

**Government of India
Central Electricity Authority
System Planning & Project Appraisal Division
Sewa Bhawan: R. K. Puram, New Delhi-110066**

No.26/10/2009-SP&PA/

Dated: 5th May, 2009

- | | | | |
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Subject: Special meeting of Standing Committee on Power System Planning in Western region

Sir,

Minutes of the special meeting of Standing Committee on Power System Planning in Western region held on 18th April 2009 at WRPC, Mumbai is available on CEA website (www.cea.nic.in at the following link: Home page-Power Systems-Standing Committee on Power System Planning-Western Region).


(P. K. Pahwa)
Director

Special meeting of the Standing Committee on Power System Planning of WR held on 18-4-2009 at WRPC.

The Special meeting of the Standing Committee on Power System Planning of WR was held on Saturday the 18th April 2009 at WRPC Mumbai. The list of participants is at Annex-I.

Member (PS), CEA welcomed the participants to the meeting and stated that this meeting was being convened in the light of the discussions held during the 9th WRPC meeting wherein certain issues pertaining to comprehensive transmission scheme “ Transmission System associated with Tilaiya UMPP(4000 MW) in Jharkhand, Nabinagar (1000 MW), Barh-II, Rihand-IV, Vindhyachal-IV, Mauda of NTPC and IPPs in Jharkhand, Orrissa Chhattisgarh and Maharashtra” were raised and it was requested that constituents would send their comments to CEA . Also during WRPC meeting it was decided that the methodology and procedure being adopted for grant of LTOA by PGCIL should be explained. This Special meeting of SCM was mainly for sorting out the issues raised during WRPC meeting with respect to transmission scheme agreed during the 28th meeting and for explaining the methodology and procedure for grant of LTOA by PGCIL. He stated that besides these two items the other items listed in agenda for today’s meeting included phasing of transmission works for Vindhyachal-IV and Rihand-III and fault levels at Vindhyachal bus.

The agenda items were thereafter taken up for discussion.

1.0 Methodology and procedure for grant of Open access

1.0 General Manager(SEF), PGCIL made a presentation regarding the methodology, procedure and the payment security mechanism being adopted by them for grant of Long term Open Access. Copy of the presentation is enclosed at Annex-II.

1.1 Chhattisgarh representative stated that Long Term Open Access (LTOA) should not be provided from the existing margins and only Short Term Open Access should be given to the IPPs who had not signed PPAs. He opined that grant of LTOA to various IPPs from the existing available margins was not as per regulations and stated that 4000 MW of Open Access provided to IPP from the

existing margins available in WR grid could have been utilized within a year considering a load growth of 10% in WR system. He further stated that LTOA should only be considered after IPPs had signed BPTA and the progress of various IPPs should be ascertained and got verified from local licensee. CSEB representative also raised the issue with regard to planning and stated that planning of transmission should be on basis of load growth instead of quantum of generation facility being put up by various IPPs. He stated that IPPs had indicated a capacity of 19000 MW within WR as target beneficiaries and opined that this would result in overprovision of transmission system, keeping in view the fact that all WR constituents would be surplus by end of 11th plan or early 12th plan.

- 1.2 Member (PS), CEA clarified that as per the Electricity Act 2003 and the existing regulation non discriminatory open access had to be granted in case existing margins were available. In case the existing transmission margins were not adequate for grant of LTOA, additional transmission lines were being planned and built. He further stated that transmission capacity was for the beneficiaries and was not allocated to the generators. As and when the allocation from the generator would get finalized and the beneficiary signs BPTA with the CTU then the transmission capacity would get allocated to the beneficiary. He further stated that many of the IPPs were indicating target beneficiaries because the distribution/transmission licensees could procure their power requirements only through competitive bidding process and this process was not moving fast. To facilitate IPPs, the above methodology was being adopted. He further clarified that in case of Merchant Power Plants if the actual sale of power was different from the one indicated and for which open access had been granted then as per present regulations, in addition to long term open access charges, short term open access charges would also be applicable. Regarding planning of transmission system, Member (PS), CEA clarified planning of transmission was being done considering various perspective load generation scenarios during different periods of the year and transmission was being planned considering the worst case scenario. Regarding progress of various IPPs prior to grant of LTOA about five meetings for review of progress were held by Govt of Orissa during the past about two years and only after the CTU was satisfied that some progress like acquisition of land, tying up of fuel etc was visible then only LTOA is considered/granted.

- 1.3 Gujarat representative was of the view that as per the EA 2003 it was mandatory for CTU to grant Long Term Open Access and till the time the beneficiaries were identified the IPP/Merchant Plant was taking a risk. However, he felt that some mechanism of review of plan and prioritization of the transmission system planned was required.
- 1.4 ED PGCIL clarified that grant of LTOA was being done in four stages. In the first stage discussion were held with the IPPs regarding achieving of various milestones viz. acquisition of land, allocation of coal and water, environment clearance, placement of orders for equipment, payment of advance to manufacturers, EPC contractors etc., and only after some progress was noted and after observing the progress of project take off, further discussion were held with the IPPs and grant of LTOA was considered. In the second stage discussions with IPPs and beneficiaries were undertaken in the SCM and LTOA meetings. The third and fourth stage was security mechanism like Bank Guarantee from IPPs along with signing of BPTA and 6 months advance transmission charges corresponding to the capacity for which PPA had not been signed by the IPP with beneficiary states(s). Regarding time frame for granting LTOA, ED (Engg-II), PGCIL informed that as per draft open access regulations the nodal agency was required to dispose of the application for connectivity within 60 days and norms for medium term open access were even stringent and suggested holding of SCM meetings every two months.
- 1.5 Member (PS) also clarified that though LTOA was granted to the IPPs, they could not hoard the transmission capacity nor trade it to any other agency. Any transmission capacity built and not allocated to any agency on long term basis would be allocated to other agency on medium term or short term basis. In the event there is a delay in commissioning of any IPP, the long term transmission capacity granted to it would be made available to any other generator coming up in the time frame and the additional transmission required for the delayed IPP would be built to match with its commissioning so that unutilized transmission capacity is not built up and the Transmission companies are not unnecessary burdened with additional transmission charges. The transmission system would be optimal to take care of the requirement meeting the planning criteria.

- 1.6 MAHATRANSCO representative was of the view that LTOA meetings should be held more frequently and progress of various IPPS should be put on on website. Other members concurred with the views expressed by MAHATRANSCO and it was decided that PGCIL would put on its website the progress of various IPPs who had applied for LTOA
- 1.7 Member (PS) stated that holding of LTOA meetings by PGCIL was linked to SCM meetings as PGCIL forwarded the agenda for LTOA after notice for SCM was issued. Further in the SCM detailed discussions were held with the constituents on the studies carried out and the tentative proposals and the IPPs were called for the meeting thereafter and the proposals discussed in the presence of the constituents. The proposals were also discussed in the Regional SCMs where the project is located and also in the destination Region of Power. He stated that SCM meetings could be convened as soon as agenda for LTOA was received from PGCIL.
- 2.0 Transmission System Associated with the Tilaiya Ultra Mega Power Project (4000 MW), in Jharkhand, Nabinagar (1000MW) of Railways and NTPC, Barh-II (1320 MW), Rihand-IV (1000MW), Vindhyachal-IV (1000MW) and Mauda (1000MW) of NTPC, and IPPs in Jharkhand, Orissa, MP, Chattisgarh, and Maharashtra**
- 2.1 Member (PS), CEA stated said that subsequent to the decision taken in 9th WRPC meeting, comments were received from CSEB, MPTRANSCO and MAHATRANSCO. CEA clarifications were sent and enclosed along with the agenda circulated for this meeting. MAHATRANSCO had requested for the basis of calculation details of transmission charges. He requested PGCIL to present the same
- 2.2 PGCIL made a presentation indicating how the transmission charges would vary with the commissioning of System strengthening for WR and System strengthening common for WR and NR and its impact on pooled transmission charges, Members desired that the details of the calculations and the assumptions made should be circulated to the various constituents of the WR along with the calculation of corresponding transmission charges of NR which is likely to share the capacity of the project(s). This was agreed to by PGCIL.
- 2.3 CSEB representative stated that in the 28th SCM, LILO of all four circuits of Rourkela-Raigarh 2xD/C 400kV lines was proposed at Jharsuguda. He requested

that only one Rourkela-Raigarh 400 kV D/C be LILOOed at Jharsuguda and other should be a direct line between Rourkela-Raigarh. Member (PS) explained that LILO of all the four circuits is a temporary arrangement. Once the Jhasurguda-Dharamjayagarh- Jabalpur link is available LILO of one D/C will be removed at Jharsuguda.

- 2.4 Member (PS) requested the constituents to convey their concurrence to the proposals circulated in the agenda for the 9th WRPC meeting. He stated that the proposal was basically a sort of master plan for evacuation of power from various IPPs and other projects anticipated in the same time frame. The actual programme with each of the projects once finalized would be brought forth in the SCM.

All the constituents agreed with the proposal.

3.0 Transmission system connected with Vindhyachal pooling station and phasing of transmission works.

- 3.1 Member (PS), CEA stated in the 28th SCM, NTPC had raised the issue of short circuit level exceeding the permissible limit at Vindhyachal (I, II & III) bus due to its interconnection with Sasan generating station through LILO of Vindhyachal- Jabalpur 400 kV D/C at Sasan agreed under Sasan transmission system and it was decided that the same would be studied. Accordingly, the same had been examined and it is found that LILO of Vindhyachal-Jabalpur at 400 kV Sasan could be initially established for supply of start up power and at a later date discontinued (through suitable switching arrangement) after establishment of 765/400 kV Vindhyachal pooling station but before commissioning of all units of Sasan. To keep the connectivity of Sasan and Vindhyachal pooling station, Sasan-Vindhyachal pool 765 kV S/C line could be established as a new transmission line to be included under common transmission system for NR and WR.

- 3.2 NTPC proposed interconnection at 400 kV level between Sasan and Vindhyachal pooling point in addition to interconnection at 765 kV level. Member (PS) stated that interconnection at 765 kV as well as 400 kV level would cause power flow from 765 kV to 400 kV at Sasan and again from 400 kV to 765 kV at Vindhyachal pooling station and this circulation would result in increased losses.

After discussions it was decided that PGCIL would carry out a study in association with NTPC and forward the same to CEA. In case studies justified interconnection at both 400 kV & 765 kV level, it would be considered.

3.3 Member (PS) CEA stated that Vindhyachal-IV, Rihand-III and Aryan Coal were presently proposed to be connected to 765/400 kV Vindhyachal pooling station. As the generators would be coming in different time frame, the transmission system from Vindhyachal pool onwards up to Gwalior would need to be initially operated at 400 kV to avoid reactive power management problem. He suggested the following phasing of transmission system interconnected from Vindhyachal pool.

- (i) When the initial unit at Vindhyachal stage-III and Rihand-III generation are commissioned they could be connected to Vindhyachal Pooling point and the Vindhyachal Pooling-Satna-Gwalior 765 kV link is charged at 400 kV level.
- (ii) In this time frame few units at Sasan would only be commissioned and there would not be any short circuit level problems at Vindhachal 400 kV generating bus due to LILO of Vindhyachal- Jabalpur 400 kV D/C at Sasan.
- (iii) When the entire planned generating stations connected to Vindhyachal pooling station are commissioned, at that stage the Vindhyachal Pooling-Satna-Gwalior link can be charged at 765 kV level along with interconnection of Sasan-Vindhyachal 765 kV S/C.
- (iv) After charging at 765 kV level the LILO of Vindhyachal – Jabalpur 400 kV D/C line at Sasan could be disconnected with suitable switching arrangements at Sasan 400 kV switchyard to meet its starting power requirements in future.

3.4 Members were in agreement with the above phasing of works and it was also decided that for implementation the following works could be taken up as a separate project associated with Vindhyachal-IV and Rihand-III.

Transmission System associated with Vindhyachal-IV and Rihand-III

A. Generation Specific Transmission System

Rihand-IV (1000MW)

- Rihand-Vindhyachal pooling 2xS/C 765kV lines operated at 400kV (under preview of NTPC)

Vindhyachal-IV (1000MW)

- Vindhyachal-IV – Vindhyachal pooling 400kV quad D/C line (under preview of NTPC)

B. System strengthening common for WR and NR

- Vindhyachal pooling station with 2x1500MVA 765/400kV (initially to be a switching station at 400 kV level)

- Vindhyachal pooling-Satna 2XS/C 765kV lines (initially to be operated at 400 kV)
- Satna-Gwalior 765kV 2XS/C (initially to be operated at 400 kV)
- Vindhyachal-Sasan 765 kV S/C

3.5 Member (PS) stated that phasing of the transmission system interconnection from Jarsuguda and Ranchi towards Western Region would also need to be done. For this PGCIL was requested to intimate the latest status and time frame of the various IPPs proposed to come in Chattishgarh, Orissa, Jharkhand etc., so that an exercise for the phasing of the transmission system could be done .

It was decided that PGCIL would intimate the latest status of various IPPs and CEA and PGCIL would jointly work out the phasing of transmission system interconnection from Jarsuguda and Ranchi towards Western Region

4.0 Modifications suggested by PGCIL in the transmission system concurred in the 28th SCM meeting

PGCIL vide their letter dated 11.02.2009 have suggested the certain modifications in the transmission system concurred in the 28th SCM meeting

4.1 *Change in Location name of pooling station:* Change of Chamba, Raipur and Raigarh to Chamba pool, Raigarh pool and Raipur pool 765/400 kV substation.

Members concurred with the above change in name.

It was also decided to rename Sipat pooling station as Bilaspur pooling station.

4.2 2X S/C 765 kV lines instead of Raigarh-Raipur and Chamba –Raipur S/C 765 kV lines. Also PGCIL have suggested 4X1500 MVA 765/400 kV SS at Raipur pool instead 2X1500 MVA.

Member (PS) CEA opined that this proposal could be discussed and considered after firming up of the generation projects in Raigarh and Champa complex. This was agreed.

4.3 2X S/C 765 kV lines instead of Satna-Gwalior 765 kV S/C line.

Members concurred with the above proposal of PGCIL.

- 4.4 FSC(40 %) on Raipur-Wardha 2XD/C 400kV lines up gradable to 2XS/C 1200kV lines and Wardha-Aurangabad D/C 400kV line (2nd line) up gradable to 1200kV S/C line(2nd line)

PGCIL clarified that the FSC would be provided on the 400 kV lines and once these lines are upgraded to 1200 kV level the FSC would be removed and utilized somewhere else in the grid.

Members agreed to the proposal.

- 4.5 400 kV level interconnections from the proposed new 765/400 kV SS at Vadodara, Bhopal, Dhule and Phadge:

Vadodara-Pirana(PG) 400 kV D/C quad

Vadodara-Asoj(GETCO) D/C quad

Bhopal- Bhopal (MP) D/C quad

Dhule-Dhule (MSCTCL) D/C quad

Phadge-Phadge-II (MSETCL) D/C quad

Members agreed to the interconnection proposed by PGCIL from new 765/400 kV S/S to their existing 400 kV S/S as given above.

5.0 Associated 220 kV Line bays along with 400/220kV ICTS

- 5.1 PGCIL representative informed that NR constituents had agreed to revise the norm of providing 220 kV bays with 400/220 kV transformers in view of increasing demand density in their system, as given below:

- For 2x315 MVA - 6 nos. of line bays
- For 3rd 315 MVA transformer - 2 line bays
- For 500 MVA transformer - 4 nos. of line bays

In Western region also, a number of new transmission projects are coming up, therefore a similar revision in the norms for providing 220 kV bays with 400/220 kV transformer may be discussed and decided.

- 5.2 MSETCL representative suggested that in urban area we should always go for 500 MVA transformers with 4 numbers of 220 kV bays. This was agreed to.

- 5.3 Gujarat representative said that BHEL had supplied 400 MVA 440/220 kV transformers in their system and suggested that one should opt for higher rating transformers instead of 315 MVA transformers. This was agreed to be looked into by CEA.

- 5.4 MPPTCL suggested that existing norms for provision of 220 kV bays with 400/220 kV transformers may be continued and if need of additional bays was felt by the constituent the same can be intimated to PGCIL while finalizing the bays requirement at new 400 kV/220 kV substation.
- 5.4 Member (PS) CEA suggested that PGCIL could interact with BHEL regarding feasibility of manufacturing new sizing of 400/220 kV transformers.
- 5.5 After further discussion it was decided that existing norms for provision of 220 kV bays with 400/220 kV transformers may be continued and regarding provision of additional 220 kV bays at new 400/220 kV substations, it would be taken on case to case basis.

6.0 Requirement of Bus Reactors at Nagda/Rajgarh to control high voltages in Dhule Area

- 6.1 PGCIL informed that provision of bus reactors at Nagda or Rajgarh to control high voltages in Dhule area and avoid frequent opening of 400kV Sardar Sarovar-Dhule line was deliberated in the 28th SCM and 9th WRPC meetings held on 16.01.09. In the TCC meeting members had requested POWERGRID to carry out studies fresh to examine the bus reactors around 400kV Nagda/Rajgarh substation. Further MPPTCL had informed that due to space constraint they would not be in a position to install earlier proposed 1x125 MVAR bus reactor at Indore S/S. PGCIL had carried out studies which indicated that installation of 1x125 MVAR bus reactor at Nagda/Rajgarh would be beneficial to control over voltages.
- 6.2 It was informed by MPPTCL that there was no space available at Nagda 400 kV substation for installation of reactors. They suggested Rajgarh 400 kV substation for reactor installation.
- Member (PS) suggested that reactors could be installed at new 765/400 kV substation at Indore in case there were space constraints at other existing substations.
- 6.3 After discussions 1x125 MVAR bus reactors at Rajgarh substation was agreed to.

7.0 LILO in Vapi-Magarwara 220 kV D/C line at Ringanwada 220/66 kV SS

- 7.1 Member (PS) CEA informed that UT of Daman & Diu had intimated that they were in the process of establishing a 220/66 kV substation at Ringanwada to meet their loads. They had proposed 220kV connectivity by LILO in one circuit of Vapi-Magarwara 220kV D/C line at Ringwada. Since Vapi-Magarwara 220 kV D/C line is a regional line UT of Daman & Diu had sought concurrence of WR constituents.
- Members concurred and took a note of the above.

8.0 Other issues discussed during the meeting

8.1 Interconnection of the state grid with the CTU points

Member (PS) raised the issue of Regional assets not being utilized to the required capacity due to non-provision of interconnection of the state grid with the CTU points by the state utility. He stated that 2X315 MVA, Wardha 440/220 kV S/S of PGCIL was already commissioned but MSETCL had still not completed the Interconnection works. He enquired from MSETCL about the status of interconnection works at Wardha, Sholapur and Pune.

MSETCL representative stated that interconnection at Wardha would be ready by June 2009 and at Sholapur by Dec 2009. He further stated that they were commissioning 2nd 500 MVA transformer at their Sholapur 400/220 kV SS and survey works was being carried out for interconnection at 400 kV level with PGCIL Sholapur 400/220 kV SS.

PGCIL representative informed that there was no provision of bays for 400 kV interconnection between PGCIL and MSETCL Sholapur 400/220 kV SS.

Member (PS), CEA said that PGCIL and MSETCL should jointly sort out issue of interconnection and requested MSETCL to furnish the details of interconnection with CTU points at Sholapur, Pune and Wardha to CEA. This was agreed by MSETCL.

Member (PS) requested all the constituents to bring up the interconnection facility with CTU points well in time to avoid the situation of asset lying unutilized.

8.2 Torrent evacuation system : Concurrence of WRPC

MS WRPC said that in the 28th SCM Director MSETCL had raised the issue that Sugan (Torrent) - Pirana 400 kV D/C line and LILO of Gandhar-Vapi at Sugan switchyard was agreed in SCM but the proposal had not been put up to the WRPC for concurrence.

MS WRPC clarified that the above proposal had already been posed to WRPC in its 4th meeting held at Vadodara on 29th June 2007 and concurred.

8.3 Interconnection of Pirana-Bachao 400 kV substation.

Gujarat representative in the meeting requested that Pirana and Bachao 400 kV SS could be interlinked through a 400 kV D/C link. He further said that Bachao 400 kV S/S of PGCIL and Versana 400 kV SS of GETCO were in close vicinity and requested that interconnection of these two s/s could also be considered.

Member (PS), CEA stated that GETCO could send their detailed proposal to CEA and PGCIL which could be studied.

8.4 Provision of 3rd 1000 MVA, 765/400kV ICT at Bina

Up gradation of Bina (PG) 400 kV substation to 765 with provision of 2x1000 MVA, 765/400 kV ICT was agreed under Regional system strengthening scheme in WR for Sasan UMPP Transmission system. PGCIL informed that space provision had kept at Bina substation for 3rd transformer. However, with this provision the routing of the planned 765 kV line would require additional line length for termination in the switchyard. In case 3rd 765/400kV ICT at Bina was not required in future, the space kept in the substation for the future transformer could be utilized for terminating the lines.

MPPTCL stated that transformation capacity planned at Bina was adequate to take care of the future load growth in vicinity of Bina. And also to meet the load growth requirements in the adjacent Bhopal region a 2X1500 MVA 765/400kV substation at Bhopal had already been planned.

After further deliberation, it was decided that provision of 3rd 765/400kV 1x1000MVA ICT at Bina was not required in future.

8.5 Non- Availability of bays at Aurangabad substation of MSETCL

Aurangabad(PG) –Aurangabad (MSETCL) 400 kV D/C (quad) was agreed as Regional system strengthening scheme in WR under Mundra UMPP Transmission system. POWERGRID stated that due to space constraint it was not possible to terminate the line at Aurangabad (MSETCL) and suggested the following:

- Termination of Akola – Aurangabad (MSETCL) 400 kV D/C line at Aurangabad (PG) instead of at Aurangabad (MSETCL). This would result in availability of two bays at Aurangabad (MSETCL) for construction of Aurangabad(PG) –Aurangabad (MSETCL) 400 kV D/C (quad) line.
- MSETCL would need to make necessary arrangement of busbar capacity corresponding to quad line capacity.

The above suggestion was agreed.

8.6 Furnishing of BPTA to WRPC, WRLDC and WR constituents

WR constituents requested PGCIL to make available the copies of transmission agreement signed with IPPs to WRPC, WRLDC and the WR constituents as it would be required for Regional Accounting purpose.

PGCIL agreed to provide the same.

9.0 Open Access Applications pertaining to New Generation Projects in Southern Region with target beneficiaries in Western Region

Open access in respect of inter-regional system and inter-state transmission system of WR for following six projects located in SR was discussed and agreed

	Generation Project	Gen MW	LTOA quantum & target beneficiary			Date of commencement of LTOA Sought
			SR	WR	NR	
1	LANCO Kondapalli	375	-	200 (Maharashtra – 100) (Madhya Pradesh – 100)	150	June, 2009
2	Simhapuri	540	405	135 (Madhya Pradesh – 135)	-	Oct' 2009
3	Meenakshi	540	205	165	170	Sept, 2010
4	Gautami	1150	300	400 (Maharashtra – 300) (Gujarat – 100)	450	1 st Qtr, 2011
5	Krishnapatnam (Navayugaa)	1860	360	600 (Maharashtra – 500) (Goa – 100)	900	Mar, 2012
6.	JSW Power Trading Company	600	-	300	300	2009
	Total	5065	1270	1635	1970	

The detailed minute of Open Access Applications pertaining to New Generation Projects in Southern Region with target beneficiaries in Western Region would be issued by PGCIL separately.

Annexure - I**SPECIAL MEETING OF STANDING COMMITTEE ON POWER SYSTEM PLANNING IN WESTERN REGION HELD ON 18-04-2009 AT WRPC, MUMBAI**

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Long Term Open Access –

Methodology of Processing

Open Access in Transmission System

- Definition of Open Access as per EA, 2003 (section 2(47))
 - “means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission”.
- Open Access (OA) in Inter State Transmission System (ISTS) introduced by CERC vide its regulations in Jan, 2004; subsequently modified in 25th Jan, 2008
- As per latest OA regulations dated 25th Jan, 2008, **Scope of OA has been limited to STOA. LTOA is called LTTA i.e. “Long Term Transmission Arrangement (LTTA)”.**

LTA in Transmission System

- Long-term Access aimed at long term (> 25 years) utilization of grid with firm access rights to the grid
- Unlike STOA, in the LT access to the grid is not limited i.e. if it is found that the grid does not have adequate transmission capacity to handle the desired transaction, then the strengthening in the grid to support the desired transaction as per reliability criteria of CEA/IEGC is evolved and built.
- LTA customers are provided firm access rights to the grid with higher priority than the STOA customers.

LTA in Transmission System

- The long-term access shall be allowed in accordance with the transmission planning criterion stipulated in the Grid Code
- Allotment priority of a long-term customer shall be higher than reservation priority of a short-term customer
- There shall be no discrimination between open access customers and self-use by an integrated utility like the State Electricity Board
- Nodal Agency – CTU of it's system is used, otherwise transmission licensee in whose system the point of drawal of electricity is situated

PROCEDURE

Receipt of Application for long term Open access
in the prescribed format

Initial System Studies carried out to determine whether

Scenario - I
Open access can be
allowed without
any system
strengthening

Scenario-II
Additional system
strengthening would
be required for
desired open access

Exit option- A long-term customer shall not relinquish or transfer his rights and obligations specified in the BPTA, without prior approval of the Commission

Guidelines for LTA Applications

- As per CERC regulations for LTOA in ISTS, Applicant shall complete the Application form for seeking Long Term Open Access and provide following major information in a prescribed format:
 - Details of the applicant
 - Power transfer requirement (peak load, average load)
 - Details of points/quantum of injection and drawee utility
 - Date of commencement
 - Generating station details including various clearances

*Application Form, Guidelines, Terms & Conditions etc available at
POWERGRID web site : www.powergridindia.com*

Prioritisation of IPPs

- **Series of discussions/consultation are held with generation project developers by CEA and POWERGRID to assess readiness of the generation project based on status of various Clearances necessary for generation projects like**
 - Land acquisition
 - Fuel linkage
 - Water linkage & environmental clearance
 - Award for the main plant & its schedule etc are checked at regular intervals
- **Based on above data, progress of generating stations and its realistic commissioning schedule are assessed**
- **Accordingly, priority is given for the projects which are in the advanced stage and expected to be commissioned early**

Planning Procedure ...contd

- **Planning is carried out at a macro level so as to facilitate development of bulk transmission arrangement for transfer of power from surplus region/areas to deficit regions/areas/load centers**
- **Broad transmission system requirement for all the generation projects in a given area is worked out and the same is then phased to match commissioning time frames of different groups of generators materializing together in similar time frame.**

The ultimate objective of the entire exercise is to optimize the investment required in the grid

Transmission System for LTA projects

- Based on **Power transfer requirement, location, time frame, target beneficiaries etc.** of generator projects, a **comprehensive transmission system** is planned for overall requirement of LTA projects.
- Identification of **high capacity transmission corridors**
 - Identification of pooling points
 - Interconnection of pooling points with grid points for connectivity
 - Identification of high capacity AC/DC transmission corridors

Allocation of Trans. Capacity

- To facilitate development of generation projects as well as its trans. system, commitment is taken from generation developers for bearing transmission charges initially proportionate to their generation capacity
- Transmission rights and its transmission charges shall be passed on to the identified beneficiaries at a later date as and when it happens
- Though apparently it may appear that transmission capacity is allocated to the private project developer but this just a stop gap arrangement wherein the longer run the allocated transmission capacity and its trans. charges shall be transferred to the identified beneficiaries
- In other words entire transmission planning and allocation of transmission capacity is for the benefit and use of constituents of Region/beneficiaries of project like any other ISGS project

Allocation of Trans. Capacity

- Utilization of margins in the available trans. system- the trans. system for new generation projects are evolved in line with Planning Criteria in such a manner that they do not generally encroach in the operational margins available in the available transmission system in normal conditions
- In case of contingencies may lean back on the margins to meet the contingencies as per planning criteria. In a way, therefore, planning of transmission system for new generation projects creates more reliability for the existing users of the grid by strengthening of the grid and providing alternate transmission paths

Allocation of Trans. Capacity ...contd

- Availability of more alternate paths allows enhanced utilization of transmission (existing as well as new) which otherwise is limited due to overloading during contingencies.
- For example, new IPPs in Orissa and Chattisgarh, trans. system planned for transfer of power from group of generation projects in Orissa and Chattisgarh, the evolved system comprises of establishment of pooling station and high capacity AC/HVDC corridors to WR/NR
- The transmission system of Orissa IPPs traverses through Chattisgarh also to integrate the pooling stations within Chattisgarh for enhanced reliability to the system. The power transfer from Orissa to Chattisgarh, does not encroach into the margins in available transmission system beyond Chattisgarh rather it enhances it by providing an alternate path in case of contingencies.

Grant of Long-term Access

- New generation seeking LTA is superimposed on the all India power system model and load flow studies are conducted to evolve the optimal transmission system strengthening
- Identified system is tested for its adequacy during normal and contingent operating conditions considering maximum and special area dispatch which covers the most stringent operating conditions taking into account daily and seasonal variations of power flows satisfying IEGC criteria

Finalization of grid connectivity and system strengthening

- Transmission system for LTA generally categorized into:
 - 1) Dedicated system – *To be built, own and operated by the IPP*
 - 2) Common Trans. System for a group of IPPs
 - 3) Grid strengthening –
 - A) Common for multi regions
 - *Tr. charges to be shared by the region in proportions to their allocation*
 - B) For specific region
 - *Tr. charges to be shared exclusively by that region*

Grant of Long-term Access ...contd

- **System strengthening including the load flow study exhibits are compiled in the form of Open Access agenda and circulated to CEA, all the constituents of concerned region and the long term open access applicants for their consideration**
- **The transmission system is finalized through a series of discussion in the above meetings**
- **Identified strengthening scheme is informed to respective RPC forum**

Grant of Long-term Access ...contd

- **Evolved system strengthening is discussed with the generation developers to sort out issues related to grid connectivity and sharing of transmission charges.**
- **The evolved system is then discussed with constituents of the home region where developers are also invited. This serves two fold purpose**
 - **apprising the constituents about new generation projects who had applied to POWERGRID as a nodal agency**
 - **provides comfort to the generation developers that the system has been evolved in association with the constituents, as the transmission capacity and its corresponding transmission charges shall finally be borne by the constituents only after firming up of Power Purchase Agreement (PPA).**
- **Ultimate objective is to optimize investment required in the transmission system as ultimately it is the constituents who shall be beneficiary of the system and pay its corresponding transmission charges.**

Grant of Long-term Access ...contd

- Upon finalisation of system strengthening scheme in the above meetings, LTA is granted to the applicants.
- The LTA becomes effective from the date of commissioning of generation project/identified transmission system subject to availability of other necessary strengthening schemes and is subject to signing of requisite BPTA
- Any modification sought by the developer regarding beneficiaries is again brought to the constituents meeting for discussion
- LTA granted to project developers can not be hoarded and in case of delay in the commissioning of generation project the capacity can be allocated to any other user requiring open access to the extent it can be accommodated in the available margin.

Security Mechanism to implement Trans. corridor

