
Agenda note for Connectivity/ Long Term Access for Private

POWERGRID has received Long term Access Application and connectivity for new generation projects in NR. In addition there are certain modifications/extension of already granted Long term access. The list of the projects to be discussed is given below:

- 1) LTA access to M/s GMR Hydro Power Pvt. Ltd. (Bajoli Holi HEP)
- 2) LTA access to M/s GMR Hydro Power Pvt. Ltd. (Alaknanda HEP)
- 3) LTA & Connectivity grant to HPPCL (SainjHEP)
- 4) LTA & Connectivity grant to HPPCL (Sawra Kuddu HEP)
- 5) LTA & Connectivity grant to HPPCL (Kashang HEP)
- 6) LTA & Connectivity grant to HPPCL (Shongtong Karcham HEP)
- 7) LTOA grant to M/s Sunflag Power Ltd. (Hanoli Tiuni HEP)
- 8) LTA grant to M/s Shri Bajrang power & Ispat Ltd in Himachal Pradesh (Rupin)
- 9) LTOA of Tidong-I (100MW) of Nuzivu seeds Limited
- 10) LTA & Connectivity grant to M/s Sravanthi Energy Pvt. Ltd. (Uttrakhand)
- 11) LTA & Connectivity grant to M/s Beta Infratech (P) Ltd. (Uttrakhand)
- 12) LTA & Connectivity grant to M/s Gama Infroprop (P) Ltd. (Uttrakhand)
- 13) LTA grant to M/s Rosa Power Supply Company Ltd. (Uttar Pradesh)
- 14) LTA grant to M/s Power Trading Corporation (Malana-II HEP)
- 15) LTA grant to M/s Malana Power in Himachal Pradesh (Bara Bangal HEP)
- 16) LTA grant to M/s Malana Poweer in Himachal Pradesh (Chango Yangthang)
- 17) Connectivity for M/s Nabha Power limited in Punjab (Rajpura Project)
- 18) Connectivity for Singrauli-III TPS (500 MW)
- 19) Connectivity for Rapp-7&8 of Nuclear power Corporation
- 20) Connectivity and LTA grant to M/s Moser Baer (MP)
- 21) Connectivity and LTA grant to M/s Pipavav Energy Pvt. Ltd. (Gujrat)
- 22) LTA grant to M/s Bina TPS Energy Pt. Ltd.
- 23) Connectivity/LTA of generation developers in Vemagiri area, AP
- 24) LTA of generation developers in Nagapattinam/Cuddalore area
- 25) LTA granted under CERC regulation and BPTA yet to be signed

The Detailed agenda for individual projects is as below:

Item no-1: Long Term Access to M/s GMR Bajoli Holi Hydro Power Pvt Ltd., for transfer of 180 MW power from Bajoli Holi HEP

M/s GMR Bajoli Holi Hydro Power Pvt Ltd., has applied to POWERGRID for Long-Term Access, for injection of 180 MW power from Bajoli Holi HEP (180MW), Himachal Pradesh. The likely beneficiary in Northern region has been indicated as Delhi, Punjab and Haryana.

Expected date of commencement of long term access, as indicated by M/s GMR Bajoli Holi Hydro Power Pvt Ltd is Dec 2015. Duration of Long Term Access sought is 25 years.

A copy of the application is enclosed at **Annexure-1**.

(a) Connectivity with Central Grid

As per the application from M/s GMR Bajoli Holi Hydro Power Pvt Ltd, power from the HEP is to be injected at Lahal pooling station by 220kV D/c line.

In the 23rd standing committee it was proposed that a pooling station upstream of Chamera-III would be constructed and power from future hydro generation like Kutehar (260MW), Bajoli Holi (180MW), Bara Bangal (200MW), Bharmor (45MW) and Kugti (45MW) shall be injected at this pooling station at 220kV level. Further, as per the discussions held in 27th SCM, Himachal Pradesh is to establish a 400/220 kV pooling station at Lahal and considering the overall power flow requirement of about 1000-1100 MW, a 400 kV D/c Line from Lahal to Chamera pooling station of POWERGRID to be implemented by HPPTCL, has been planned.

Hence the connectivity for proposed power plant to Regional grid would be as follows

- Bajoli Holi power would be pooled at Lahal pooling point of Himachal at 220kV
- From Lahal pooling to Chamera Pooling point of POWERGRID would be a through a 400kV D/c.

As decided during the Long Term access meeting held along with 28th SCM held on 23rd February, 2010 “laying of 220 kV D/c line with twin moose (0.5) conductor would be required beyond Bajoli Holi to Lahal S/S to carry the combined power of both Bajoli Holi and Bara Banghal HEP’s.”

M/s GMR has taken up the matter with CEA regarding sharing the cost of common transmission line from Bajoli Holi to Lahal Pooling Station. Due to uncertainty in getting Forest clearance for realization of their project, Bara Bangal is not committal about the matter. In view of avoiding deferment of the project as issues like Forest clearance are also involved, M/s GMR has proposed the scheme to be developed by CTU/ISTS Licensee. As per CERC regulations, the CTU cannot take up the implementation of the line, however, it is suggested that to facilitate the IPP's in Himachal Pradesh, HPPTCL may take up the high capacity line from Bajoli Holi to Lahal

The Long Term Access is being processed for transfer beyond the ISTS injection point, Chamera pooling point. Further, the applicant shall coordinate with HPPTCL for implementing of Lahal Pooling Station and Lahal- Chamera pooling station 400 kV D/c line.

Members may discuss and decide.

(b) Evacuation of Bajoli Holi Power beyond Chamera Pooling

The main corridor for transfer of power from generating station beyond Chamera pooling station would be Chamera-Jullandhar 400kV d/c. The line would be required transfer power of the order of 761MW from Chamera-III ((231MW), Kutehar (260MW), Barabanghal(200MW) and Budhil(70MW). In addition to Bajoli Holi, further new projects like Hadsar (60 MW), Kugti (45 MW) and Bharmour(45MW) are expected to be evacuated via this corridor. The system would not be able to transfer additional power reliably under certain contingency condition. Hence additional system may be required for transfer of power beyond Chamera Pooling with materialization of other projects. The system would be evolved looking into progress of the other generating stations in the basin and network in that time frame. M/s GMR Bajoli Holi Hydro Power Pvt Ltd shall share the system cost alongwith other beneficiaries, if any, for the system.

c) PROPOSAL

M/s GMR Bajoli Holi Hydro Power Pvt Ltd has applied for Long term Access for 180MW from Bajoli Holi HEP for 25 years for transfer to Delhi Punjab and Haryana. The long term access is being processed for transfer beyond the ISTS injection point, Chamera pooling point, and it is proposed to grant the same, subject to following

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- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009.
 - As per the Regulations for “Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission”, notified by Central Electricity Regulatory Commission (CERC), and Detailed procedures of Central Transmission Utility (POWERGRID) approved by CERC, Grid connectivity / application for connectivity is prerequisite for Long term/Medium Term Access. As the generation is being connected to state network it is requested that the No Objection Certificate from concerned state utility as per prescribed format (Format–LTA-3), which includes details of connectivity may be submitted to us.
 - Signing the requisite BPTA for Northern Regional Transmission system charges from Dec’2015 for 25 years.
 - M/s GMR Bajoli Holi Hydro Power Pvt Ltd. shall take up the matter with Himachal for connectivity and transfer of power from the generation project to 400/220kV Chamera Pooling substation.
 - Additional strengthening may be required for transfer of power beyond Chamera Pooling. The system would be evolved looking into progress of the generating stations in the basin and network in that time frame. The system cost shall be shared by the applicant, along with other beneficiaries if any.
 - The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
 - The Long term Access shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding LTA would have to be met.

Item no-2 : Long Term Access to M/s GMR (Badrinath) Hydro Power generation pvt Ltd., for transfer of 300 MW power from Alaknanda HEP

M/s GMR (Badrinath) Hydro Power generation pvt Ltd., has applied to POWERGRID for Long-Term Access, for injection quantum of 259 MW power from Alaknanda HEP (300MW) located on Chamoli district in Uttarakhand.

Expected date of commencement of long term access, as indicated by M/s GMR (Badrinath) Hydro Power generation pvt Ltd is Dec 2014. Duration of Long term Access is 25 years. As per the application the beneficiaries for the power is Northern Region.

A copy of the application is enclosed at **Annexure-2**.

(a) Connectivity with Central Grid

The applicant has indicated connectivity with Grid as ISTS at Kashipur at 400kV through STU grid as per the plan enclosed in the application.

In this regard it may be mentioned that as discussed during the NRPC meeting held on 10/11/06 for projects in Uttarakhand, "PTCUL could take up the intrastate transmission system to the pooling point on their own for which there was no requirement of any commitment of payment of transmission charges by others constituents and arrangement of recovery of transmission charges will be only between PTCUL and the Generators. PTCUL/Generators would apply for open access for inter-state transmission system to CTU so that POWERGRID in consultation with CEA could firm up inter-state transmission and necessary modification in the system up to pooling point would also be firmed up in the process".

As per the information available, power generated from Alaknanda HEP will be stepped up at 220Kv level and will be pooled at 220kV substation Joshimath and will be transmitted to Pipalkotli pool at 220kV. At Piplakotli it will be stepped up to 400kV and transmitted to Kashipur by Pipalkotli-Karanprayag-Sringar-Kashipur 400kV D/c.

The long term access is being processed for transfer beyond the injection point, Kashipur pooling point. Further, the applicant shall construct / coordinate with PTCUL for dedicated transmission line as well as transmission system upto Kashipur and bear all applicable transmission charges as decided by appropriate agencies.

(b) Evacuation of Alaknanda HEP Power beyond Kashipur

Presently Kashipur is connected to Moradabad and Rishikesh by a 400kV S/c line. Under Northern region System Strengthening Scheme-XXI following transmission system is being developed by POWERGRID which would facilitate power injected at Kashipur to be evacuated to Saharanpur.

- Lucknow – Bareilly 765 kV S/c
- Bareilly – Kashipur 400 kV D/c (quad)
- Kashipur – Roorkee 400 kV D/c (quad)
- Roorkee – Saharanpur 400 kV D/c (quad)

Saharanpur would be connected to Meerut and Dehardun. Considering the quantum of power to be injected at Kashipur and proposed connectivity beyond Kashipur no transmission constraint is envisaged in ISTS for transferring 259MW power from Alaknanda HEP.

(c) Proposal

M/s GMR (Badrinath) Hydro Power generation pvt Ltd., has applied to POWERGRID for Long-Term Access, for injection quantum of 259 MW power from Alaknanda HEP (300MW) located on Chamoli district in Himachal Pradesh. The long term access is being processed for transfer beyond the injection point, Kashipur, and it is proposed to grant the same, subject to following

- The applicant shall indicate the exact beneficiaries with quantum of power within a month
- As per the Regulations for “Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission”, notified by Central Electricity Regulatory Commission (CERC), and Detailed procedures of Central Transmission Utility (POWERGRID) approved by CERC, Grid connectivity / application for connectivity is prerequisite for Long term/Medium Term Access. As the generation is being connected to state network it is requested that the No Objection Certificate from concerned state utility as per prescribed format (Format –LTA-3), which includes details of connectivity may be submitted to us.
- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power

for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009.

- The Long term Access shall be granted after the commissioning of following scheme:
 - Kashipur–Roorkee–Saharanpur 400 kV D/c (Quad conductor)
- Signing the requisite BPTA for Northern Regional Transmission system charges from Dec'2014 for 25 years.
- M/s GMR (Badrinath) Hydro Power generation pvt Ltd shall take up the matter with Uttarakhand for connectivity and transfer of power from the generation project to 400/220kV Kashipur. The applicant, shall construct/coordinate with PTCUL for dedicated transmission line as well as transmission system upto Kashipur and bear all applicable transmission charges as decided by appropriate agencies.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- As the power is being injected into the STU network, the ISTS charges for free power would not be applicable.
- The Long term Access shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding LTA would have to be met.

Item no-3 : Connectivity and Long Term Access (LTA) to Himachal Pradesh Power Corporation limited, for connectivity and transfer of 100 MW power from Sainj HEP

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, Himachal Pradesh Power Corporation Ltd has applied to POWERGRID for Connectivity and Long Term Access of their 100 MW Sainj HEP at Kullu in Himachal Pradesh. As per the application, the connectivity and LTA for the project are required by April, 2014. The commissioning schedules of the units are as below

Unit-1 : April, 2014

As per the application the beneficiaries for the power is Northern Region.

A copy of the applications are enclosed at **Annexure-3**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

- **Land acquisition:** As per HPPCL's Land acquisition collector, land measuring 98-13-4 bighas of land as required for construction of Sainj HEP has been acquired.
- **Environmental Clearance:** Applicant has submitted MOEF clearance letter dated 4/5/2009 alongwith application.
- **Forest Clearance:** Applicant has enclosed MOEF letter 14/09/2009 agreeing for diversion of 47.993 HA of forest land for construction of Sainj HEP in favour of HPPCL.

iii) Connectivity and Long Term Access

The nearest substation to HEP are Sainj substation (Proposed) of HPPTCL and Parbati-II switchyard. During the 26th SCM it was discussed and agreed that the generation at Sainj HEP could be evacuated by 132 kV D/C line to 132/400 kV sub-station which could be connected at 400 kV level by LILO of Parbati-II – Parbati –III 400kV S/C line or through a 400 kV S/C line either to Parbati –III or to Parbati-II. It was decided that NHPC would review the availability of space for additional 400 kV bay at Parbati II as well as Parbati III and intimate the position to CEA as well as HPSEB. HPPTCL has intimated that NHPC has confirmed that space for 400kV bays are neither available at Switchyard of Parbati-II nor at III. As per the information, the step up voltage of the generation project is 132 kV ,during the TEC of the generation project it was indicated that a 400/132kV substation would be created wherein Sainj power would be pooled at 132kV and stepped up to 400kV. Beyond the proposed station it is proposed to evacuate of Sainj Power by LILO of one circuit of Parbati-II – Parbati-III line, near Parbati-II, for injection of Sainj Power HEP

However there are many hydro projects in the basin which needs to be evacuated via the corridor beyond Parbati pooling point. Beyond Parbati-III and Parbati Pooling points following Transmission system is being implimented:

- Parbati Pooling Poing – Amritsar 400kV D/c
- Parbati Pooling Point – Koldam/Nallagarh 400 kV D/c (Quad)

iv) Proposal:

Connectivity and Long term Access for 100MW generation of Sainj HEP of HPPCL by LILO of one circuit of Parbati-II to Parbati-III/ Parbati Pooling at new 400/132kV Substation is proposed subject to following:

Connectivity

- A 400/132kV substation would be created wherein Sainj power would be pooled at 132kV and stepped up to 400kV. The 132kV line from Sainj generation project to pooling station alongwith the pooling station shall be in the scope of applicant/HPPTCL
- Connectivity would be by LILO of one circuit of Parbati-II to Parbati-III/ Parbati Pooling at proposed generation plant. The LILO may be carried out by the applicant .Based on Line routing and generation plant location either Parbati-II - Parbati-III or Parbati-II - Parbati Pooling station 400kV line would be LILO'ed
- Modification, if required, at Parbati-II and Parbati-III/ Parbati Pooling end switchyards would be at the cost of the applicant.
- The applicant shall abide by all provisions of the Electricity Act, 2003, the CERC regulation 2009 (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time..
- The connectivity shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding connectivity would have to be met.

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- The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.
 - Sainj Switchyard must be designed with higher capacity switchyard rating which is generally used along with a quad line.

Long term Access

- The applicant shall indicate the exact beneficiaries with quantum of power
- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009.
- The Long Term access is being processed subject to the condition that the applicant, shall construct or coordinate with HPPTCL for implementation of LILO portion and bear all applicable transmission charges as decided by appropriate agencies for transfer of power upto regional grid point.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- The Long term Access shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding LTA would have to be met.
- Signing the requisite BPTA for Northern Regional Transmission system charges from Dec'2014 for 25 years.

Item no- 4: Connectivity and Long Term Access (LTA) to Himachal Pradesh Power Corporation limited, for connectivity and transfer of 111 MW power from Sawra Kuddu HEP

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, Himachal Pradesh Power Corporation Ltd has applied to POWERGRID for Connectivity and Long Term Access of

their 111 MW Sawra Kuddu HEP in Himachal Pradesh. As per the application, the connectivity and LTA for the project is required by December,2012. The commissioning schedules of the units are as below

Unit-1 : December, 2012

Unit-2 : January, 2013

Unit-3 : February, 2013

As per the application the Target beneficiaries for the power is Northern Region.

A copy of the application is enclosed at **Annexure-4**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

- **Land acquisition:** As per HPPCL's Land acquisition collector, land measuring 40-09-39 Ha of land as required for construction of Sawra Kuddu HEP has been acquired. In addition land measuring 6-47-52 Hact is also required to be acquired for the project and notiifcatin under Section-4 of the Act has been issued and further process is going on.
- **Environmental Clearance:** Applicant has submitted MOEF clearance letter dated 17/5/2007 alongwith application.
- **Forest Clearance:** Applicant has enclosed MOEF letter 2/06/2009 agreeing for diversion of 53.21 Ha of forest land for construction of Sawra Kuddu HEP in favour of HPSEB.

iii) Connectivity and Long Term Access

In Pabbar Valley in Himachal Pradesh, about 500 MW of hydro projects including Sawra Kuddu, are at various stages of development. For evacuation of power from Satluj basin there are three corridors, Nathpa Jhakri- Nallgarh, Nathpa Jhakri-Abdullapur and Karcham Wangtoo-Abdullpur (under construction), out of which later two are routed via Pabbar Valley. HPPCL has now proposed to evacuate 500 MW power from HEP's in Pabbar valley by creating a pooling station by LILO one of the lines.

HPPCL has proposed that the 220/400kV, 2x315 MVA pooling station along with LILO of Wangtoo-Abdullpaur or Nathpa-Jhakri-Abdullpaur line be included in

regional strengthening scheme. The 220kV D/c from Pabbar valley to the pooling station shall be built by HPPTCL. Here it might be mentioned that time line a 400 substation in hilly terrain is 27 months from investment approval. Hence Himachal would require to make alternate arrangement for evacuation of power till the substation is commissioned.

iv) Proposal:

Connectivity and Long term Access for 111MW generation of Sawra Kuddu HEP of HPPCL by establishment of 220/400kV, 2x315 MVA pooling station along with LILO of Nathpa-Jhakri-Abdullapur line subject to following:

Connectivity

- Connectivity could be by establishment of 220/400kV, 2x315 MVA pooling station along with LILO of Nathpa-Jhakri-Abdullapur line along with required modification at Nathpa Jhakri and Abdullapur. The scope of work and implementing agency may be discussed and concurred by the members. However, it is suggested that this substation may be constructed as ISTS station, as establishment of this substation would require LILO of existing high capacity lines on which there is direct injection of power from Nathpa Jhakri and Baspa. Tariff of this substation may be exclusively borne by HPPCL.
- Here it might be mentioned that time line a 400 substation in hilly terrain is 27 months from investment approval in addition to *9 months for pre-investment activities*. Hence Himachal would require to make an alternate arrangement for evacuation of power till the substation is commissioned.
- The applicant shall abide by all provisions of the Electricity Act, 2003, the CERC regulation 2009 (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- The connectivity shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding connectivity would have to be met.

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- The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.
 - For any additional power injection at this new S/s, application as per CERC regulations would be required.

Long term Access

- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009. . As the Long Term access is required before three years the applicant may finalize and intimate the beneficiaries immediately.
- Signing the requisite BPTA for Northern Regional Transmission system charges and submitting of required Bank Gurantee
- The applicant, shall construct/coordinate with HPPTCL for dedicated transmission line/Subststaion and bear all applicable transmission charges as decided by appropriate agencies for transfer of power upto regional grid point.
- Signing the requisite BPTA for Northern Regional Transmission system charges from Dec'2012 for 25 years.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- The Long term Access shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding LTA would have to be met.

Item no- 5 : Connectivity and Long Term Access (LTA) to Himachal Pradesh Power Corporation limited, for connectivity and transfer of 195 MW power from Kashang HEP

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, Himachal Pradesh Power Corporation Ltd has applied to POWERGRID for Connectivity and Long Term Access of their 195 MW Kashang Generation project at Kinnaur in Himachal Pradesh. As per the application, the connectivity and LTA for the project is required by January, 2013. The commissioning schedules of the units are as below

Unit-1 : January, 2013

Unit-2 : February,2013

Unit-3 : October,2014

As per the application the beneficiaries for the power is Northern Region.

A copy of the application is enclosed at **Annexure-5**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

- **Land acquisition:** As per HPPCL's Land acquisition collector, land measuring 15-48-60 ha of land as required for construction of Kashang HEP has been acquired. Land measuring 2-90-53 Hect for residential colony has also been acquired.
- **Environmental Clearance:** Applicant has submitted MOEF clearance letter dated 16/4/2010 alongwith application.
- **Forest Clearance:** Applicant has enclosed MOEF letter 23 June, 2004 agreeing for diversion of 18.7142 Ha of forest land for construction of Kashang HEP.

iii) Connectivity and Long Term Access

As per the connectivity application the nearest substation to Kashang HEP are Bhabha Substation (27 km), Kotla Substation (52 km) and Kunihar Substation (190km). As per the master plan evolved by CEA, for evacuation of power for evacuation of power from Satluj basin, it envisages a 400/220kV Substation at Sherpa colony where power from various hydro projects are to be pooled

In this regard it may be mentioned that Tidong-I (100MW) had already applied for Long Term Access and while granting Long term Access it was intimated that Initially power to be evacuated by Tidong-I - Kashang – Bhabha – Kunihar 220 kV D/c line of STU and when the 400 kV substation at Jangi and pooling station at Sherpa colony would be commissioned, the Tidong power could be injected at Jangi and be evacuated as envisaged in the Master Plan for Sutlej Basin project. Further HPPCL in addition to Kashang HEP has also applied LTA for Shong Tong HEP (450 MW) which is close to sherpa Colony.

As about 645 MW needs to be evacuated from the basin, Kashang (195MW), Shong Tong Karcham (450 MW) a 400/220kV Substation at Sherpa colony by LILO of one ckt. of Karcham Wangtoo- Abdullapur D/c line at Sherpa colony is proposed. The substation would be commissioned matching with Shong Tong time frame and till then power from the project would be evacuated via extending Bhabha – Kunihar 220 kV D/c. Here it might be mentioned that the line shall carry power 415 MW, from Bhava(120 MW), Kashang (195 MW) and Tidong-I(100MW), the line shall be loaded to its full capacity and would not be able to sustain contingency

With the commissioning of Karcham Wangtoo system about 1200-1400 MW shall be available for future projects, out of which already 100 MW has been allotted for Sorang HEP. The proposed Tidong-I, Kashang and Shongtong Karcham can also be evacuated over the above corridor upto Abdullapur.

Beyond Abdullapur additional transmission system would be required with commissioning of proposed generation projects. The additional transmission system shall be evolved based on progress of generation and network orientation. HPPCL would be required to share transmission charges for the additional transmission system, alongwith other generations, if any

iv) Proposal:

Connectivity and Long term Access for 195MW generation of Kashang HEP of HPPCL is proposed subject to following:

Connectivity

- For evacuation of Shongtong Karcham (450 MW) it is proposed to establish a 400kV substation at Sherpa colony by LILO of one circuit of Karcham Wangtoo –

Abdullapur line, matching with generation schedule (March'15). The works of establishing 400kV Sherpa colony substation and providing connectivity from the generation project by 400kV D/c can be carried out under ISTS as per provisions of the CERC regulation and approved procedure of CTU. With the commissioning of Sherpa colony, power from Kashang, in accordance with CEA master plan, may be pooled at Sherpa colony by LILO of Kashang-Bhabha-Kunihar 220kV line and establishment transformation capacity of 2x500 MVA. The works (LILO bays and provision of ICT & associated bays) would be carried out as a depository work on behalf of HPPCL.). The applicant in addition to transformation capacity and 220kV switchyard shall share the cost of 400kV switchyard. LILO of 220kV line of HPPCL at proposed Sherpa colony shall be carried out HPPCL

As Kashang (195 MW) HEP, is scheduled to commissioned by January,2013, it is proposed that applicant may evacuate power from the project by extending Bhabha-Kunihar 220kV line initially till the commissioning of Sherpa colony. Here it might be mentioned that the line shall carry power 415 MW, from Bhava(120 MW), Kashan (195 MW) and Tidong-I(100MW), The line shall be loaded to its full capacity and would not be able to sustain contingency

- To provide reliability HPPTCL/Applicant may provide Kashang- Sherpa colony 220 kV D/c line in the time frame of Sherpa substation in line with the master plan of CEA.
- HPPTCL would discuss and ensure vacation of land presently being held by M/s Jaypee Ltd. for Sherpa Colony substation.
- The applicant shall abide by all provisions of the Electricity Act, 2003, the CERC regulation 2009 (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time..
- The connectivity shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding connectivity would have to be met.

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- The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.

Long term Access

- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009. . As the Long Term access is required before three years the applicant may finalize and intimate the beneficiaries immediately
- The Long Term access is being processed subject to the condition that the applicant, shall construct or coordinate with HPPTCL for dedicated transmission line and bear all applicable transmission charges as decided by appropriate agencies for transfer of power upto regional grid point.
- Signing the requisite BPTA for Northern Regional Transmission system charges from Dec'2013 for 25 years.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- The Long term Access shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding LTA would have to be met.

Item no-6: Connectivity and Long Term Access (LTA) to Himachal Pradesh Power Corporation limited, for connectivity and transfer of 450 MW power from Shongtong Karcham HEP

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, Himachal Pradesh Power Corporation Ltd has applied to POWERGRID for Connectivity and Long Term Access of their Shongtong Karcham (450) MW Generation project at Kinnaur in Himachal Pradesh.

As per the application, the connectivity and LTA for the project is required by March, 2015. The commissioning schedules of the units are as below

Unit-1 : March,2015

Unit-2 : April,2015

Unit-3 : May,2015

As per the application the beneficiaries for the power is Northern Region.

A copy of the application is enclosed at **Annexure-6**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

- **Land acquisition:** As per HPPCL's Land acquisition collector, land measuring 6-26-92 Ha of land has been proposed for construction of Shongtong – Karcham HEP. Issue of notification under section-4 is under process. The notification under section-4 and declaration u/s 6 & 7 has been issued in respect of land measuring 7-56-19 ha..
- **Environmental Clearance:** Meeting held on 18 & 19 Feb, 2010. Case recommended by EAC
- **Forest Clearance:** Case submitted to GOI vide letter 04/09/2010

iii) Connectivity and Long Term Access

Shongtong Karcham is located in Satluj Basin. As per their Long term Access application HPPCL has proposed for LILO of one circuit if Baspa-II – Jhakri D/c line at Shongtong Karcham HEP. As per their connectivity application, the generation project is located about 2km from proposed Sherpa colony 400kV S/s. As per the master plan evolved by CEA for evacuation of power from Satluj basin, it envisages pooling of power from the project in 400/220kV Substation at Sherpa colony

Here, it may be mentioned that Tidong-I (100MW) had already applied for Long Term Access and while granting Long term Access it was decided that initially power to be evacuated by Tidong-I - Kashang – Bhabha – Kunihar 220 kV D/c line of STU and when the 400 kV substation at Jangi and pooling station at Sherpa colony would be commissioned, the Tidong power could be injected at Jangi and be evacuated as envisaged in the Master Plan for Sutlej Basin project. Further, as informed earlier,

HPPCL has also applied LTA for Kashang HEP. As the 400/220kV substation of Jhangi shall materialize in later time frame, presently injection of power at Sherpa colony may be planned.

Keeping above in view, presently about 750 MW needs to be evacuated from the basin, Kashang (195MW), Tidong-I (88 MW) and Shong Tong Karcham (450 MW) and to evacuate the power, a 400/220kV Substation at Sherpa colony by LILO of one circuit of Karcham Wangtoo- Abdullapur at Sherpa colony is proposed. The substation would be commissioned matching with Shong Tong time frame. It is proposed that the Shongtong Karcham HEP would be connected to Sherpa colony by a 400kV D/c line. With the commissioning of Karcham Wangtoo system about 1000 MW shall be available for future projects, out of which already 100 MW has been allotted for Sorang HEP. The proposed Tidong-I, Kashang and Shongtong Karcham can also be evacuated over the corridor upto Abdullapur.

Beyond Abdullapur additional transmission system would be required with commissioning of proposed generation projects. The additional transmission system shall be evolved based on progress of generation and network orientation. HPPCL would be required to share transmission charges for the additional transmission system, alongwith other generations, if any.

iv) Proposal:

Connectivity and Long term Access for 450MW generation of Shongtong Karcham HEP of HPPCL is proposed subject to following:

Connectivity:

- For evacuation of Shongtong Karcham (450 MW) it is proposed to establish a 400kV substation at Sherpa colony by LILO of one circuit of Karcham Wangtoo – Abdullapur line, matching with generation schedule (March'15). The works of establishing 400kV Sherpa colony substation and providing connectivity from the generation project by 400kV D/c can be carried out by POWERGRID as per provisions of the CERC regulation and approved procedure of CTU. With the commissioning of Sherpa colony, power from Kashang, in accordance with CEA master plan, may be pooled at Sherpa colony by LILO of Kashang-Bhabha-Kunihar 220kV line and establishment transformation capacity of 2x500 MVA.

The works (LILO and its bays and provision of ICT & associated bays) would be carried out as a depository work on behalf of HPPCL.

- HPPCL would discuss and ensure vacation of land presently being held by M/s Jaypee Ltd for Sherpa colony
- The applicant shall abide by all provisions of the Electricity Act, 2003, the CERC regulation 2009 (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- The connectivity shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding connectivity would have to be met.
- The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.
- Further, HPPCL shall have to sign separate Transmission Agreement with POWERGRID for bearing cost of Sherpa colony S/s alongwith LILO & 400kV D/c shall also be required to submit Bank Guarantee @ Rs. 2.5 Lakhs per MW if required line is less than 20 kms else @ Rs. 5 Lakhs per MW of connectivity applied/granted.

Long term Access

- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009.
- The Long term access is being processed subject to the condition that the applicant, in addition to regional charges, bear all applicable transmission charges for transfer of power upto regional grid point.
- Signing the requisite BPTA for Northern Regional Transmission system charges from Dec'2015 for 25 years.

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- Additional strengthening would be required for transfer of power beyond Abdullapur. The system would be evolved looking into progress of the generating stations in the basin. The system cost shall be shared by the applicant, along with other beneficiaries if any.
 - The applicant shall abide by all provisions of the Electricity Act, 2003, CERC(Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
 - The Long term Access shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission and all provisions regarding LTA would have to be met.

Item no 7: Long Term Open Access granted to M/s Sunflag under CERC regulation 2004

M/s Sunflag Power Ltd. had applied to POWERGRID for Long-Term Open Access, for injection quantum of 52.8 MW power from Hanoli Tiuni HEP (60MW) located at Uttarakhand. Expected date of commencement of long term open access, as indicated by M/s. Sunflag Power Ltd was December'2014 for 30 years. The beneficiary in Northern region has been indicated as any utility in Northern Grid. The application was discussed during the Long term Open Access meeting held 23/02/2010 following was agreed :

- As the project was located in Uttarakhand, PTCUL was to take up the intrastate transmission system up to the pooling point i.e. power from Hanoli Tiuni is to be transferred to Dehradun 400/220kV substation of POWERGRID, via Mori 220kV S/s of PTCUL, through a 220kV D/c line.
- It was agreed to grant Long-term Open Access to M/s Sunflag Power Ltd for transfer of 52.8 MW of Hanoli Tuini from Dehradun 400/220kV Substation of POWERGRID, subject to following:
 - Signing the requisite BPTA for Northern Regional Transmission system charges from Dec'2014 for 30 years.

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- The applicant shall enter into Bulk Power Transmission Agreement (BPTA) with POWERGRID within thirty days of confirmed grant of Long Term Open Access.
 - PTCUL to take up transmission for connectivity and transfer of power from the generation project to Dehradun POWERGRID substation. For implementation of transmission system upto pooling point, M/s Sunflag Power Ltd shall coordinate with PTCUL and bear all applicable transmission charges for transfer of power upto regional grid point

The Long term Access intimation was issued to M/s Sunflag vide letter dated 20/04/2010.

M/s Sunflag vide its letter dated 24/09/2010, enclosed at **Annexure-7**, has intimated that that Hanoli Tuini is the only company in Yamuna Valley who have submitted application for seeking open Access from PTCUL. M/s Sunflag have indicated in their letter that they are not sure about the period it would take PTCUL to construct the transmission line upto Dehradun substation of POWERGRID. In their letter M/s Sunflag have indicated that *“HPPTCL has proposed a transmission line from Hatkoti to Sainj for evacuation of power of all the upcoming projects in the Pabbar Valley. HPPTCL is providing us a 220kV switching point at Hatkoti, which is at a distance of around 32 km or so from our subject project at Hanol Tiuni. We are very keen in early implementation and commissioning of our above project and are desirous of evacuating the power to be generated from our project point through HPPTCL’s proposed transmission line”*. M/s Sunflag has requested for a *“change of point of connection from Dehradun to Sainj as an interim arrangement till PTCUL becomes ready with their transmission system from the project to Dehradun”*. PTCUL may indicate their plans for implementation of the system. In case, both the HPPCL & PTCUL agree for change in location, the matter can be processed further. 132 kV D/c line from generation project to Hatkoti, shall be implemented by developer.

Here it might be mentioned that the Sainj substation is a proposed substation and it might be mentioned that time line a 400kV substation in hilly terrain is 27 months from investment approval in addition to *9 months for pre-investment activities* and the applicant transmission charges for the substation.

Member may like to discuss

Item no 8: Long term Access for power project of M/s Shri Bajrang power & Ispat Ltd in Himachal Pradesh

M/s Shri Bajrang Power & Ispat Ltd. Had applied for long-term open access to transfer 45 MW of power for 40 yrs from the proposed Rupin HEP (45 MW) to be set up in Himachal Pradesh. The commissioning schedule for generation project as indicated in the application is Unit I II & III – June 2014. As per the application, a quantum of 22.5 MW is targeted to be transferred to Punjab/ Rajasthan in Northern Grid and balance 22.5 MW to Maharashtra (22.5 MW) in Western Grid. The application was discussed in the Long Term Open Access Meeting held on 30/05/2009 at Nainital alongwith 27th Standing Committee Meeting of Northern Region. Power from the generating station was to be evacuated to nearby 220/132 kV Hatkoti pooling station of STU. Beyond HatKoti pooling station, the power is planned to be evacuated to Nalagarh 400/220kV substation of POWERGRID via Moginand 220kV substation. During the meeting it was decided to grant Long-term Open Access subject to following:

- Signing the requisite BPTA for Northern Regional & Western Regional Transmission system charges from June'2014 for 40 years
- The applicant shall enter into Bulk Power Transmission Agreement (BPTA) with POWERGRID within thirty days of confirmed grant of Long Term Open Access
- Shri Bajrang Power & Ispat Ltd. shall take up the matter with Himachal to ensure for transfer of power upto Nalagarh matching with the generation project and bear all applicable transmission charges for transfer of power upto regional grid point.

Recently the applicant has forwarded letter from HPTCL, **Annexure-8**, indicating that a 220/400kV pooling station near Sainj (Shimla) has been envisaged and advising approaching CTU for Long term Access. In view of above it is proposed to grant Long-term Open Access to M/s Shri Bajrang Power & Ispat Ltd, for transfer of 45MW of Rupin HEP beyond Sainj 400/220kV Substation of POWERGRID subject to following:

- Signing the requisite BPTA for Northern Regional & Western Regional Transmission system charges from June'2014 for 40 years
- The applicant shall enter into Bulk Power Transmission Agreement (BPTA) with POWERGRID within thirty days of confirmed grant of Long Term Open Access
- Shri Bajrang Power & Ispat Ltd. shall take up the matter with Himachal to ensure commissioning of Sainj 400/220kV substation along with required 400kV

connectivity, transmission line from generating station to Sainj and bear all applicable transmission charges for transfer of power up to regional grid point.

- M/s Shri Bajrang Power & Ispat Ltd have informed beneficiary as 22.5 MW for Punjab/ Rajasthan in Northern Grid and 22.5 MW to Maharashtra in Western Grid LTOA to Shri Bajrang Power & Ispat Ltd would be granted with equal proportion of 22.5 MW for Punjab & Rajasthan.
- Transfer of 22.5 MW power to Maharashtra would be through displacement and looking into the quantum of power flow no problem is envisaged in transfer of power.

Member may like to discuss

Item no-9 Long Term Open Access of Tidong-I (100MW) of Nuzivu seeds Limited

M/s Nuziveedu Seeds Ltd. had applied for long-term open access to transfer 100 MW from Tidong-I, located at Kinnaur Distt., HP to various NR constituents. Out of 100 MW, 88 MW power is proposed as distribution among three states- Haryana, Punjab & Delhi and 12MW (12% free power) has been allocated to HP.. Expected date of commencement of long term open access was indicated as 31/12/2011 and the duration is for 25 years.

During the Long Term Open Access meeting held on 30/05/2009 it was discussed & agreed that the power from Tidong-I can be evacuated via Kashang, Bhabha, Kotla, Kunihar 220 kV D/C lines of HPSEB. It was also informed by HPSEB that the 220 kV D/c line from Kashang to a location near Bhabha HEP would be ready by March 2009. HPSEB was required to construct a 220 kV D/c line from Tidong-I to a location near Kashang-I project site and also 220 kV D/c line from Bhabha to Kunihar. It was also agreed that, as and when the 400 kV S/s at Jangi and pooling station at Sherpa colony would be commissioned, the Tidong power could be injected at Jangi Pooling Station and be evacuated as envisaged in the Master Plan for Sutluj Basin Project.

The Long-term Open Access was granted to Tidong-I HEP of M/s Nuziveedu Seeds Limited, subject to following:

- Power to Haryana, Punjab and Delhi shall be through displacement.
- It was agreed that LTOA to M/s Nuziveedu Seeds (P) Ltd. Shall be granted with equal proportion for Haryana, Punjab and Delhi subject to the signing of the BPTA for Northern region transmission charges for 88 MW.

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- It was also informed that at present no constraints are envisaged in ISTS system for the above target power allocation, however some constraints, during special dispatch/loading conditions or in a particular operating situation, however, cannot be totally ruled out, which cannot be foreseen today.
 - As the power is being injected into the STU network, the ISTS charges for free power would not be applicable.
 - HPSEB to complete the implementation of 220 kV systems required for evacuation of power from Tidong-I HEP.
 - Later when 400/220 kV substations at Jangi & Sherpa colony alongwith the other 400 kV lines are established, power from Tidong-I can be injected at Jangi pooling station.

As per revised master plan the power from the project is to be evacuated via Kashang and is to be injected at Sherpa colony. Till the commissioning of Sherpa colony power from the project would be evacuated by extending Bhabha-Kunihar line. Here it might be mentioned that the line shall carry power 415 MW, from Bhabha (120 MW), Kashang (195 MW) and Tidong-I(100MW), The line shall be loaded to its full capacity and would not be able to sustain contingency. Further recently vide its letter dated 30th November, 2010 have indicated that

- Name of the company has been changed to NSL Tidong Power Generation in Place of Nuzivu Seeds Ltd.
- Commencement of Open Access as 31/03/2012
- BPTA would be signed by Tata Power Trading Co Ltd.

Letter from Nuzivu seeds is enclosed In **Annexure-9**

Member may like to discuss

Item no-10 : Connectivity and Long term Access for power project of M/s Sravanthi Energy Private Limited in Uttarkhand

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, M/s Sravanthi Energy Private Ltd., has applied to POWERGRID for Connectivity and long term Access of their 450 MW (Phase-1 – 225MW and Phase-II : 225 MW) Generation project at Village Khaikhera, Tehsil-Kashipur, Distt Udham Singh Nagar in Uttarakhand. As per the application, the connectivity for the project is required by January 2011. The commissioning schedules of the units are as below

Phase-I : 225 MW

Unit-1 (75 MW - Open cycle) : January 2011

Unit-2 (75 MW - Open cycle) : January 2011

Unit-3 (75 MW - Combined cycle) : March 2011

Phase-II : 225 MW

Unit-4 (75 MW - Open cycle) : January 2012

Unit-5 (75 MW - Open cycle) : January 2012

Unit-6 (75 MW - Combined cycle) : March 2012

Long Term Access application, the period for which long term Access is required is 25 years and is from March, 2011 for phase-I (225 MW) and January, 2012 for phase-II (225MW). The beneficiaries of the project are Northern region constituents

A copy of the application is enclosed at **Annexure-10**

ii) Status of Generation

As per the applicant, the status of generation is as follows:

➤ **Land acquisition:**

The applicant as per declaration has indicated that the total land requirement is 36.92 acres including green belt and has been acquired through direct purchase and entire land is under possession of the company. As per MOEF letter land requirement of phase-I is 30 acres and as per TOR for Phase-II land requirement is 10 acres.

➤ **Environmental Clearance:** As per the applicant Environmental clearance for phase-I, 225 MW is already obtained from MOEF, New Delhi and for phase-II, 225 MW approval for terms of Reference already obtained.

➤ **Forest Clearance:** As per the applicant, Forest clearance is not applicable as there are no forest area/land areas available at the project site.

➤ **Fuel arrangement:** As per the applicant the gas available from the KG D6 field shall be transported and delivered at project site by Gail. Term Sheet for phase-I has been signed with Gail for supply of Natural Gas of 0.9 MMSCMD. For phase-II application for 0.9 MMSCMD of gas made with MP & NG department.

As per letter of Ministry of Petroleum and Natural gas allocation will be considered for projects in pipeline as and when are ready to commence

production. As per the applicant they have signed a term sheet for supply of gas to Phase-II with Gail.

- **Water linkage:** As per the applicant, Approval for using ground water of 4512 m³/day for phase-I of the project has been accorded by CGWA. Further the applicant has indicated that the project proponent has envisaged using Air cooled condenser (ACC) for both phase-I & Phase-II. Water requirement for 450 MW capacity with ACC amounting 1200 m³ /day.

iii) Connectivity and Long Term Access of Generation

The nearest substations for Connectivity of the generating station are Kashipur 400 KV S/s of PTCUL (10 km), Mahuakheda Ganj 220kV S/s of PTCUL (2 km) and Bareilly 400kV S/s of POWERGRID (95km).

In addition to Sravanthi (450 MW), M/s Gamma Infraprop and M/s Beta Infratech have applied for connectivity and LTA for their 337.5 MW and 358 MW generation plant near Kashipur respectively.

The proposed Mahuakheda 220kV substation of PTCUL would not be able to handle power from all the projects. Considering the Quantum of power to be evacuated from the project, connectivity of the generation project is proposed by LILO of one circuit Kasipur-Roorkee 400 kV Quad line at the generation switchyard

However keeping in view the early schedule of 1st generator, connectivity may be granted at Mahuakheda as a temporary arrangement which will be restored back to final arrangement. This temporary arrangement may be for one year or as per the direction of PTCUL.

Long Term Access

The applicant has applied for LTA for 450 MW, Phase-I (225MW) from March, 2011 and Phase-II (225 MW) from January, 2012. The beneficiary of the project has been indicated as Northern region Constituents. Power from the project is to be injected into the ISTS by LILO of one circuit Kashipur-Roorkee 400kV Quad line For evacuation of power from the generation project following transmission system of POWERGRID would be available:

- Sravanthi Generation– Roorkee 400kV

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- Roorkee -Saharanpur 400 kV D/c (quad)
 - Saharanpur-Dehradun 400 kV D/c (quad)
 - Dehradun-Abdullapur 400 kV D/c (quad)

With the commissioning of above lines no problem is envisaged in immediate evacuation of power from the project. However In addition to power from Sravanthi power plant, power from generation projects proposed in Uttrakhand would also be evacuated via Abdullapur. With the commissioning of the above projects additional strengthening would be required..

Beyond Abdullapur additional strengthening required if any, shall be carried out based on the progress of generation projects, M/s Sravanthi would also be required to share transmission charges for the additional transmission system, alongwith other generations, if any.

iv) Proposal:

Connectivity

Connectivity of 450MW generation of M/s Sravanthi Energy Private Ltd. to Kashipur 400/220kV Substation is proposed subject to following:

- The applicant shall LILO one circuit of Kashipur-Roorkee 400kV Quad line at the generating switchyard. In case of any modification required in the proposed line due to proposed LILO the same shall be borne the generator. The applicant shall ensure that the equipment and 400kV switchyard shall be designed for terminating Quad lines
- However keeping in view the early schedule of 1st generator, connectivity may be granted at Mahuakheda as a temporary arrangement which will be restored back to final arrangement. This temporary arrangement may be for one year or as per the direction of PTCUL.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
- The connectivity shall be as per the detailed procedures of Central Transmission

Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission.

- The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.

Long Term Access

M/s Sravanthi Ltd, has applied to POWERGRID for Long-Term Access, for long term Access of their 450 MW (Phase-1 – 225MW and Phase-II : 225 MW) Generation project at Tehsil-Kashipur, Distt Udham Singh Nagar in Uttarakhand. It is proposed to grant Long term Access subject to following:

- The applicant shall indicate the exact beneficiaries with quantum of power.
- The Long term Access is granted subject to commissioning of following scheme:
 - Kashipur–Roorkee–Saharanpur 400 kV D/c (Quad)
 - Sharanpur-Dehradun 400 kV D/c (Quad)
- Till the commissioning of the above system margins if any in existing system shall be available utilized. M/s Sravanthi would be required to co-ordinate with NRLDC for access.
- It is proposed to grant the LTA subject to signing of the requisite BPTA for Northern Transmission system charges.
- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009. As the Long Term access is required before three years the applicant may finalize and intimate the beneficiaries immediately
- Beyond Abdullapur additional strengthening required if any, shall be carried out based on the progress of generation projects, the applicant would be required to share transmission charges for the additional transmission system alongwith other generations, if any.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved

Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

Item no- 11 : Connectivity and Long term Access for power project of M/s Gama Infraprop(P) Limited in Uttarkhand

i) Introduction

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, M/s M/s Gama Infraprop(P) Limited, has applied to POWERGRID for Connectivity and Long term Access of their 337.5 MW (Phase-1 – 225MW and Phase-II : 112.5 MW) Generation project at Village Mahua Khera Ganj , Tehsil-Kashipur, Distt Udham Singh Nagar in Uttarakhand. As per the application, the connectivity for the project is required by October 2011. The commissioning schedules of the units are as below

Phase-I : 225 MW

GT (150 MW)	: October 2011
ST (75 MW)	: December 2011

Phase-II : 112.5 MW

GT (75 MW)	: March 2012
ST (37.5 MW)	: June2012

A copy of the application is enclosed at **Annexure-12**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

➤ **Land acquisition:**

The applicant has submitted a letter from BRAS city Infrastructure Development ltd giving allotment of Notified Industrial plot for total 30 acres. The applicant may indicate whether the land is for both phases

➤ **Environmental Clearance:** The applicant has submitted TOR for phase-I only. Applicant may indicate status of phase-II

➤ **Forest Clearance:** The applicant is to submit documentary evidence of Forest clearance for both the phases

➤ **Fuel arrangement:** As per the applicant the gas available from the Vasai east

field shall be transported and delivered at project site by Gail. Term Sheet for has been signed with Gail for supply of Gas of 0.22 MMSCMD firm basis and 0.08 MMSCMD on fall back basis. The applicant may indicate the gas supply is for phase –I only or for Phase-I & II

- **Water linkage:** Approval for using ground water of the project has been accorded by CGWA and same is attached with the application. The applicant may indicate whether the approval is is for phase –I only or for Phase-I & II

iii) Connectivity of Generation

The nearest substations for Connectivity of the generating station are Kashipur 400 KV S/s of PTCUL (10 km), Mahuakheda Ganj 220kV S/s of PTCUL (0 km), adjacent to substation and Bareilly 400kV S/s of POWERGRID (95km).

In addition to Gamma (337.5 MW), M/s Sravanthi and M/s Beta Infratech have applied for connectivity for their 450 MW and 358 MW generation plant near Kashipur respectively.

The proposed Makhuakheda 220kV substation of PTCUL would not be able to handle power from all the projects. Considering the Quantum of power to be evacuated from the project, connectivity of the generation project is proposed by LILO of one circuit Kasipur-Roorkee 400 kV Quad line at the generation switchyard

However keeping in view the early schedule of 1st generator, connectivity may be granted at Mahuakhed as a temporary arrangement which will be restored back to final arrangement. This temporary arrangement may be for one year or as per the direction of PTCUL.

iv) Long Term Access

The applicant has applied for LTA for 125 MW in Phase-I (225MW) from 31/3/2012 and 133 MW in Phase-II 112.5 MW from March, 2014. The beneficiary of the project has been indicated as Northern region Constituents. 100MW has been allocated to Uttarakhand from Phase-I. Power from the project is to be injected into the ISTS by LILO of one circuit Kashipur-Roorkee 400kV Quad line For evacuation of power from the generation project following transmission system of POWERGRID would be available:

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- Gamma Generation– Roorkee 400kV
 - Roorkee -Saharanpur 400 kV D/c (quad)
 - Saharanpur-Dehradun 400 kV D/c (quad)
 - Dehradun-Abdullapur 400 kV D/c (quad)

With the commissioning of above lines no problem is envisaged in immediate evacuation of power from the project. However In addition to power from Gamma power plant, power from generation projects proposed in Utrakhand would also be evacuated via Abdullapur. With the commissioning of the above projects additional strengthening would be required.

Regarding supply of 100 MW to Utrakahnd , separate arrangement needs to be made to supply to the state. If the supply is through above LILO than the tariff would be borne for full capacity

Beyond Abdullapur additional strengthening required if any, shall be carried out based on the progress of generation projects, M/s Gamma would also be required to share transmission charges for the additional transmission system, alongwith other generations, if any.

iv) Proposal:

Connectivity

Connectivity of 337.5MW generation of M/s Gama is proposed subject to following:

- The applicant shall LILO one circuit of Kashipur-Roorkee 400kV Quad line at the generating switchyard. In case of any modification required in the proposed line due to proposed LILO the same shall be borne the generator. The applicant shall ensure that the equipment and 400kV switchyard shall be designed for terminating Quad lines
- The applicant shall submit :
 - The applicant has submitted a letter from BRAS city Infrastructure Development Ltd giving allotment of Notified Industrial plot for total 30 acres. The applicant may indicate whether the land is for both phases
 - The applicant has submitted TOR for phase-I only. Applicant may indicate status of phase-II

-
- The applicant is to submit documentary evidence of Forest clearance for both the phases.
 - The applicant may indicate the gas supply is for phase-I only or for Phase-I & Phase-II
 - The applicant may indicate whether the approval for using ground water is for phase -I only or for Phase-I & II
 - The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
 - The connectivity shall be as per the detailed procedures of Central Transmission Utility (POWERGRID) for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-State Transmission.
 - The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.

Long Term Access

M/s Gamma Ltd, has applied to POWERGRID for Long-Term Access of their 337.5 MW (Phase-1 – 225MW and Phase-II : 112.5 MW) Generation project at Tehsil-Kashipur, Distt Udham Singh Nagar in Uttarakhand. It is proposed to grant Long term Access subject to following:

- The applicant shall indicate the exact beneficiaries with quantum of power.
- The Long term Access is granted subject to commissioning of following scheme:
 - Kashipur–Roorkee–Saharanpur 400 kV D/c (Quad)
 - Sharanpur-Dehradun 400 kV D/c (Quad)
- Till the commissioning of the above system margins if any in existing system shall be available utilized. M/s Gamma would be required to co-ordinate with NRLDC for access.
- Regarding supply of 100 MW to Uttrakahnd , separate arrangement needs to be made to supply to the state. If the supply is through above LILO than the tariff would be borne for full capacity

-
- The applicant need to submit Bank Gurantee for the 258 MW, which would be twenty five lakhs eighty thousand . The Grant of LTA intimation shall be issued subject to submitting of Bank gurantee
 - It is proposed to grant the LTA subject to signing of the requisite BPTA for Northern Transmission system charges.
 - Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009. As the open access is required before three years the applicant may finalize and intimate the beneficiaries immediately
 - Beyond Abdullapur additional strengthening required if any, shall be carried out based on the progress of generation projects, the applicant would be required to share transmission charges for the additional transmission system alongwith other generations, if any.
 - The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

Item no- 12 : Connectivity and Long term Access for power project of M/s Beta Infratech (P) Limited in Uttarkhand

i) Introduction

In accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, M/s Beta Infratech (P) Limited, has applied to POWERGRID for Connectivity and long Term Access of their 358 MW Generation project at Village Mahua Khera Ganj , Distt Udham Singh Nagar in Uttarakhand. As per the application, the connectivity for the project is required by December 2011. The commissioning schedules of the units are as below:

GT- #1 (77.1 MW) : December 2011
GT - #2 (77.1 MW) : February 2012
ST -#3 (85.2 MW) : March 2012
GT - #4 (77.1 MW) : December 2012
ST -#5 (41.3 MW) : March 2013

A copy of the application is enclosed at **Annexure-11**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

➤ **Land acquisition:**

As per the application they are in possession of 30 acres of land in Nand Nagar Industrial area Phase-III, Mahua Khera Ganj, Kashipur.

➤ **Environmental Clearance:** As per the applicant TPR for 358 MW has been accepted by MOEF vide letter dated 12/10/2010. Copy, submitted

➤ **Forest Clearance:** As per the applicant no forest land is under notified industrial area

➤ **Fuel arrangement:** As per the applicant G.T.A and G.S.A have been signed for 0.9 mmscmd of Natural gas with Gail

➤ **Water linkage:** The applicant have indicated that they have obtained the permission of using ground water from Executive Engineer , vide letter dated 01/09/2010 and they have also applied to Central Ground Water Board.

iii) Connectivity of Generation

The nearest substations for Connectivity of the generating station are Kashipur 400 KV S/s of PTCUL (14-15 km) and Mahuakheda Ganj 220kV S/s of PTCUL (1km).

As per the Long term Access application the target beneficiary for 308 MW is PTCUL and only 50 MW is for Northern region

As most of power is to be consumed within the state it is proposed that the connectivity would be at Makhuakheda 220kV substation of PTCUL. The generator would co-ordinate with PTCUL for termination of a 220kV Line from the generating station to Mahuakheda. The line should have adequate capacity to

transfer of power from the generating station to Mahuakheda even under contingency.

iv) Long Term Access

The applicant has applied for LTA for 50 MW, from March, 2012. The beneficiary of the project has been indicated as Northern region Constituents. Power from the project is to be injected at Mahuakheda. Mahuakheda would be connected to Kashipur 400kV Substation of PTCUL by 220kV line. The present long term Access is being processed for transfer of power beyond Kashipur. . The open access is being considered for transfer of power beyond Kashipur 400kV. Presently connectivity of Kashipur 400kV with rest of the grid is via Kashipur-Moradabad 400kV S/c and Kashipur-Rishikesh 400kV S/c. For improved connectivity of Kashipur and better evacuation of power POWERGRID has proposed following transmission system:

- Kashipur – Roorkee-Saharanpur 400 kV D/c (quad)
- Saharanpur-Dehradun 400 kV D/c (quad)
- Dehradun-Abdullapur 400 kV D/c (quad)

With the commissioning of above lines no problem is envisaged in immediate evacuation of power from the project. However In addition to power from Beta power plant, power from generation projects proposed in Uttarakhand would also be evacuated via Abdullapur. With the commissioning of the above projects additional strengthening would be required.

Beyond Abdullapur additional strengthening required if any, shall be carried out based on the progress of generation projects, M/s Beta would also be required to share transmission charges for the additional transmission system, alongwith other generations, if any

iv) Proposal:

Connectivity

Connectivity of 358 MW generation of M/s Beta Infratech Pvt. Ltd to Kashipur 400/220kV Substation is proposed subject to following:

-
- The applicant shall build a 220kV D/c with adequate capacity from generating switchyard to Mahuakheda. The line should have adequate capacity to transfer of power from the generating station to Mahuakheda even under contingency.
 - The applicant should coordinate with PTCUL for implementation of 220kV Bays at Mahuakheda for termination of the line.
 - The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Central Electricity Authority (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.
 - As the generation is being injected into the STU grid the connectivity shall be as per the direction/procedure of PTCUL.
 - The applicant shall furnish additional details for signing Connection Agreement for the same and would sign the Connection Agreement as per the provisions of Connectivity.

Long Term Access

M/s Beta Ltd, has applied to POWERGRID for Long-Term Access, for long term Access for 50 MW from their 358 MW Generation project at Village Mahua Khera Ganj , Distt Udham Singh Nagar in Uttarakhand. The present long term Access is being processed for transfer of power beyond Kashipur. It is proposed to grant Long term Access subject to following:

- The applicant shall indicate the exact beneficiaries with quantum of power.
- The Long term Access is granted subject to commissioning of following scheme:
 - Kashipur–Roorkee–Saharanpur 400 kV D/c (Quad)
 - Sharanpur-Dehradun 400 kV D/c (Quad)
- Till the commissioning of the above system margins if any in existing system shall be available utilized. M/s Beta would be required to co-ordinate with NRLDC for access.
- It is proposed to grant the LTA subject to signing of the requisite BPTA for Northern Transmission system charges. The applicant shall coordinate with PTCUL for applicable transmission charges.

-
- Applicant shall have to firm up exact destination at least 3 years prior to the intended date of availing LTA at least for a capacity equivalent to 50% of the quantum of power for which LTA has been sought for through signing of PPA with such grid connected entities/STUs as per CERC Regulations 2009. As the Long Term access is required before three years the applicant may finalize and intimate the beneficiaries immediately
 - Beyond Abdullapur additional strengthening required if any, shall be carried out based on the progress of generation projects, the applicant would be required to share transmission charges for the additional transmission system alongwith other generations, if any.
 - The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

Item no 13: Long term Access for power project of Rosa Power Supply Company Limited in Uttar Pradesh

M/s Rosa Power Supply Company Limited had applied seeking Long-term Open Access for transfer of 300 MW power from Stage-II (2x300 MW) of Rosa Power Project located at Shahjahanpur, U.P. Out of 600 MW power, 300 MW power is allocated to Uttar Pradesh and balance 300 MW is to be distributed between Delhi (150 MW) and Haryana (150 MW). The application was discussed in the Long Term Open Access Meeting held on 30/05/2009 at Nainital alongwith 27th Standing Committee Meeting of Northern Region during the meeting it was decided that Long-term Open Access can be granted for 25 years subject to following:

- i. Long Term Open Access to Rosa Power Company shall be granted after the commissioning of following strengthening scheme:
 - Bareilly – Meerut 765 kV S/c
 - One ckt of Lucknow – Bareilly 765 kV line
 - Bareilly-Kashipur–Roorkee–Saharanpur 400 kV D/c (Quad conductor)
- ii. For connectivity of Rosa Power Plant with the grid the following was agreed :
 - Rosa- Shahjahanpur 400 kV D/c

Shahjahanpur is expected to be commissioned by November'12.

As per the information from POWERGRID, that first unit of Stage-II is to be commissioned by September '2011 and second unit by December'2011.

UPPTCL has stated that there is likelihood that 400 kV Shahjahanpur substation and hence Rosa-Shahjhanpur line may not be commissioned by Ot/Nov'2011 and proposed to LILO one ckt of Unnao – Bareilly 400 kV D/c line at Rosa TPS alongwith bypassing of Series compensation of Unnao

As agreed earlier power from Rosa is to be injected at Shahjhanpur and therefore in view of the early commissioning schedule of the generation till the commissioning of Shahjhanpur S/s following is proposed

- Till the commissioning of Shahjhanpur S/s, Rosa generation may be connected to the grid by connecting proposed Rosa-Shahjhanpur line to one circuit of Lucknow –Bareilly 400kV line i.e LILO of Lucknow-Bareilly line at Rosa generation. In other words POWERGRID would construct one D/c line (LILO portion upto proposed site of Shahjahanpur substation) and Rosa would also bring their line upto proposed site of Shahjahanpur substation and they can be joined as to make Rosa – Lucknow and Rosa – Bareilly 400 kV S/c lines. This would avoid any additional expenditure and avoid bypassing of the series compensation. Till the commissioning of system identified in (ii) existing system margins could be used for evacuation of power from the project subject to approval of NRLDC.

Member may like to discuss

Item no 14: Long term Access for Malana-II power project in Himachal Pradesh

M/s Power Trading Corporation had applied seeking long-term open access to transfer 86MW of power from the proposed Malana-II HEP (100 MW) to be set up in Himachal Pradesh. For transmission requirement and injection of power at Nalagarh, LILO of one circuit of ADHEP-Nalagarh 220 kV D/c line has been carried out by the project developer. In a meeting held on 3rd September,2010 at NRLDC , New Delhi to discuss Control area, Jurisdiction, location of energy meter, scheduling , loss apportionment and desptach instructions etc, in respect of AD HEP and Malana-II HEP it was decided that “ Malana-II with an installed capacity of 100 MW has only 86 MW LTA on ISTS from Nalagarh onwards to Punjab. Since the total generation from

the Malana-II HEP should also be for full capacity of 100 MW rather than 86 MW and it was agreed that necessary action would be taken M/s Everest Power limited and CTU for correcting the LTA capacity in respect of Malana-II HEP". **Annexure-13**

In view of it is proposed that Long term Open Access of Malana-II may be increased from 86MW to 100 MW, full capacity. BPTA for 86 MW has already been signed by PTC. It is proposed that applicant shall sign the BPTA and agreement for balance power.

Member may like to discuss

Item no 15: Long term Access for Bara Banghal power project of M/s Malana Power in Himachal Pradesh

M/s Malana Power company, has applied for Long-Term Access in ISTS for transfer of 240 MW of power from the proposed Bara Banghal HEP (3x66.67MW) to be set up in Himachal Pradesh. The commissioning schedule for generation project is progressively from 30/11/2016.

The application was discussed in the the Long Term Open Access Meeting held on 30/05/2009 at Nainital along with 27th Standing Committee Meeting of Northern Region. It was discussed that Power from Bara Banghal was to be injected at Bajoli Holi HEP at 220kV level. Beyond Bajoli Holi, power was to be pooled at Lahal pooling point of Himachal. From Lahal pooling, evacuation to Chamera Pooling station of POWERGRID would be through a 400kV D/c line to be established by Himachal. Beyond Chamera Pooling point power would be evacuated via ISTS regional grid. The applicant informed that their open access quantum might be revised to 200MW minus home state share as 240 MW is the peak power. After the discussions it was agreed that Long-term Open Access can be granted to M/s Malana Power Company for transfer of Bara Banghal power from Chamera Pooling station of POWERGRID, subject to following:

- The company shall within a month's time indicate the quantum of power, firm commissioning schedule, period of open access and the arrangement for supply of home state power. After receipt of above information the Intimation for Long Term Open Access shall be issued. Incase of non-receipt of above information the Long Term Open Access Application shall be closed.

The applicant is yet to indicate the quantum of power, firm commissioning schedule, period of open access and the arrangement for supply of home state power. A reminder letter in this regard has already issued on 27/04/2010, **Annexure-14**.

Member may like to discuss

Item no 16: Long term Access for Chango Yangthang power project of M/s Malana Poweer in Himachal Pradesh

M/s Malana Power company, has applied for Long-Term Access in ISTS for transfer 168 MW of power from the proposed Chango Yangthang HEP (2x70 MW) to be set up in Himachal Pradesh. The commissioning schedule for generation project is progressively from 01/05/2015. The application was discussed in the the Long Term Open Access Meeting held on 30/05/2009 at Nainital along with 27th Standing Committee Meeting of Northern Region. It was discussed that, as per the Master plan of HP, Power from the Yangthang generation project would be evacuated via Jangi and Sherpa 400/220kV pooling station to Northern region grid.

After the discussions it was agreed that Long-term Open Access can be granted to M/s Malana Power Company for transfer of Chang Yang Thang power from a feasible ISTS Grid station i.e. Abdullapur, subject to following:

- The applicant shall coordinate with Himachal for developing system for transfer of power upto a feasible ISTS grid station matching with generation station.
- The long term access open is being processed for transfer beyond the ISTS injection point i.e Abdullapur.
- The company shall within a month's time indicate the quantum of power, firm commissioning schedule, period of open access and the arrangement for supply of home state power. After receipt of above information the Intimation for Long Term Open Access shall be issued. Incase of non-receipt of above information the Long Term Open Access Application shall be closed.
- Applicant shall coordinate with Himachal for availability of required transmission system for transfer of power upto regional injection point and bear all applicable transmission charges for transfer of power upto regional grid point.

The applicant is yet to indicate the quantum of power, firm commissioning schedule, period of open access and the arrangement for supply of home state power. A reminder letter in this regard has already issued on 27/04/2010, **Annexure-14**.

Member may like to discuss

Item no-17: Connectivity for power 1x700 MW expansion unit of Rajpura project of M/s Nabha Power limited in Punjab

i) Introduction

M/s Nabha Power limited (a wholly owned subsidiary of L&T) is currently developing a 2x700 MW domestic coal based thermal power project at Rajpura in Punjab. Further M/s NPL has signed a MOU with the Government of Punjab for enhancing the capacity of the present plant by an expansion unit of 1x700 MW adjacent to the current plant. The expansion unit shall setup substantially within the boundary of the present project.

Presently in accordance with CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, M/s Nabha Power Limited, has applied to POWERGRID for Connectivity of their 700MW. As per the application, the connectivity for the project is required by August'2014.

A copy of the application is enclosed at **Annexure-15**.

ii) Status of Generation

As per the applicant, the status of generation is as follows:

- **Land acquisition:** As per the applicant, the unit shall be setup substantially within the boundary of the present project (land already acquired and in possession of NPL). As per the applicant only around 270 acres of land for which land has already been identified and submission of application of land acquisition in under process. Expected to be complete the process by Feb'2011
- **Environmental Clearance:** As per the applicant, Application of TOR submitted in August'2010 and is expected to be taken up during Novemeber'10 by expert committee Meeting
- **Forest Clearance:** As per the applicant, not applicable.
- **Fuel arrangement:** Coal linkage application submitted to Ministry of Coal on 29th

July,2010. Decision expected shortly.

- **Water linkage:** Water linkage of 25 cusecs received vide letter dated 23rd September,2010

iii) Connectivity of Generation

Nabha is (2x700 MW) is an already under construction thermal power plant in Punjab. For evacuation of power from the project following transmission has been proposed for immediate evacuation of power:

- Nabha Generation – Rajpura 400kV D/c
- Nabha Generation – Nakodar 400kV D/c

The proposed 700 MW is the third unit proposed at Nabha. With this generation unit the total generation capacity at Nabha (Rajpura) would be 2100 MW. As the generation is expansion of already proposed 2x700 MW generation at Rajpura. Hence the lines would provide connectivity of the generation. Additional lines required if any for evacuation of power from the generation would be looked into with the Long term Access application.

It is proposed that M/s Nabha Power Ltd. may be asked to submit the LTA application.

Member may like to discuss

Item no. -18: Singrauli-III TPS (500 MW) : (same as given in SCM agenda)

NTPC is implementing Singrauli STPP Stage-III (500 MW) in Uttar Pradesh for the benefit of Northern region beneficiaries. As per NTPC letter, copy enclosed in **Annexure-16**, the Feasibility report (FR) for the project has been approved in August 2009 and various clearances are in advance stage. The units are likely to be commissioned in 2013-14. The indicative allocation of power from the generation to NR beneficiaries as indicated by NTPC is as follows:

- Himachal Pradesh-20MW, Haryana-33MW, Jammu and Kashmir-39MW, Punjab-48MW, Rajasthan-68MW, Uttar Pradesh-188MW, Uttarakhand-24MW, Chandigarh-4MW, Delhi-76 MW

NTPC has requested for matching of Associated Transmission system to be planned to match the time frame of the generation project.

Presently following transmission system exist for evacuation of power from the generation Complex.

Singrauli Generation station (2000MW)

- Singrauli-Lucknow 400kV S/c
- Singrauli – Kanpur 400kV S/c
- Singrauli-Allahabad 400kV 2xS/c
- Singrauli-Anpara 400kV S/c
- Singrauli-Rihand 400kV 2xS/c

Rihand Generation station-I & II (2000MW)

- 1500 MW Rihand-Dadri HVDC bipole
- Rihand –Allahabad 400kV D/c
- Rihand - Singrauli 400kV 2xS/c

Study has been carried out to study adequacy of the system to evacuate Singrauli-III generation. Study has been carried out for 2013-14 time frame. Maximum thermal condition has been simulated to study critical loading condition.

Base Case :

Result of Load flow simulation under base case is plotted in **Exhibit-Singr-I**. It is seen that all line loadings are well within 500 MW and no overloading is observed. Following contingencies have been studied

- Outage of Singrauli-Allahabad 400kV S/c – **Exhibit-Singr-I-01**
- Outage of Singrauli-Lucknow 400kV S/c – **Exhibit-Singr-I-02**
- Outage of Rihand –Dadri pole outage – **Exhibit-Singr-I-03**

From the simulation it is seen all line loadings are within limits. Maximum loading observed is on Singrauli-Anpara line viz 714 MW

With 500 MW additional generation at Singrauli:

Result of Load flow simulation under base case is plotted in **Exhibit-Singr-II**. It is seen that all line loadings are well within 500 MW and no overloading is observed. Following contingencies have been studied

- Outage of Singrauli-Allahabad 400kV S/c – **Exhibit-Singr-II-01**
- Outage of Singrauli-Lucknow 400kV S/c – **Exhibit-Singr-II-02**
- Outage of Rihand –Dadri pole outage – **Exhibit-Singr-II-03**

From the simulation it is seen with 500 MW additional generation at Singrauli, even under base case Singrauli- Anpara line gets loaded 623 MW even under base case. Under outage of one pole of Rihand-Dadri HVDC the line gets loaded 954 MW.

There is a need for additional outlets from Singrauli.

System strengthening for additional generation:

There are Severe Right of way constraints in construction of new lines from Singrauli. Some sections of the existing lines are Double circuit lines with single circuit strung. It is proposed to utilise the space by stringing of one more circuit in the Singrauli–Allahabad section. As per preliminary estimates about 50 km line section is on D/C Towers, Allahabad in addition to Singrauli/ Rihand circuit is also connected to eastern region via Allahabad-Sasaram 400kV d/c. Beyond Allahabad lines are already well loaded and have little margin to carry additional power. In view of above, Allahabad-Kanpur 400kV D/c is proposed. The load flow studies with proposed strengthening are plotted as below:

- With System Strengthening scheme – **Exhibit-Singr–III**
- Outage of Singrauli-Allahabad 400kV S/c – **Exhibit-Singr–III-01**
- Outage of Singrauli-Lucknow 400kV S/c – **Exhibit-Singr–III-02**
- Outage of Rihand –Dadri pole outage – **Exhibit-Singr–III-03**

From the studies it is seen that all line loadings are within limit with proposed transmission scheme. In view of above following transmission scheme is proposed for evacuation of power from Singrauli-III

- Siingrauli-Allahabad 400kV S/c
- Allahabad-Kanpur 400kV D/c

NTPC has applied for connectivity, however it is suggested that they may apply for LTA, before taking up of implementation of above lines.

Members of the Committee may discuss and concur.

Item no. 19: Rapp-7&8 (2x700 MW) of Nuclear power Corporation: (same as given in SCM agenda)

M/s Nuclear Power Corporation of India limited is developing a 1400 MW (2x700 MW) Nuclear power plant in Rawatbhata, Chittorgarh in Rajasthan. In accordance CERC regulations 2009 for Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission, M/s Nuclear Power Corporation of India limited, has

applied to POWERGRID for Connectivity of their 1400 MW Generation project. As per the application the Rapp-7 unit is scheduled for commissioning by June, 2016 while Rapp-8 schedule is December-2016.

A copy of the application is enclosed at **Annexure-17**:

Transmission system for RAPP-7&8 was in the standing committee meeting and following system was agreed during 16th Standing Committee Meeting held on 24.03.04 following transmission system was proposed :

- RAPP – Jaipur 400 kV D/C line of which one circuit to be LILoed at Kota
- RAPP – Nagda (WR) 400 kV D/C

The expected time schedule of commissioning of Rapp-7&8 while finalising the above scheme was 2009. As connectivity application the commissioning schedule of the generation now is 2016. The system in Rajasthan has undergone sufficient change since 2004.

Presently Rajasthan has an installed capacity of about 4100 MW. By 2013-14 Rajasthan has proposed to add about 4500 MW. Future projects include an addition of about 4450 MW by XII plan. RRVPNL has proposed a 765/400kV substation at Anta from where 765kV 2xS/c has been proposed to Jaipur 765/400kV substation at Jaipur. The expected demand of Rajasthan by end of XII plan is about 11,400 MW as per 17th EPS. With the commissioning of proposed generations Rajasthan large amount of load would be met own generation.

Studies have been carried to evolve the transmission system for RAPP-7&8 considering above.

With proposed Rapp-7&8 generation

Study has been carried out for evacuation from Rapp-7&8. The system envisaged earlier i.e, Rapp-Jaipur 400 kV D/c (one circuit via Kota) and Rapp(NR) to Sujalpur(WR) a 400/220kV Substation under construction by LILo of Bina-Nagda has been considered as approved in 26th SCM of WR, instead of RAPP- Nagda as considered earlier. The result of simulation studies are tabulated as follows:

- Base Case with proposed Rapp-7&8 : **Exhibit-Rapp-I**
- Outage of one circuit Rapp-Kankroli 400 kV : **Exhibit-Rapp-I-01**
- Outage of one circuit Rapp-Kota 400 kV : **Exhibit-Rapp-I-02**

The load flow under base case is plotted in **Exhibit-Rapp-I**. From the studies it is seen that all lines are loaded in a balance manner with 300-370 MW. Under outage of one circuit of Rapp-Kankroli the remaining circuit gets loaded to 485 MW. Under outage of one circuit of Rapp-Kota the other circuit gets loaded to 575 MW. From the studies it is seen that no constraint is envisaged in immediate evacuation of power.

While planning earlier, it was envisaged a major part of generation would be consumed in Rajasthan and power supply to other states would be through displacement. As indicated earlier the generation addition of about 9000 MW (4450 + 4500 MW) state generation is envisaged in Rajasthan which would meet the load requirement of Rajasthan. Hence the addition of RAPP-7&*8 would directly result increased flow on tie line to the state. One of the low impedance path for evacuation of power would be 765 kV corridor beyond Jaipur.

As per under execution/planned transmission system, at Jaipur 765kV we have two (2) nos of 765kv lines from Gwalior (WR) & Anta and one 765kV line towards Bhiwani. It was envisaged that power from Gwalior partly would meet the load of Jaipur (in addition to power from Anta) and partly be transferred towards Bhiwani. With increased generation addition in Rajasthan and a large quantum of import from WR side, a large quantum of power would be required to be transferred out of the state. From the base case it is seen that of the 2400MW flowing on 765 kV line from Anta to Jaipur only 1300 MW flows through the transformer while remaining 1000 MW flows towards Bhiwani. With Gwalior-Jaipur line carrying about 2000 MW, the loading Jaipur-Bhiwani line is about 3000 MW, which is critical. Additional 765kV strengthening is required beyond Jaipur. With 2500 MW HVDC being planned to Bhiwani, the strengthening would have to be extended beyond Bhiwani.

Accordingly following strengthening is proposed. **Northern region system strengthening Scheme - XXV**

- Jaipur-Bhiwani 765kV S/c (2nd)
- Bhiwani (PG)-Hisar 400kV D/c
- LILO of Moga-Bhiwadi 400kV D/c at Hissar

Studies indicate that with proposed system all line loadings are within limit. The result of loadflow studies are plotted in **Exhibit Rapp-II**

In view of above following is proposed

Transmission System for Rapp-7&8

- Rapp-Jaipur 400kV D/c – one circuit via Kota
- Rapp- Sujalpur 400kV D/c

Northern region system strengthening Scheme - XXV

- Jaipur-Bhiwani 765kV S/c (2nd)
- Bhiwani (PG)-Hisar 400kV D/c
- LILO of Moga-Bhiwadi 400kV D/c at Hissar

Members may discuss and concur.

Item no 20: Connectivity and Long Term Access to MB Power (Madhya Pradesh) Ltd.

M/s M B Power(Madhya Pradesh) Ltd. had earlier submitted application to POWERGRID for grant of “Long term Open Access” as per CERC regulation 2004 for transfer of 1128MW power from their proposed generation project [2x600 MW] in Distt Anuppur, MP. The above application was also discussed in the 28th Standing Committee Meeting of NR constituents regarding long-term open access applications held on 23/02/2010 at New Delhi. Subsequently, M/s Moser Baer has applied for connectivity and Long-term Access for the same project as per CERC Regulations, 2009 with applications detail as under, A copy of the application is enclosed at **Annexure-18**:

Generation Project	: District-Anuppur, State- MP
Generation Step up Voltage	: 400kV
Connectivity sought	: 1122 MW
Date from which Connectivity Sought	: Aug'13
Commissioning schedule	: U-1 : Aug'13, U-2 : Dec'13
Capacity for which LTA is required	: 392 MW **
Drawl of Power (Target Beneficiary)	: 200MW(WR) & 192MW(NR)
Date from which LTA is Required	: Aug'13

*** Balance power reserved for GoMP (393 MW), Short term sale (337 MW)*

Connectivity

The issue of connectivity was discussed in the of 12th Meeting of Western Region Constituents regarding Connectivity/Long term Access Applications held at NRPC, New Delhi on 08th July, 2010 and it was agreed that that connectivity for the above project may be provided with direct interconnection at 400kV Jabalpur Pooling Station through

MB TPS – Jabalpur Pooling Station 400kV D/c (Triple) line. Till the availability of proposed transmission system and to take care of any mismatch between commissioning of generation project and line termination at Jabalpur Pooling Station, connectivity of Moser Baer(MB) TPS with WR grid may be provided by terminating the 400kV D/c(triple) line from MB TPS to Jabalpur(existing) S/s of POWERGRID as an interim arrangement. It was agreed that, POWERGRID shall develop the transmission system for Connectivity, however, the commissioning schedule of the system for connectivity would be as per CERC time lines (tariff regulations 2009) plus 9 months.

Long Term Access

As per earlier application the allocation to Northern region was 499 MW which as per revised is 192 MW. A comprehensive transmission for transfer of power to NR from IPP's has been evolved in an integrated manner looking into power transfer network requirement in Northern Region from IPP's in Western region & Orissa. The allocation to NR from above project would be transferred over the corridor.

Common Transmission Corridor

1. Common Transmission system to shared by Maruti Clean Coal & Power Ltd.(300MW), Dheeru Powergen(450MW), Jaiprakash Power Ventures Ltd(1320MW), Aryan M.P Power(1200MW), Bina Power(500MW), CSPTCL (432 MW), M B Power[MP] (1200 MW) along with IPPs in Orissa (6080 MW) in proportion to allocation to NR
 - a) Bina – Gwalior 765 kV S/c (3rd)
 - b) Gwalior – Jaipur 765kV S/c (2nd)
 - c) Jaipur – Bhiwani 765kV S/c
2. Common Transmission system to shared by M B Power(MP) [1200MW] along with IPPs in Orissa (6080 MW) in proportion to allocation to WR
 - a) Jabalpur Pooling Station – Bhopal – Indore 765kV S/c
 - b) 765/400kV 2x1500MVA Jabalpur Pooling Station
3. Common Transmission system to shared by Maruti Clean Coal & Power Ltd.(300MW), Dheeru Powergen(450MW), Jaiprakash Power Ventures Ltd, (1320MW), Aryan M.P. (1200MW), Bina Power(500MW), CSPTCL (432 MW), M B Power(MP) (1200MMW) in proportion to allocation to WR
 - a) Indore - Vadodara 765 kV S/c
 - b) Vadodara – Pirana 400kV D/c(Quad)

c) Establishment of 765/400kV 2x1500MVA Pooling station at Vadodara

In addition as was discussed in WR constituent meeting M/s Moser Baer shall share the transmission charges of

- Jabalpur Pooling Station – Bina 765kV S/c(3rd) along with associated bays at either end (Implementation through private sector)

M/s Moser Baer shall share the transmission charges of the above strengthening scheme. Transmission Charges for above link shall also be shared by other IPPs, if applicable

It is proposed that Long Term Access may be granted to M/s Moser Baer subject to :

- M/s Moser Baer shall have to firm up PPA at least for 50% of LTA quantum 3 years prior to the intended date of availing LTA as per CERC regulations, 2009 and intimate to POWERGRID
- Till the availability of above proposed transmission system strengthening(s), power transfer may be effected depending on the transmission capacity available and in case of any transmission constraint for power transfer from the MB TPS during operation, M/s MB Power(MP) Ltd. may take necessary action to back down the generation as per the instruction of respective Load Despatch Centre.
- M/s MB Power (MP) Ltd. shall sign BPTA with POWERGRID/transmission licensee for sharing of WR regional transmission charges corresponding to 392MW, NR transmission charges corresponding to 192MW as per CERC norms as well as transmission charges towards following common transmission corridors in WR and NR-WR indicated above.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

Member may like to discuss

Item no 21: connectivity and Long Term Access to Pipavav Energy Pvt. Ltd

M/s Pipavav Energy Ltd had earlier submitted application to POWERGRID for grant of “Long term Open Access” as per CERC regulation 2004 for transfer of 1110MW power from their proposed project [2x600 MW] in Distt Amreli, Gujarat. The above application

was also discussed in the 28th Standing Committee Meeting of NR constituents regarding long-term open access applications held on 23/02/2010 at New Delhi. Subsequently, M/s Pipavav Energy Ltd has applied for connectivity and Long-term Access for the same project as per CERC Regulations, 2009 with applications detail as under, copy of the application is enclosed at **Annexure-19**.

Generation Project : 1200MW (2x600MW)
District-Amreli, State- Gujarat
Connectivity sought : 1110 MW
Date from which Connectivity Sought : Jan'13
Commissioning schedule : U-1 : Jun'13, U-2 : Oct'13
Capacity for which LTA is required : 1110 MW
Drawl of Power (Target Beneficiary)\ : 510MW (WR),270MW (NR) & 330MW(ER)
Date from which LTA is required : Aug'13

Connectivity

Earlier connectivity for the above project was considered at nearby 400kV Amreli (GETCO) substation. The issue of connectivity was discussed in the of 12th Meeting of Western Region Constituents regarding Connectivity/Long term Access Applications held at NRPC, New Delhi on 08th July, 2010 and is was agreed that that connectivity for the above project may be provided at the nearest ISTS substation which is 400kV Pirana through 400kV Pipavav TPS – Pirana D/c(Triple) line. However, in case there is any mismatch between implementation of above connectivity with the generation project, it was agreed that interim arrangement through LILO of 400kV Amreli – Jetpur S/c line at Pipavav TPS is to be provided. However, in that case, power transfer may be effected depending upon the system condition.

Long Term Access

As per earlier application the allocation to Northern region was 555 MW which as per revised is 270 MW. For Transfer of power to WR following has been agreed

Transmission system strengthening in WR

- Pirana – Dehgam 400kV D/c (2nd)
- Installation of 1x315 MVA,400/220kV ICT (3rd) at Pirana

Above transmission arrangement shall facilitate power transfer within WR while power transfer to beneficiaries in ER shall be effected on displacement basis. M/s Pipavav Energy Ltd. shall bear the transmission charges of the above strengthening scheme. Transmission Charges for above link shall also be shared by other IPPs, if applicable

As was discussed in 28th Standing Committee Meeting of NR constituents For power transfer from Pipavav to Northern region the applicant shall share the system identified for WR-NR corridor with IPP's in SR consisting of following elements :

WR-NR corridor identified along with other IPP generation projects in SR

- i) Jabalpur Pooling Station – Orai 765kV S/c
- ii) Orai – Bulandshahar 765kV S/c
- iii) Bulandshahar – Sonipat 765kV S/c
- iv) Establishment of 765/400kV 2x1000MVA S/s at Orai by LILO of one ckt. of Satna – Gwalior 765kV line
- v) Establishment of 765/400kV 2x1500MVA S/s at Bulandshahar by LILO of Agra – Meerut 765kV line
- vi) Establishment of 765/400kV 2x1500MVA S/s at Sonapat by LILO of Bhiwani – Meerut 765kV line
- vii) Orai-Orai(UPPCL) 400kV D/c (Quad))
- viii) Sonipat – Kurushetra 400kV D/c (Quad))
- ix) Sonipat(new) – Sonipat (Under constr) 400kV D/c (Quad))
- x) Bulandshahar – Hapur (UPPCL) 400kV D/c (Quad)

It is proposed that Long Term Access may be granted to M/s Pipavav Energy Ltd subject to :

- M/s Pipavav Energy Ltd shall have to firm up PPA at least for 50% of LTA quantum 3 years prior to the intended date of availing LTA as per CERC regulations, 2009 and intimate to POWERGRID
- Till the availability of above proposed transmission system strengthening(s), power transfer may be effected depending on the transmission capacity available and in case of any transmission constraint for power transfer from the PipavavTPS during operation, M/s Pipavav Energy Ltd may take necessary action to back down the generation as per the instruction of respective Load Despatch Centre.

- M/s Pipavav Energy Ltd. shall sign BPTA with POWERGRID for sharing of WR regional transmission charges corresponding to 1200MW, NR & ER transmission charges corresponding to 290MW & 360 MW respectively and ER-WR inter-regional transmission charges as per CERC norms as well as shall need to share the transmission charges towards transmission system strengthening scheme for WR-NR corridor along with other already identified IPPs in SR listed above.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC(Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, Approved Detailed procedure of CTU, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

Member may like to discuss

Item no 22: Long Term Access to Bina TPS Energy Pvt. Ltd

The above application was also discussed in the 28th Standing Committee Meeting of NR constituents regarding long-term open access applications held on 23/02/2010 at New Delhi. In the meeting the allocation to NR was indicated as NR (132.5MW) and WR (132.5 MW). The revised allocation is 132.68MW (WR) & 132.67MW (NR).

Member may like to discuss

Item no 23: Connectivity/LTA of generation developers in Vemagiri area, AP

POWERGRID had received following applications for Connectivity/LTA in Vemagiri area, Andhra Pradesh :

Connectivity Applications

Sl. No	Applicant	Connectivity applied for (MW)	Connectivity required from
1.	Spectrum Power Generation Ltd.	1400	December, 2012
2.	Reliance Infrastructure Limited	2400	September, 2012 / September, 2013
3.	GVK Gautami Power Ltd.	800	September, 2012
4.	GVK Power (Jegurupadu) Pvt. Ltd	800	September, 2012
	Total	5400	

LTA Applications

Sl. No	Applicant	Installed Capacity (MW)	LTA applied for (MW)	Time Frame	Target Beneficiary Regions		
					SR	WR	NR
1.	Spectrum Power Generation Limited	1400	1350	March, 2013	1020	330	-
2.	Reliance Infrastructure	2400	2200	January, 2012	1500	700	-
3.	GVK Gautami Power Ltd.	800	800	September, 2012	433	100	267
4.	GVK Power (Jegurupadu) Pvt. Ltd	800	800	September, 2012	520	100	180
	Total	5400	5150		3473	1230	447

It was decided to grant LTA for above applicants' alongwith the following system for Connectivity and LTA:

Transmission system for Connectivity:

(i) Spectrum Power Generation Ltd (1400 MW)

- a. 400 kV quad D/c line to Vemagiri-II pooling station
- b. 125 MVAR Bus Reactor at generation switchyard

(ii) Reliance Infrastructure Ltd (2400 MW)

- a. 2x400 kV quad D/c line to Vemagiri-II pooling station (the two nos. of dedicated lines may be phased matching with the commissioning of the two phases).
- b. 2x125 MVAR Bus Reactor at generation switchyard (the two nos. of 125 MVAR bus reactors may be phased matching with the commissioning of the two phases).

(iii) GVK Gautami Power Ltd (800 MW)

- a. Bus extn of the existing switchyard
- b. 400 kV D/c line to Vemagiri-II pooling station

c. 80 MVAR Bus Reactor at generation switchyard

(iv) GVK Power (Jegurupadu) Pvt Ltd (800 MW)

a. Bus extn of the existing switchyard or LILO of one of the existing 400 kV D/c line at new switchyard

b. 400 kV D/c line to Vemagiri-II pooling station

c. 80 MVAR Bus Reactor at generation switchyard

Note: (1) *The bays, works and bus reactor(s) at the generation switchyard shall be under the scope of generation developers.*

(2) *The bays and works at the pooling station shall be under the scope of entity developing transmission system for connectivity.*

POWERGRID has informed to the applicants the timeline for construction of lines for connectivity shall be 9 months + CERC time line as specified in the tariff regulations, in case if the applicant desires to have connectivity before these time lines then they may construct the connectivity lines by themselves.

Common Transmission System for projects located in Vemagiri area:

- (i) Establishment of 765/400kV GIS Pooling station at Vemagiri with 4x1500 MVA transformer with sectionalisation arrangement to control short circuit MVA
- (ii) LILO of Gazuwaka – Vijayawada 400kV S/c line at Vemagiri Pooling Station for initial integration with SR grid and which later shall be bypassed
- (iii) Establishment of 765/400kV GIS Pooling station at Khammam & Hyderabad with 2x1500 MVA transformers each
- (iv) Hyderabad 765/400 kV S/s – Hyderabad (existing) 400 kV D/c (quad) line
- (v) Khammam 765/400 kV S/s – Khammam (existing) 400 kV D/c (quad) line
- (vi) Vemagiri Pooling Station – Khammam 2x765kV D/c line
- (vii) Khammam – Hyderabad 2x765 kV D/c line
- (viii) Hyderabad – Wardha 765 kV D/c line
- (ix) Wardha – Jabalpur Pooling station 765 kV D/c
- (x) Beyond Jabalpur Pooling Station the transmission system will be provided integrating with the proposed High Capacity Power Transmission Corridor – IX i.e. Jabalpur Pooling Station – Orai – Bulandshahr 765 kV S/c depending upon the inter-regional power transfer.

The above was discussed and agreed in the 31st Standing Committee meeting held on 16th Novemer,2010

Member may like to discuss

Item no 24: LTA of generation developers in Nagapattinam/Cuddalore area

POWERGRID had received following applications for LTA in Nagapattinam/Cuddalore area of Tamil Nadu:

LTA Applications

Sl. No	Applicant	IC (MW)	LTA applied for (MW)	Time Frame	Quantum allocated in the region		
					SR	WR	NR
Under Regulations 2004					SR	WR	NR
1.	NSL Power Pvt. Ltd.	1320	800	2014	267	267	266
2.	PEL Power Ltd.	1050	987	June, 2013	700	0	287
3.	IL&FS Tamil Nadu Power Co. Ltd.	1200	1150	June, 2013	575	575	0
Total			2937		1542	842	553

It was decided to grant LTA for above applicants' alongwith the following system for Connectivity and LTA:

Transmission system for Connectivity application made under regulations 2004 (in the scope of respective generation developers):

(i) NSL Power Pvt. Ltd. (800 MW)

- a. 400 kV quad D/c line to Nagapattinam pooling station
- b. 125 MVAR Bus Reactor at generation switchyard

(ii) PEL Power Ltd. (987 MW)

- a. 400 kV quad D/c line to Nagapattinam pooling station
- b. 80 MVAR Bus Reactor at generation switchyard

(iii) IL&FS Tamil Nadu Power Co. Ltd. (1150 MW)

- a. 400 kV quad D/c line to Nagapattinam pooling station
- b. 125 MVAR Bus Reactor at generation switchyard

Note: (1) *The bays, works and bus reactor(s) at the generation switchyard and Nagapattinam Pooling station shall be under the scope of generation developers.*

POWERGRID has informed to the applicants the timeline for construction of lines for connectivity shall be 9 months + CERC time line as specified in the tariff regulations, in case if the applicant desires to have connectivity before these time lines then they may construct the connectivity lines by themselves.

Common Transmission System for projects located in Nagapattinam/Cuddalore area:

- (i) New 765/400kV Pooling station at Nagapattinam (GIS) with 4x1500 MVA transformers
- (ii) Nagapattinam Pooling Station – Salem 765kV D/c line
- (iii) Salem – Madhugiri 765 kV S/c line – 2
- (iv) Madhugiri – Narendra 765kV D/c line
- (v) Narendra – Kolhapur 765kV D/c line
- (vi) Kolhapur – Padghe 765 kV D/c one circuit via Pune
- (vii) New 765/400kV Pooling station each at Narendra (GIS) and Kolhapur with 2x1500 MVA transformers
- (viii) Provision of 2x1500 MVA, 765/400 kV transformers each at Madhugiri and Salem
- (ix) LILO of both circuits of Kolhapur – Mapusa 400 kV D/c line at Kolhapur 765/400 kV Ss
- (x) Charging of Salem – Madhugiri 765 kV S/c line – 1 (*planned with Tuticorin LTOA projects*) at its rated voltage
- (xi) LILO of Neyveli – Trichy 400kV S/c line at Nagapattinam Pooling Station for interim arrangement which later shall be bypassed
- (xii) 400 kV interconnection between Narendra (existing) and Narendra 765/400 kV GIS Ss

As explained above, looking into the synchronous operation of SR and NEW grid by 2013-14 through Raichur – Sholapur 765 kV 2xS/c lines it is desirable that Narendra – Kolhapur 765 kV D/c link shall also be available by that timeframe for smooth synchronization. Accordingly the Narendra – Kolhapur section alongwith necessary interconnections are proposed to be delinked with generation development in the Cuddalore/Nagapattinam area and taken up separately matching with the timeframe

of Raichur-Sholapur 765 kV lines. The 765 kV operation of this link shall be undertaken matching with the progress of generation projects in Cuddalore/Nagapattinam area.

Scheme for SR and NEW grid interconnection

- (i) New 765/400kV substation each at Narendra (GIS) and Kolhapur initially charged at 400 kV
- (ii) Narendra (GIS) – Kolhapur (new) 765kV D/c line (initially charged at 400 kV)
- (iii) LILO of both circuits of Kolhapur – Mapusa 400 kV D/c line at Kolhapur (new)
- (iv) Narendra (GIS) - Narendra (existing) 400 kV D/c (quad) line.

The above was discussed and agreed in the 31st Standing Committee meeting held on 16th Novemer,2010

Member may like to discuss

Item no 25: Long Term Access granted under CERC regulation and BPTA yet to be signed

Some of the applicants have applied for long term Open Access under CERC Regulation, 2004 and are yet to sign the BPTA agreement. The lists of open Access applicant's alongwith with details are enclosed in **Annexure – 20**.

Member may like to discuss