constituents".

2) & - " Actual information to be submitted by respective constituents".

3) As per NRPC meeting held on 30/09/2008, insulators replacement has to be completed by March, 09.

Annex-XI**Implementation of Recommendations of the Inquiry Committee on Grid Disturbance in Northern Region of 27th January, 2007**

Sl. No.	Recommendations	Action by	Current Status
1	Classification of pollution levels of lines/line stretches by measurement of ESDD on insulator.	All constituents	PGCIL NR-I and NR-II : Got the study done NCR Area: should look into because it varies case to case basis.
2	Notifications by the respective state government that no brick kiln or any industrial unit or biomass or diesel based power plant having chimney height up to 30 meters be set up within 0.5 km of the 220 kV or higher voltage transmission lines.	All State Govt.	Instruction issued by Haryana only. Other states were also requested in the meeting to issue necessary instructions
3	Review of pollution standard.	CEA to initiate action	Action being taken by CEA
4	Provision of bird guards on all towers.	STUs/CTU	Completed.

Annex-XII**Implementation of Recommendations of the Inquiry Committee on Grid Disturbance in Northern Region on 7th and 9th March 2008**

Sl. No.	Recommendations	Action by	Current Status
1	Replacement of existing insulators by Polymer / Anti fog Insulators	(Action- All Constituents)	In progress by all constituents
2	Cleaning of insulators	(Action- STUs/CTUs)	In progress by all constituents
3	Monitoring of criticality of lines vis-a-vis cleaning/replacement process in NR	(Action- NRLDC and All SLDCs)	In progress
4	Alertness During high RH and Low Temperature conditions	Action- SLDC/ NRLDC	Reported to be implemented by SLDC/NRLDC
5	Railway supply reliability	Railways	-----
6	Operation of Minimum filter bank at HVDC Rihand –Dadri Bi-pole	(Action – PGCIL)	Instruction issued by PGCIL
7	Pollution control of diesel vehicle	All State Govt.	States were requested in OCC to initiate action.
8	Developing a fog forecasting model for power system in NR	(Action – NRLDC)	In progress: NRLDC is working to develop a model before next winter.
9	Chemical Analysis of deposits on Insulator Strings	(Action All constituents)	PGCIL (NR-I) have got the analysis done, NR-II has sent sample to CPRI and other agencies.
10	Recommendation of committee on Insulation requirement of EHV transmission lines of various voltage	All constituents	States were requested in OCC to implement the recommendations.
11	Pollution Mapping of the Country	PGCIL	POERGRID (NR-I) and (NR-II) have got the study done. PGCIL was requested to make a proposal for whole country. PGCIL stated that letter from CEA has been received and their Engg. Deptt. is working on it. PGCIL had written letter to CPRI. PGCIL requested states to cooperate in this matter.

List of Substations Without RTUs

Sl No.	Utility	kV Level	Station	Remarks
1	DTL	220	DSIDC	RTU was to be installed by April 2009. Status
2	HVPNL	220	Cheeka	
3	HVPNL	220	Daulatabad	
4	HVPNL	220	IMT Manesar	
5	HVPNL	220	Jorian	
6	HVPNL	220	Nilokheri	
7	HVPNL	220	Palli	
8	HVPNL	220	Tepla	
9	PDD , J & K	400	Baglihar	
10	PSEB	220	Bajakhana	
11	PSEB	220	Botiawala	
12	PSEB	220	Derabassi	
13	PSEB	220	Dhuri	
14	PSEB	220	Hambran	
15	PSEB	220	Khasa	
16	PSEB	220	Kotli Suratmali	
17	PSEB	220	Patran	
18	PSEB	220	Rajla	
19	PTCUL	400	Kashipur	To be integrated. Integration date
20	PTCUL	220	Haldwani	
21	PTCUL	220	Pantnagar	RTU Shifted from Haldwani .Not yet integrated. Schedule for integration
22	PTCUL	220	Roorkee	
23	RRVNL	220	Barsingsar	RTU would be Commissioned along with synchronisation.
24	RRVNL	220	Dholpur	
25	RRVNL	220	Jallore	
26	UPPCL	400	Greater Noida	
27	UPPCL	221	Orai	RTU installed.Integration status
28	UPPCL	220	Almoh	
29	UPPCL	220	Attrauli	
30	UPPCL	220	Chibra Mau	RTU installed.Integration status
31	UPPCL	220	Dohna	RTU installed.Integration status
32	UPPCL	220	RPH	RTU installed.Integration status
33	PGCIL	400	Roorkee	To be integrated.
34	PGCIL	220	Sitarganj	Integration in progress.

RTUs with Telemetry Problem

SI No.	Utility	kV Level	Station	Remarks
1	HPSEB	220	Larji	RTU would be integrated by March 09. Status
2	HPSEB	400	Baspa	RTU Integrated but some configuration problem.Data not available at NRLDC
3	HPSEB	132	Andhra	PLCC problem
4	HVPNL	220	Fatehabad	Restored
5	PDD , J & K	220	Chenani	PLCC Link problem.
6	PDD , J & K	220	Hiranagar	PLCC Link problem.
7	PDD , J & K	220	Pampore	PLCC Link problem.
8	PDD , J & K	132	Lower Jhelum	PLCC Link problem.
9	PDD , J & K	132	MiranSahib	PLCC Link problem.
10	PDD , J & K	132	Upper Sindh	PLCC Link problem.
11	POWERGRID	400	Kankrauli	Siemens SAS , integrated on 29/05.Link intermittent.
12	PTCUL	220	Maneribhali	
13	RRVPNL	400	Jodhpur	ABB RTUS have been Received at Site would be integrated soon. Status
14	RRVPNL	220	Flodi	ABB RTUS have been Received at Site would be integrated soon. Status
15	RRVPNL	132	Jaisalmer	Data base mismatch-- Corrected
16	RRVPNL	132	Sri ganga Nagar	Restored
17	RRVPNL	220	Bhilwara	
18	UJVNL	220	Chibro	CPU card problem.
19	UJVNL	220	Ramganga(H)	PLCC Link problem.
20	UPPCL	400	Agra-I	Restored
21	UPPCL	220	Agra-II	PLCC Link problem.
22	UPPCL	220	Allahabad Cant	
23	UPPCL	220	Badaun	
24	UPPCL	220	Basti	
25	UPPCL	220	Gokul	Restored---14-05-09
26	UPPCL	220	Gorakhpur 220	Restored---14-05-09
27	UPPCL	220	Noida	Data intermittent
28	UPPCL	220	Saharanpur	Data intermittent
29	UPPCL	220	Sahibabad	Data intermittent
30	PGCIL	400	Naptha Jhakri	Restored
31	PGCIL	400	Ludhiana	Restored---10-06-09
32	PGCIL	400	Patiala	Not available since 6/6/2009
33	PGCIL	400	Dulhasti	PLCC Link problem.--- Since 12/05/09
34	PGCIL	400	RAPP-A	Not available since 6/6/2009
35	PGCIL	400	Balia	Not available since 18-01-09
36	DTL	220	Kashmeri Gate	
37	No alternate route for all Gopalpur RTU.			