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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

सं0-एनआरपीसी/अधी.अभिं.(प्रचा)ओसीसी/39/2009

दिनांक:- 05/06/2009

विषय- प्रचालन समन्वय समिति की 39वीं बैठक की कार्यसूची ।

Subject: Agenda for 39th OCC meeting.

The 39th OCC meeting will be held at 11:00 AM on 15th June, 09 at NRPC Secretariat.

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

Kindly make it convenient to attend the meeting.

(Ashok Kumar Rajput)

SE (Operations) & Member Convenor, OCC

(प्रचालन एवं अयोजक सदस्य (ओ.सी.सी).)

09868202176

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Agenda for the 39th Meeting of the Operation Coordination Sub-Committee (OCC) of NRPC

Date 15th June, 2009
Time 11:00 AM
Venue: NRPC Secretariat, New Delhi.

1.0 Confirmation of Minutes

The Minutes of the 38th meeting of the OCC held on 14th May, 2009 at Mount Abu, have been issued and circulated vide letter No. NRPC/SE (O)/OCC/38/2009 dated 28.05.09 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 Review and Discussion

2.1 Power Supply Position

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

2.2 Representative of NRLDC may give a brief presentation on the performance of the Grid Operation during the last month. However, key issues related to grid security, requiring feedback from the constituents will be circulated separately.

2.3 Important Grid Incidents of May 2009

(a) Grid failure at NAPS on 06.05.2009: NAPS has intimated that Unit-I of NAPS was under startup on 06.05.09. NAPS Unit-2 was under shutdown. 220 kV NAPS-Moradabad line was under shutdown for repairing of broken line insulator. Other 220 kV lines i.e. Khurja Ckt.-1 & 2 and Atrauli line were in service and drawing 395 Amp, 35 Amp & 30 Amp respectively. Grid voltage was maintaining low at around 165 kV. 220 kV system around Khurja, Harduaganj, Muradnagar was experiencing over loading. In order to regulate power flow at Harduaganj 220 kV Harduaganj-Atrauli line was opened from Harduaganj since 2238 Hrs on the instruction of SLDC, Lucknow.

At 2249 Hrs, 220 kV Simbhaoli line was opened from NAPS end on NRLDC instructions to regulate overloading in Western UP system. After opening of 220 kV Simbhaoli line, power flow from Simbhaoli to Narora – Khurja system stopped. It resulted into further overloading on 220 kV Harduaganj-Khurja lines. The 220 kV Harduaganj – Khurja line tripped at 2250 Hrs, it led to separation of 220 kV Narora, Atrauli, Khurja, Muradnagar and adjoining 220 kV grid system. As there was no power feed in the separated sub system, there was a complete grid supply failure at NAPS and adjoining sub-system.

NAPS has intimated that the Grid failure has occurred due to enforcement of grid regulatory measures i.e. “opening of 220kV Narora-Simbhaoli line for load regulation” without proper review of the grid configuration. Hence they have requested UPPTCL/NRLDC to investigate the incident to avoid recurrence of such incidents.

(b) Outage of Important 400 kV and 220 kV Lines

Due to collapse of towers of 400 kV and 220 kV transmission lines in the dust-

storm in May, 2009 the transmission system had been experiencing a critical/alert situation (details given at **Annex-VI**). To review the situation a meeting of Crisis Management Group (CMG) of NR was held on 28th May 2009 at NRPC, New Delhi.

The following decisions were taken by the Crisis Management Group:

1. Revival of lines by PowerGrid and other constituents should be taken up on war-footing and the lines should be brought back before 15th June, 2009. The status in this regard would be closely monitored by NRPC Sectt. (Action – POWERGRID, UPPTCL, DTL, RVPNL, NRPC & WRPC)
2. Reliability of 400 kV Muradnagar sub-station of UPPTCL should be ensured by UPPTCL. (Action - UPPTCL)
3. Narela substation of DTL should be fed from Panipat (BBMB) side till the revival of Mandola ICT. (Action - DTL)
4. The ICT at Mandola needs to be revived as early as possible, preferably before 30th June, 2009. (Action - POWERGRID).
5. Constituents might be requested to control overdrawl in view of system constraints. (Action - All constituents)
6. Voltage level at Panipat , Haryana system and Punjab system needs to be closely monitored by NRLDC (Action - BBMB, HVPNL, PSEB and NRLDC)

Constituents may like to update the status.

(c) Tripping of Jhakri and Baspa Hydro Generating Stations along with all the 400 kV circuits emanating from Jhakri on 19.05.2009.

NJHPS has reported that at 16:29 hours on 19.05.2009, earth fault was observed on Nalagarh-II circuit due to which this line tripped. Subsequently, at 16:36 hours, Abdullahpur-I circuit also observed an earth fault which caused the tripping of this circuit. At this particular time, the total generation at Jhakri and Baspa Generating Stations was around 1668 MW. After the tripping of Nalagarh-II and Adbullahpur-I 400 kV circuits, there was a gradual increase in the current being drawn over Nalagrah-I circuit, which was found balance in all phases. Within 500 milliseconds(ms), the current increased from 1047 Amp to 3000 Amp. over Nalagrah-I circuit which triggered Zone-1 relay in all the three phases simultaneously (sensing a 3 phase fault) at NJHPS end for this circuit.

Alongwith this, because of such heavy overloading on this circuit, the generating units of NJHPS observed overloading on all the six generators which resulted into voltage dip at the generator terminals of all the six units and accordingly under voltage relay installed on the individual units led to opening of the Generator circuits breakers. Because of this, there was over speeding on the generators of all the six units which were running on near full load with full reservoir level.

Because of the simultaneous loss of generation from all the six generating units of NJHPS, there was sudden increase in the voltage level which tripped the fourth circuit emanating from Jhakri i.e. Abdullahpur-II and the two incoming Baspa-I & Baspa-II circuits thus causing loss of generation from Baspa Power House also. However, with the active participation and cooperation of all concerned, it is noted that the entire system could be restored in about an hour time.

The incident resulted in a loss of generation of 1.55 MU at NJHPS end because of water spillage. Similar loss must have also occurred at Baspa as both NJHPS and Baspa Projects are "run of the river" project and because of the fact that inflow of water in the feeding rivers is now more than the design discharge.

Details from Disturbance Recorder (DR) and Event Logger (EL) from Nalagarh and Abdullahpur may be submitted by POWERGRID with analysis of the incident and OCC may like to deliberate on the issue.

(d) Outage of Muradnagar sub station of UPPTCL on 19th May 2009-Reliability issue

NRLDC has reported that at 2117 hours on 19th May 2009 all the 400 kV circuits at Muradnagar tripped/reportedly opened manually leading to a severe crisis in the Northern Grid.

This incident at Muradnagar occurred during the period when there was report of a fire incident at Mandaula sub-station on the 400/200 kV, 315 MVA ICT-3 at 2112 hours. Soon after the above incident 400 kV Dadri-Mandaula D/C lines tripped at 2128 hours due to collapse of transmission line towers. All these incidents occurring in quick succession in a span of sixteen (16) minutes placed the grid in a severe crisis. Fortunately due to quick actions all around, a major grid disturbance was narrowly averted. On account of outage of Muradnagar system, around 600 MW generation was backed down at Dadri complex due to transmission constraints.

At earlier occasions also and particularly at critical times, this sub-station had shown its vulnerability. This is a very important station in NR and its reliability affects the reliability of the whole Grid. The disturbance recorder (DR) and Event logger (EL) are not functioning at this location. The protection system of this sub-station also needs special attention from UPPTCL.

UPPTCL may submit the details of outage with analysis and OCC may deliberate.

(e) Tripping at Parichha TPS on 28th May, 2009

It had been mentioned that 220 kV Orai-Mainpuri line tripped on operation of distance protection. The 220 kV Orai-Kanpur (PG) line was already under breakdown since 20th May 2009 due to damage of towers caused by thunderstorm. The 220 kV Parichha-Orai line also tripped on distance protection. Thus it appears that 220 kV Parichha-Saifai line was the only line available for evacuating 500 MW generation at Parichha which tripped at Saifai end on distance protection.

After the above line trippings, Parichha power station might have experienced high frequency conditions. However, the report states that the units tripped on under frequency and over-fluxing.

The above may be deliberated upon.

(F) Grid Incident in Delhi System on 22nd May, 2009

Around 1437 hrs of 22nd May, 2009 Delhi system experienced an incident in which four circuits from 400/220 kV sub-station Mandaula to Wazirabad tripped. This resulted in islanding and then collapse of Rajghat Thermal power Station (TPS), Indraprastha and Pragati Gas Power stations (GPS) along with load at 220 kV Patparganj and 220 kV Geeta Colony sub-stations.

Power supply to 220 kV Gopalpur, 220 kV Sabzi Mandi and 220 kV Kashmiri Gate sub-stations was affected and supply to 220 kV Park Street was partly affected. Prime facie a three phase fault at 220 kV Wazirabad sub-station has been reported to be the cause of the above islanding situation and collapse.

The details of the tripping, submitted by DTL is enclosed at **Annex-VII**.

Members may like to deliberate.

(G) Tripping at Anpara – on 18th and 20th May, 2009

The following tripping incidences were observed at Anpara on 18th May 2009 at 1713 hours:

1. 400 kV Anpara-Obra line
- 2 400 kV Anpara-Sarnath line
3. 400 kV Anpara-Singrauli line
4. 200 MW Unit No. 1 at Anpara

Again on 20th May, 2009 at 1518 hours the above tripping incidences were repeated. As a result of above trippings the transmission lines evacuating generation from Singrauli-Rihand Complex were critically loaded and for short time even the generation at Singrauli-Rihand complex had to be restricted to control the situation.

Anpara TPS (UPRVPNL) is requested that the details of these trippings along with specific reason details of flags/SOEs (Sequence of Events) and DR print-outs may please be sent to NRPC secretariat. They may intimate the necessary measures to avert such trippings in future.

(G) Blackout at 220 kV Hiranagar Sub-station Twice on 17th May 2009

NRLDC has reported that 220 kV Hiranagar sub-station suffered blackout on two occasions on 17th May, 2009. The first blackout occurred at 1125 hours while the second occurred at 1625 hours. Supply in both the instances was restored through 220 kV Gladni-Hiranagar line at 1220 hours and 1725 hours respectively. About 100 MW load was affected for close to two hours and the entire peak load of Hiranagar (160 MW) had a single infeed for about nine hours.

Restoration of 220 kV Sarna-Hiranagar line was considerably delayed in both these instances. In the first instance it was restored at 1545 hours reportedly through the transfer breaker as the main breaker of the line at Hiranagar end became faulty. In the second instance the line could be finally restored only at 2300 hours of 17th May, 2009 through the transfer breaker as that also reportedly developed a problem in its closing coil.

The above two incidents have led to a complete outage of 220 kV Hiranagar sub-station and has the potential to affect the reliability of Salal Power Station as well as the Northern Grid. PDD J&K may submit a detailed report in the matter.

NRLDC has reported that real time data is not available from Hiranagar 220 kV substation at NRLDC. J&K may take necessary action to avoid such incidents in future.

J&K, POWERGRID and NHPC may like to add more information in this regard.

2.4 Performance of UF and df/dt Relays

- Constituents to submit the details of the UFR operations during the month of May, 2009 to NRPC secretariat via e-mail at **nrebops@yahoo.com**
- Constituents to confirm the revised setting of df/dt relays as approved in the 23rd OCC Meeting.

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

(A) In the last OCC Meeting, Constituents had submitted the following details:

1. **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 13.3.2009 on M/s Areva T&D India Ltd., inspection of 50% of the ordered relays would be completed in May, 2009 and balance to be completed by July, 2009.
2. **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 Nos. df/dt relays had been placed and inspection is going on.
3. **HP:** HP stated that they had installed 3 Nos. df/dt relays in their system.
4. **DTL:** DTL stated that all 5 Nos. stage-I, df/dt relays with 0.1 Hz/sec had been installed in their system.
5. **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 in May, 2009. They further stated that order for 5 numbers additional UFRs would be placed in May, 2009. Four relays were being repaired. For 6 Nos. df/dt relays, they informed that these would be installed in May, 2009.
6. **UP:** UPPTCL stated that as they had sufficient relays in their system, they were not planning for new relays. However during the last OCC meeting they were requested to install the UFRs and df/dt relays at their new sub-stations so that the desired load relief could be achieved.
7. **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 by May, 2009. For df/dt relays, PTCUL had stated that the numerical relays already installed in their system are to be set for df/dt operation.
8. **J&K:** No information.
9. **Chandigarh:** No information

OCC in the last meeting emphasized that the need for providing additional **30% UFRs** in the system had arisen because the required load relief was not achievable with the UFRs presently installed in the system. It was also suggested that UFRs should be shifted to the feeders of higher voltage level, so that it comes on feeders which could be controlled by SLDC. Further, it should be certified that the UFRs had not been installed on the feeders which are already on Rotational Load Shedding Equipment (RLSE). OCC noted that manual load shedding requires time to operate and UFRs are instantaneous; hence installation of UFRs increases the reliability of the grid at the time of eventuality.

Constituents' should select the locations of new UFRs accordingly and **may update the status.**

2.5 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 May, 2009 will be circulated in the meeting.

Members may update and also furnish the required information through email.

3.0 PERFORMANCE OF SHUNT CAPACITORS

3.1 Status of Shunt Capacitors' installation for 2009-10 is enclosed at **Annexure-I**

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

New Capacitors installed during May, 2009	Defective Capacitors in the system at the end of May, 2009	Defective Capacitors brought back in to service during May, 2009
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The constituents were requested to update the status for following:

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

In the last OCC Meeting, Constituents had submitted the following details:

(A) Rajasthan: Rajasthan had submitted that tenders for purchase of 324 MVAR HT Shunt Capacitor Banks were opened and case was processed but no participant could qualify the technical bid. Re-tendering is under process. The balance capacitor banks are to be installed by the Discoms.

(B) Haryana: HVPNL informed that 470 MVAR shunt capacitors would be installed in their system and additional 430 MVAR shunt capacitors would be installed by their Discoms.

(C) **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. The supply was to commence within 2 months and completed within 3 months thereafter. 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.

(D) **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 a half months time and defective capacitors in the system would be revived by the end of June, 2009.

(E) **Delhi:** DTL informed that they had revived the 20 MVAR Capacitor Bank in their system.

(F) **J&K:** In 35th OCC meeting J&K had informed that due to poor response of the tender floated to procure capacitor banks, they were not able to add any capacitors in their system. J&K were also in process of re-tendering.

Each utility may update the status to NRPC Sectt. through e-mail.

Constituents may submit the information

3.2 Monthly Target for revival of defective Capacitor

As can be seen from **Annex-I** that around 1872 MVAR are defective which need revival at an early date. Constituents are requested to submit monthly target for the revival of the capacitors in their system.

Constituents may submit the information.

4.0 MAINTENANCE PROGRAMME OF GENERATING UNITS AND TRANSMISSION LINES

4.1 Generating Units

NTPC (NR) and NTPC's (NCR) are requested to submit in advance the programme for maintenance of their generating units in June-July, 2009 so that it can be deliberated in the meeting.

4.2 Transmission Lines

POWERGRID is requested to submit the programme for shutdown of lines & other elements during June and July, 2009 so that it can be deliberated in the meeting.

5.0 Outage of important elements in NR for a long period

5.1 Availability of spare converter transformer for HVDC bi-pole Rihand-

Dadri line:

POWERGRID had informed the following status:

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 13.11.07. POWERGRID

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. BHEL would take about 12 months to get it repaired. It would be made ready by August, 2009

- iii. 3rd transformer is now available as ready spare at Dadri. (ABB make)
- iv. 4th transformer had been dispatched from Vadodara to Rihand on 16.01.09 and had reached Rihand on 20.02.09.

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

- i. New converter transformer had been delivered by BHEL and reached Dadri.
- ii. Delivery of second converter transformer would be in June, 2009.

POWERGRID may update the status.

5.2 Outage of transmission line & other elements:

In the last OCC Meeting, the status of Line/Bus reactors which were not available since long time was discussed as under:

(a) 50 MVAR Bus Reactor at Gorakhpur

In 38th OCC meeting UPPTCL had intimated that post insulator for the reactor had been arranged and BHEL had been called to complete the work. The work is expected to be completed by 15th June, 2009.

UPPTCL may update.

(b) Tertiary Reactors

UPPTCL had earlier informed in 28th OCC meeting in July, 08 that there were 28 tertiary reactors in the Eastern UP out of which 5 numbers are defective. UPPTCL had submitted following status in the 38th OCC meeting.

Sl. No.	Location	No. of Reactors	Status
1	Mau	2	Tendering Process is on.
2	Bareilly	1	Inspection carried out. It has been stated that the damage is beyond economic repair and new reactor is needed at this location. 18 months time is required to change the reactor by a new one.
3	Sultanpur	1	New reactor has to be installed, No further update available.
4	Agra	1	Bushing has been ordered on BHEL, no further update available.

UPPTCL may update

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

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.

In last meeting, PGCIL had intimated that 400 kV Sarojini Nagar (Lucknow) sub-station belongs to UPPTCL and accordingly they should install the bus reactor at Sarojini Nagar. PGCIL had further added that for this location agreement between

PGCIL and UPPTCL was for existing elements and for any new items to be procured for the above the case might be referred to Standing Committee on Power System Planning. PGCIL and UPPTCL were requested to co-ordinate and settle the issue.

(UPPTCL may update)

(e) 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 transfer CB. M/S Hitachi had submitted offer for repair of Circuit Breaker. UPRVUNL had informed that order for repair and supply of spare parts of CB would be placed soon and delivery would be by August, 2009. UPRVUNL was requested to expedite the work.

(UPRVUNL may update)

(f) 315 MVA ICT at Bamnauli

DTL intimated that the 315 MVA ICT at 400 kV S/S Bamnauli was likely to reach at the S/S by the end of May, 2009 and commissioning would be completed by July, 2009.

(DTL may update)

(g) 100 MVA 220/66 kV ICT at Narela

DTL had intimated that the burnt 100 MVA 220/66 kV power transformer at Narela 220 kV S/S had been dismantled and removed from the foundation. A new transformer had reached at Narela S/S and repair work of transformer foundation had been started. The transformer would be commissioned by 30th May, 2009.

(DTL may update)

(h) In the last meeting UPPTCL intimated the revival status of the following system elements as under:

- **400/220 kV ICT-2 at Obra:** UPRVUNL informed that order for ICT had been placed on M/s BHEL. Work was expected to be completed by March, 2010
- **50 MVAR Bus Reactors at Bareilly:** UPPTCL informed that the Bus Reactor at Bareilly and not the CB connecting to Bus Reactor was defective. UPPTCL informed that it had been decided to install a new bus reactor at this location.
- **Bus Reactors at Sarnath:** Bus Reactors at Sarnath which was normalized after a long time was again out of order for considerable time due to reported problem in Y phase bushing damage at Sarnath. UPPTCL is requested to give the status for revival.

UPPTCL may update the status.

6.0 STATUS OF COMMISSIONING OF NEW GENERATING UNITS AND TRANSMISSION WORKS

6.1 The status of commissioning of new generating units in 2009-10 as updated by the constituents in 38th OCC meeting is as under:

Sl. No.	Unit	State	Company	Capacity (MW)	Expected Date of Commissioning
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1	Guru Hargobind TPS-II (Unit-IV)	Punjab	PSEB	250	Commissioned on 31.07.08, CoD on 30.06.2009.
2	Giral Lignite-II (Unit-2)	Rajasthan	RRVUNL	125	Synchronised on 26.12.08; CoD by May, 2009
3	Barsingsar Lignite	Rajasthan	NLC	2x125	08/2009 and 01/2010
4	Chhabra TPS	Rajasthan	RRVUNL	2x250	Synchronized on 16 th April 09, COD July 2009 Unit #2 12/2009
5	Kota TPP	Rajasthan	RRVUNL	195	May 09, COD by July 09
6	Suratgarh TPS	Rajasthan	RRVUNL	250	Synchronized on 31.03.09 COD 7/2009
7	RAPP-5 and 6	Rajasthan	NPCIL	220	U#5: December, 2009 U #6: March, 2010. (Depending upon availability of fuel) Revival of U#2: July, 2009
8	Jallipa Kapurdi TPP	Rajasthan	Raj West Power Ltd (JSW)	8x135	06/2009 to 08/2010
9	Yamuna Nagar U#2	Haryana	HPGCL	300	Synchronised on 29th March, 2008. Machine handed over in April, 2009.
10	Kahalgaon Stage-II, U#3	Bihar	NTPC	500	Synchronisation by June, 2009, CoD by Sep, 2009
11	NCP Project St-II U#5 &6	U.P.	NTPC	2X 490	11/2009 03/2010
12	Rithala CCPP	Delhi	NDPL	108	01/2010
13	Rajiv Gandhi Thermal Project (Khedar)	Haryana		2X600	Dec 2009 Feb 2010

Constituents may like to update the status.

6.3 TRANSMISSION WORK

6.3.1 POWERGRID/ RRVPNL furnished following information in the 38th OCC meeting:

1. **400 kV Kankroli-Jodhpur:** PowerGrid informed that for Kankroli-Jodhpur line, the commissioning schedule is October, 2009.
2. **220 kV Kankroli-Dewari:** RRVPNL intimated that some litigation was going on in respect of location of some towers and for this hearing which was scheduled to be held on 13th April, 2009 had been shifted to 25th May, 2009. Work is expected to be completed by July, 2009.

6.3.2 Constituents may also submit the status for commissioning of following lines

1. Commissioning of outlets from Roorkee (PG) Substation by PTCUL
2. Commissioning of outlets from Kota (PG) Substation by RVPNL
3. Commissioning Bhinmal (PG) Substation by PGCIL and 220 kV outlets from Bhinmal by RVPNL

POWERGRID/ RRVPNL/PTCUL may update.

6.3.3 Delay in Commissioning of 220 kV Nalagarh-Mohali D/C Transmission Line (100 ckt kms)

220 kV Nalagarh-Mohali D/C line is a part of the Jhakri transmission system and was scheduled to come by Dec-2004. The commissioning was delayed due to forest clearance pending and court case in respect of land acquisition. In last OCC meeting PSEB had informed that Environment and Forest clearance has been obtained from MOE&F. PSEB had also intimated that the case regarding stay at one location in HP had been dismissed by the Session Court and it had to be filed again in the High Court. It was suggested that PSEB may examine the alternative of re-routing this line or other options so as to avoid the disputed location.

PSEB may update the status.

6.4 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. PTCUL, Punjab (partly), HP, Haryana (partly), Rajasthan(partly) and DTL have submitted the required information.

Other constituents are requested to furnish the information in the following format through email to NRPC.

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		

8.0 Under Voltage Load Shedding Relays (UVLSRs)

Progress in the matter was discussed in last OCC meeting:

The status submitted by different constituents is as under:

- (i) **Punjab:** PSEB stated that out of 10 Nos. relays, 4 had already been installed and the remaining 6 would be installed by 25th May 2009.
- (ii) **Haryana:** In the last OCC meeting, the representative of 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 where high reactive load is incident, so that these loads might be disconnected in case of low voltage conditions and proper voltage in the grid could be maintained.

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 37th OCC meeting PTCUL had intimated that they had one relay for Rishikesh sub-station and its setting would be completed by April, 2009.
- (v) **UP:** UPPTCL informed that 6 UVLSRs out of 13 UVLSRs had been received out of these two UVLSRs had been installed and remaining four would be installed by April, 2009. They added that remaining 7 UVLSRs were expected to be delivered by 15th June, 2009.
- (vi) **Rajasthan:** As decided in 36th OCC meeting NRLDC stated that some

parts of Rajasthan such as Heerapura, Bassi etc had 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.

9.0 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 **Annexure-II**

Constituents may update.

10.0 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 **Annexure-III**.

Constituents may update

11.0 Implementation of Decisions of Crisis Management Group (CMG) Meeting Held on 22nd December, 2008

Member (GO&D), CEA and Chairman of Crisis Management Group (CMG) had a meeting on 22nd Dec, 2008. The status as submitted by constituents regarding implementation of the recommendations of CMG in last OCC meeting is enclosed at **Annex-IV**.

Constituents may update

12.0 (A) CAPTIVE POWER INJECTION 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

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The details submitted by constituents in 38th OCC meeting is attached at **Annexure V**

SLDCs/NRLDC may submit the information

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. For the month of May 2009, constituents may submit information to NRPC secretariat. Rajasthan has submitted the information.

13. Power Supply Position for the Area 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.

14. **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	

19.0 Any Other Item with the Permission of the Chair

20.0 Date and Time of Next Meeting

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

Name of the constituent	Voltage level	Lines where insulators to be replaced (As Reported by Constituents)			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 PGCIL, order in 04/09, supply 09. Tenders for installation to be completed by Sep-09.
	220kV	&	nil	*	Polymer/Antifog	Taking action for procurement of insulators
HVPNL	220kV	58050	*	May-09	Antifog	Work completion by May-09
UPPTCL	400kV	1000	80	in progress	Polymer	total 1282 will be replaced, 1165 insulators received
	220kV	1000	629	in progress	Polymer/ antifog	total 1000 will be replaced, 799 insulators received
PGCIL NR-I	400kV	23102	10515	Sep-09	Polymer	12295 received
	HVDC	4608	40	Oct-09	Polymer	
PGCIL NR-II	400kV	19512	2500	Sep-09	Polymer	11000 received so far, installed by May 09
	220kV	360	0	15th Jun-09	Polymer	Insulators received
BBMB	400kV	2016	*	Nov-09	Polymer	Specifications to be submitted by Nov-09
	220kV	3541	*	Dec-09	Polymer	
	400kV	264	42	May-09	Antifog	Purchase order for 37000 in place in May 09, Expected delivery- 3 months, replacement work completed by May 09
	220kV	2654	224	May-09	Antifog	
POWERLINKS	400kV	1956	0	Apr-09	Polymer	All insulators received. work completed by Apr-09
PSEB	220 & 132 kV	13000	322	Oct/Nov 09	Antifog	Order placed for 13000 antifog insulators in Oct-09, Expected delivery- 3 months, 13000 are available in stock and ready for supply

- 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, 2009.

Annexure-III

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

Sl. No.	Recommendations	Action by	Current Status
1	Classification of pollution levels of lines/line stretches by measurement of ESDD on insulators.	All constituents	PGCIL NR-I and NR-II: have Got the study done. NCR Area: The concerned should look into the matter because it varies from case to case.
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 220kV or higher voltage transmission lines.	All State Govt.	Haryana: Instructions issued. Other States: to issue necessary instructions.
3	Review of pollution standards.	CEA to initiate action	Action being taken by CEA
4	Provision of bird guards on all towers.	STUs/CTU	PGCIL: Completed. DTL: Mostly completed UPPTCL, Rajasthan and Punjab: Work in Progress

Implementation of the 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/Antifog 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 – Powergrid)	Instruction issued by POWERGRID
7	Pollution control of diesel vehicles	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)	POWERGRID (NR-I) have got the analysis done, NR-II has sent samples to CPRI and other agencies.
10	Recommendation of committee on Insulation requirement of EHV transmission lines of various voltage levels	All constituents	States were requested in OCC to implement
11	Pollution Mapping of the Country	POWERGRID	POWERGRID (NR-I) got the study done. PGCIL was requested to make a proposal in respect of whole of the country. PGCIL stated that letter from CEA has been received and their Engineering Department is working on it. PGCIL requested states to cooperate in this matter.

Annexure-IV

Implementation of the Decisions of the Crisis Management Group Meeting Dated 22nd December, 2008

Sl. No.	Decision	Action by	Current Status
1	The process of insulators cleaning shall be continued by all the constituents till March, 2009 and increase the frequency of cleaning at critical locations.	(Action-All Constituents)	In progress by all constituents.
2	Constituents shall expedite the replacement of insulators by polymer/antifog on priority in critical stretches of 400 kV and 220 kV lines.	(Action-All Constituents)	In progress by all constituents
3	All incidents of auto closures/tripping shall be analyzed by the concerned constituent and details of these trippings and analysis shall be sent to NRPC/NRLDC along with disturbance recorder (DR) and Event Logger (EL) printouts.	(Action-All SLDCs/ POWERGRID/ Generators)	Information submitted by POWERGRID, DTL & NTPC (NCR)
4	Operators at all substations, generators etc. shall adhere to the instructions of NRLDC/SLDCs immediately during contingency condition. Accountability should be fixed for non-adhering to the instructions of NRLDC/SLDC in emergency conditions.	(Action- All Constituents)	States were requested in OCC to initiate action.
5	UPPTCL shall close 220kV BTPS- Noida- Gazipur- Sahibabad loop within 24 hrs.	(Action-UPPTCL)	Implemented on 16.01.09 Again put off on 24 th April, 09, UPPTCL informed that it would be restored on 19 th May, 2009
6	Reactors at Bareilly (POWERGRID), Moradabad, Gorakhpur, Sarnath, and Bareilly (UPPTCL) should be revived at the earliest.	(Action- PGCIL, UPPTCL)	Bareilly (PG): Completed Sarnath: Completed Gorakhpur: By April, 2009
7	All generating stations shall absorb MVAR up to their capability to control the high voltage conditions.	(Action- All GENCOs)	In progress
8	POWERGRID shall install temperature and humidity transducers at designated locations within a month.	(Action-PGCIL)	Completed
9	To control high voltage at Dadri Bus , minimum capacitor bank shall be kept out of circuit by POWERGRID when both poles of Rihand -Dadri HVDC bi-pole are out.	(Action-PGCIL)	Instruction issued by POWERGRID
10	All effort shall be made by the constituents for maintaining data/ communication reliability during the crisis.	(Action- All Constituents)	In progress

Annexure-V

Sl. No.	Details of Rejection of Open Access for Captive Power by States	Name of firm/ Plant/location	MW	Month- APRIL 09
1	Punjab	NIL	NIL	NIL
2	NRLDC	NIL	NIL	NIL
3	Rajasthan	NIL	NIL	NIL
3	HP	NIL	NIL	NIL

	Transactions for Captive Power	(+ Import) MU/ (-Export) MU					Remarks
State	Intra-State		Inter-State		Inter-Regional		
	Firm/Plant/ Location	MU	Firm/Plant/ Location	MU	Firm/Plant/ Location	MU	
Punjab	No information				M/s Rana Sugars Ltd., village Butterseviyan (Distt. Amritsar)	upto 22 MW	Third party sale to Maharashtra
					M/s Lakshmi Energy & Foods Ltd., Khamanon	upto 30 MW	Third party sale to Maharashtra
					M/s Ambuja Cement Ltd	upto 10 MW	Third party sale to Maharashtra
					M/s Wahid Sandhar Sugar Ltd	upto 7 MW	Sale through Power Exchange

Annexure-VI

Outage of Transmission Elements Due to Dust Storm in Northern Region During May 2009:

Sl. No.	Name of Line (ownership)	Number of towers collapsed (Location Nos.)	Date of:		Remark
			Outage	Revival	
	NR		Outage	Revival	
	POWERGRID				
1	400 kV Ballabgarh-Noida (PGCIL)	6 (Loc 70-75)	10/05/09	Likely by 15th June 09	
2	400 kV Maharanibagh-Ballabgarh (PGCIL)	6 (Loc 70-75)	10/05/09	19/05/09	On ERS
3	400 kV Allahabad-Mainpuri II/I(PGCIL)	4 (Loc798-802)	11/05/09	19/05/09 and 23/5/09 respectively	On ERS
4	400 kV Dadri - Mandola(PGCIL) I/II	2 (Loc-32-33)	19/05/09	Ckt-I revived on 26.05.09	Ckt-II On ERS
	Total	12			
	UPPTCL				
5	400 kV Unnao-Bareilly I/II(UPPTCL)	2 (Loc 700-701)	10/05/09	Likely on 05.06.09 (pmt)	
6	220 kV Bareilly - Dohna (UPPTCL)	1 (Loc-15)	10/05/09	Likely on 30/05/09	
7	220 kV Shahjahanpur-Sitapur(UPPTCL)	2	10/05/09	Likely on 31.05.09 (pmt)	
8	220 kV Orai- Bhauti (Kanpur) (UPPTCL)	9	10/05/09	Likely on 10.06.09 (pmt)	
9	220 kV Meerut Shatabdinagar (UPPTCL)	1	19/05/09	06.06.2009	
10	220 kV Matore-Shatabdinagar - Modipuram (UPPTCL)	2	19/05/09	28/05/09	
	UP	17			
	DTL				
11	220 kV Wazirabad – Kashmiri Gate D/C (DTL)	3	22.05.09	Likely revival in one month time	
	PTCUL				
12	220 kV Bareilly-Pantnagar (PTCUL)	1(Loc -55)	10/05/09	16/05/09	
	WR				
1	400 kV Jabalpur – Itarsi D/C	20	14/05/09	Likely revival on 30/5/09, at present on ERS	
2	400 kV Jabalpur Vindhaychal	3	24/05/09		
	Other lines outages reported by ED(SO), POWERGRID				
1	220 kV Joda-Jamshedpur (DVC),		18.05.09	06.06.09	

2	220 kV Bakreshawer-Bidhannagar D/C		27.05.09	25.06.09	
3	220 kV Farakka-Lalmathiya (NTPC)			31.05.09	
4	220 kV Bharatpur-Mandova (RRVNL)		21.05.09	Information not available	