CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 154/ MP/2011
&
IA No. 17/2011

Coram: Dr. Pramod Deo, Chairperson
Shri S. Jayaraman, Member
Shri V.S. Verma, Member
Shri M. Deena Dayalan, Member

Date of Hearing: 13.9.2011

Date of Order: 13.12.2011

In the matter of:

Approval under Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010 read with Central Electricity Regulatory Commission (Grant of Connectivity, Long Term and Medium Term Open Access to the Inter-State Transmission and Related Matters) Regulations, 2009, for grant of regulatory approval for execution of Transmission system required in connection with grant of long term access to group of developers.

And
In the matter of:

Power Grid Corporation of India Ltd., Gurgaon **..... Petitioner**

Vs

1. Spectrum Power Generation Ltd., Hyderabad
2. Reliance Infrastructure Limited, Hyderabad
3. GVK Gautami Power Limited, Secunderabad
4. GVK Industries Limited, Secunderabad
5. PEL Power Limited , Hyderabad
6. IL&FS Tamil Nadu Power Company Limited, Chennai
7. NSL Power Pvt. Ltd., Hyderabad
8. Thermal Powertech Corporation India Ltd., Hyderabad
9. Chitrangi Power Private Ltd., Navi Mumbai
10. Essar Power Gujarat Limited, Maharashtra
11. MB Power (MP) Ltd., New Delhi
12. Today Energy (MP). Pvt Ltd, New Delhi

13. Dhariwal Infrastructure Ltd, Kolkata
14. Karnataka Power Corporation Ltd, Bangalore
15. Bihar State Electricity Board, Patna
16. West Bengal State Electricity Board, Calcutta
17. Grid corporation of orisa ltd., bhubaneshwar
18. Damodar Valley Corporation , Calcutta
19. Power deptt., govt. Of sikkim, gangtok- 737 101
20. Jharkhand State Electricity Board, Ranchi
21. Assam State Electricity Board, Assam
22. Meghalaya State Electricity Board, Shillong
23. Government Of Arunachal Pradesh, Arunachal Pradesh
24. Power & Electricity Deptt., Govt. Of Mizoram, , Aizwal
25. Electricity Department, Govt. of Manipur, Keishampat, Imphal
26. Department of Power, Govt. of Nagaland.
27. Tripura State Electricity Corporation Limited, Banamalipur. Agartala – 799001
28. Rajasthan Rajya Vidyut Prasaran Nigam Limited. Jaipur
29. Ajmer Vidyut Vitran Nigam Ltd, Rajasthan
30. Jaipur Vidyut Vitran Nigam Ltd, Jaipur
31. Jodhpur Vidyut Vitran Nigam Ltd, Rajasthan
32. Himachal Pradesh State Electricity Board, Vidyut Bhawan, Shimla
33. Punjab State Electricity Board, Patiala
34. Haryana Power Purchase Centre, Panchkula
35. Power Development Deptt., Govt. of Jammu & Kashmir, Jammu
36. Uttar Pradesh Power Corporation Ltd., Lucknow
37. Delhi Transco Ltd, New Delhi
38. Chandigarh Administration., Chandigarh
39. Uttarakhand Power Corporation Ltd., Dehradun
40. BSES Yamuna Power Ltd., New Delhi
41. BSES Rajdhani Power ltd, New Delhi
42. North Delhi Power Ltd, New Delhi
43. NDMC , Mezzanine floor, New Delhi
44. North Central Railway,Allahabad
45. Karnataka Power Transmission Corporation Ltd.,Bangalore
46. Bangalore Electricity Supply Company Limited (BESCOM). Karnataka
47. Gulburga Electricity Supply Company Limited (GESCM), Karnataka
48. Hubli Electricity Supply Company Limited (HESCOM), Karnataka
49. Mangalore Electricity Supply Company Limited (MESCOM), Karnataka
50. Chamundeshwari Electricity Supply Corporation Limited, (CESC), Karnataka
51. Transmission Corporation of Andhra Pradesh ltd, Hyderabad
52. Eastern Power Distribution Company of Andhra Pradesh , Limited (APEPDCL), Andhra Pradesh
53. Southern Power Distribution Company of Andhra Pradesh ltd (APSPDCL), , Andhra Pradesh

54. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL),
55. Northern Power Distribution Company of Andhra Pradesh ltd (APNPDCL)
56. Kerala State Electricity Board, Thiruvananthapuram
57. Tamilnadu Electricity Board, Chennai
58. Electricity Department, Govt of Pondicherry
59. Electricity Department, Govt. of Goa, Panaji.
60. Madhya Pradesh Tradeco, Jabalpur
61. Madhya Pradesh Audyogik Kandra Vikas Nigam (INDORE) Ltd.
62. Maharashtra State Electricity Distribution Co Ltd, Mumbai
63. Gujarat Urja Vikas Nigam Ltd, Baroda
64. Electricity Department, Administration of Daman & Diu, Daman
65. Electricity Department, Administration of Dadra Nagar Haveli, Silvasa
66. Chhattisgarh State Electricity Board, Chhatisgarh.

……..Respondents

Following were present:

1. Shri S.S. Raju, PGCIL
2. Shri Jane Jose, PGCIL
3. Shri RVM Rao, PGCIL
4. Shri Avinash M Pavgi, PGCIL
5. Shri Subir Sen, PGCIL
6. Smt. Manju Gupta, PGCIL
7. Shri Dilip Roiekar, PGCIL
8. Shri Ravi Arya, MB Power
9. Shri Abhishek Gupta, MB Power
10. Shri Manoj Dubey, Advisor, MP Trader
11. Shri S Venkatesh, MBP(MP) L
12. Shri Kailash Chandra, Jindal Power
13. Shri R.B. Sharma, BSEJ

ORDER

The petitioner, Power Grid Corporation of India Limited (PGCIL) has filed this petition seeking regulatory approval under Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010, for development and execution of certain identified transmission systems for evacuation of power from various generation projects planned to be

promoted by different developers. The petitioner has made the following prayers in the petition:

(a) Grant Regulatory approval for taking up implementation of identified transmission systems at Annexure-III to Annexure-X of the petition, for transmission of power from IPPs/LTA/Connectivity Applicants who have been granted LTA/ Connectivity;

(b) Grant approval for inclusion of the assets for which the transmission charges are to be recovered through the Point of Connection Charge methodology or any other sharing mechanism notified by CERC from time to time; and

(c) Grant approval for inclusion of system under the TSA to be notified by CERC.

2. In Interlocutory Application No. 17/2011, the petitioner prayed for issue of necessary order on urgent basis, permitting the petitioner to go ahead with the execution of the Agreements for implementation of the transmission system as mentioned or prayed in the main petition.

3. The petitioner has submitted that as nodal agency for processing the Connectivity/Long term Access, it has received a number of Connectivity/LTA applications from prospective customers for their generation projects primarily in Vemagiri, Nagapattinam/Cuddalore and Krishnapattnam area in Southern Region, Maharashtra/Madhya Pradesh, Chhattisgarh in Western Region and Orissa in Eastern Region.

4. The petitioner has submitted that Long Term Access/Connectivity was granted to the applicants for Long Term Access/Connectivity and Project Developers in Southern, Western and Eastern Regions of the country for which the Associated Transmission Systems required for transmission of power were identified after discussions in concerned Standing Committee Meetings/Regional Power Committee forums of Southern, Western, Eastern and Northern Regions. The identified Transmission Systems along with the quantum of Long Term Access/Connectivity granted to the applicants and their estimated cost are given in the table below:

Sl. No.	Transmission Systems	Long Term Access/ Connectivity (MW)	Estimated cost of the Project (₹ in crore)
Transmission System for LTA to different groups of generating Stations			
1.	High Capacity Power Transmission Corridor-X (Transmission System Associated with IPP projects in Vemagiri Area)	**6650**	**9144**
2	High Capacity Power Transmission Corridor-XI (Transmission System Associated with IPP projects in Nagapattinam/ Cuddalore Area)	**3297**	**7985**
3	Transmission System Strengthening in WR-NR Transmission Corridor for IPP projects in Maharashtra/ MP Area	**1910**	**1610**
4	Transmission System Strengthening in WR-NR Transmission Corridor for IPP projects in Chhattisgarh Area	**2034**	**4448**
Transmission System for Connectivity to individual generating Stations			
5	Transmission System for connectivity of M/s Thermal Powertech Corporation India Ltd	**1320**	**96**
6	Transmission System for connectivity of M/s MB Power (MP) Ltd.	**1200**	**458**
7	Transmission System for connectivity of M/s Essar Power Gujarat Ltd	**2240**	**558**
8	Transmission System for connectivity of M/s Chitrangi Power Pvt. Ltd.	**3960**	**226**
Total		**21451**	**24525**

5. The petitioner has further submitted that in the 23rd Meeting of Empowered Committee on Transmission, the members of the committee have desired that Regulatory Approval be sought by Central Transmission Utility (CTU) for schemes which are considered for tariff based bidding in addition to the schemes that are to be implemented by CTU. As per the decisions taken in the 25th meeting of Empowered Committee on Transmission held on 1st February, 2011, it was decided that part of transmission system would be implemented by CTU on cost plus basis and balance would be implemented through tariff based bidding. Accordingly, the petitioner has approached the Commission with the present proposal for regulatory approval which includes elements proposed to be developed by the CTU as well as those to be implemented through tariff based bidding process.

6. The petitioner has further submitted that the readiness of the various generation projects for which LTAs have been granted was assessed during the discussions held with the project developers, wherein status of proposed generation projects with respect to availability of land, fuel, water linkages, environment and other statutory clearances were examined. The detailed status was given in the Project Inception Reports (PIR) of the respective projects.

7. During the hearing of the matter on 28.7.2011, the representative of the petitioner submitted that out of eight cases under consideration, four cases pertain to connectivity to generating stations being developed by individual developers and the remaining four cases pertain to long-term access to different groups of generating stations. These Inter-State Transmission Systems (ISTS) are part of the coordinated transmission planning by the CTU and Central Electricity Authority (CEA). These transmission corridors have been planned keeping in view the all India generation and demand scenario in the various meetings of the Standing Committees on Transmission Planning in which the representatives from all the concerned States were present. Bulk Power Transmission Agreements have been signed with the Independent Power Producers (IPPs) and most of them have submitted the requisite Bank Guarantee as per the Central Electricity Regulatory Commission (Grant of Connectivity, Long Term and Medium Term Open Access to the Inter-State Transmission and Related Matters) Regulations, 2010 (hereinafter "the Connectivity Regulations").

8. On the issue of segregation of the transmission assets for the generating stations which are required to be taken up immediately and the ones in which the generating stations are expected to be developed later, the representative of the petitioner submitted that since the implementation of the transmission schemes would take time, regulatory approval was being sought for all the corridors. He explained that the procedure followed by the

petitioner takes about 9 to 10 months for preparation of Detailed Project Report (DPR), floating the Notice Inviting Tender (NIT) and Investment Approval from the Board of Directors. He further submitted that the whole process including signing of Implementation Agreement, land acquisition, forest clearance, and construction etc. takes about 45-46 months.

9. In reply to a query of the Commission during hearing, the representative of the petitioner submitted that for the generating station to be commissioned during 2011-12 and 2012-13, the transmission system cannot be developed in such a short time frame as the Project Developers have approached the CTU very late and they have been informed in this regard. The Petitioner was directed to submit the following details:

(i) The latest status of the generation projects having Ministry of Environment and Forests Clearances, fuel supply agreements, EPC orders etc.

(ii) The transmission assets to be executed by Power Grid and those by private developers on the cost plus basis and tariff based bidding.

(iii) Timeline for scheduled completion of the each transmission systems.

(iv) Segregation of the transmission assets for the generating stations which have to be taken up immediately and ones in which the generating stations are expected to come later.

10. The petitioner in its affidavit dated 02.09.2011 has submitted the information regarding progress of generating stations, the transmission system through tariff based bidding, time line for completion of transmission system etc. The said information is given at **Appendix** to this order.

11. The petitioner has submitted that BPTAs have been signed between CTU and the developer IPPs in accordance with Regulation 12 of the Connectivity Regulations. The petitioner has submitted that in none of the cases, long-term tie–ups have been made by the concerned IPPs with the beneficiaries and the transmission systems have been planned based on the target regions. Regarding the possibility of phasing of the transmission system on the basis of progress of concerned generating stations, the petitioner has submitted that except the transmission system for Chitrangi Power Ltd., all the transmission systems proposed for regulatory approval in the instant petition are required to be taken up immediately.

12. M/s MB Power Ltd., in its reply dated 23.08.2011 has submitted that regulatory approval may be granted to the petitioner and the transmission system being developed for its generating station may be

included as part of basic network for determination of Point of Connection charges.

13. During the hearing of the case on 13.09.2011, the representative of the petitioner submitted that out of eight transmission projects for which regulatory approval has been sought, the approval for seven projects is immediately needed and for the eighth project i.e. the generating station of M/s Chitrangi Power Pvt. Ltd, regulatory approval is not required at present since the project developer has not submitted the Bank Guarantee. The representative of the petitioner has further submitted that the activities related to land, environmental clearance, fuel supply agreement and EPC orders have been completed for the generating station of Thermal Powertech Corporation Ltd. It has also been submitted that keeping in view the progress of Thermal Powertech, MB Power and Essar Power generating stations, the regulatory approval is urgently required for these three connectivity cases. The petitioner has further submitted that pre-tendering activities for implementation of transmission system for providing connectivity to these three generating stations have already been started.

14. Regarding the Transmission System Strengthening in WR-NR Transmission Corridor for IPP projects in Maharashtra/Madhya Pradesh

Area, the petitioner emphasized the need of regulatory approval, immediately, so that, in order to optimize the right of way, the work for 2nd ckt. of Jabalpur-Orai- Bulandashahar 765 kV transmission system can be taken along with the first ckt., for which regulatory approval has already been granted by the Commission vide order dated 31.05.2010 in petition No. 233/2009. The petitioner has further submitted that regulatory approval for Transmission System Strengthening in WR-NR Transmission Corridor for IPP projects in Chhattisgarh Area, is required since it consists of up-gradation of ± 800 kV, 3000 MW HVDC Bi-pole between Champa pooling station and Kurukshetra to 6000 MW , implementation of which would require longer duration.

15. The Commission in the Record of Proceedings for the hearing on 13.9.2011 had directed the petitioner to submit the following information:

(a) The details of progress of the nine High Capacity Power Transmission Corridors and related generating stations for which regulatory approval was granted in Petition No. 233/2009.

(b) Details of Long Term Access of the three generation projects for which the transmission system has been proposed in the present petition.

(c) To submit a report after site visit.

The petitioner in its affidavit dated 3.10.2011 has submitted details regarding the progress of nine High Capacity Power Transmission Corridors (HCPTC) for which regulatory approval was granted vide order dated 31.05.2011 in petition no. 233/2009. After perusal of the progress report, we

note that the progress of the generating stations and the transmission corridors is satisfactory. With regard to the progress of the work on the generating stations covered under HCPTC-XI, the petitioner has submitted that LTA capacity of 1560 MW (IL & FS – 1200 MW and PPN – 360 MW) is likely to materialize with reasonable certainty. Moreover, being a green field area, the Nagapattinam corridor is required even if one of the generating stations materializes. The petitioner has proposed that HCPTC-XI for IPPs in Nagapattinam area may be allowed to be taken up for implementation and commissioning of the elements of the transmission systems would be in phases keeping in view the progress of generating units.

16. We have examined in detail the proposal of the Petitioner with regard to the 8 transmission systems along with the tentative cost estimates and the milestones achieved by the generation projects which are the prospective beneficiaries of these corridors. Our observations on the HCPTCs from the point of view of regulatory approval are discussed in the succeeding paragraphs.

A. High Capacity Power Transmission Corridor-X (Transmission System Associated with IPP projects in Vemagiri Area)

17. With regard to HCPTC – X, the Petitioner has submitted as under:

a) IPPs which have been granted LTA and have signed BPTAs and

submitted Bank Guarantee in the Vemagiri area are Samalkot Power Ltd/Reliance Infrastructure Ltd. (2400 MW) with LTA of 2200 MW and Spectrum Power Generation Ltd. (1400 MW) with LTA of 1350 MW.

b) In this corridor, LTA of 775 MW has been granted to GMR Rajahmundry Ltd. (2X384 MW). 1st unit of this generating station has been synchronised with grid in September,2011. Hinduja National Power Ltd. (2X520 MW) has also been granted LTA of 725 MW with connectivity to Vemagiri Pooling station proposed to be developed under this scheme. Scheduled COD of generating units as per EPC contract is June-September, 2013.

c) Besides these generating stations, LTA of 800 MW each has also been granted to GVK Gautami Power Ltd. (800 MW) and GVK Industries Ltd. (800 MW)

d) The studies for evolution of transmission system was discussed and finalised in consultation with CEA, generation developers and various utilities. It was agreed that the charges of the transmission system is to be borne by the generation developers till the time beneficiaries are firmed up and agree to bear its transmission charges.

e) Though BPTA for the subject transmission system was signed by the petitioner before 5 January 2011, in line with the decision of Empowered Committee on Transmission, the trunk transmission corridor is to be developed under the tariff based competitive bidding and the pooling stations/sub-stations along with their interconnection with the grid shall be implemented by the

petitioner under cost plus basis.

f) The RFQ for one of the packages of the trunk transmission corridor viz. Vemagiri–Khammam–Hyderabad 765 kV D/c line has already been issued for implementation through tariff based competitive bidding and bids have been opened. The time schedule specified in the RFQ for the scheme has been given as 36 months from the effective date as per the TSA approved by MOP. Therefore, assuming that the RFP process and effective transfer to IPTC is achieved by March, 2012, then the likely commissioning date for the system would be March, 2015.

g) The petitioner shall implement the associated substations/pooling stations and their interconnection to the grid matching with the above time schedule.

h) Considering above, the subject transmission system is to be taken up for implementation immediately.

18. After examination of the submissions made by CTU, it is observed that two developers i.e. Samalkot Private Ltd. (3400 MW) with LTA of 2200 MW and Spectrum Power Generation Ltd. (1400 MW) with LTA of 1350 MW have signed the BPTAs and submitted the Bank Guarantee. Two generation developers i.e Samalkot Private Ltd. and Hinduja National Power Ltd. have awarded the EPC contracts, while Spectrum Power Generation Ltd., is in process. Total LTA granted in this corridor is 6650 MW.

As the generating stations are scheduled to be commissioned from September 2011 onwards, we are of the view that HCPTC-X may be taken up for implementation. The petitioner has submitted that the transmission systems covered under this corridor cannot be commissioned within this time frame which has been apprised to the concerned generation developers. In our view, the petitioner should ensure that implementation of the corridor should be taken up in phases to match with the progress of the generating stations.

B. High Capacity Power Transmission Corridor-XI (Transmission System Associated with IPP projects in Nagapattinam/ Cuddalore Area)

19. The petitioner has submitted the following with regard to the progress of work on corridor XI:

a) IPPs who have been granted LTA in the Nagapattinam/Cuddalore area and have signed BPTA and submitted Bank Guarantee are IL&FS Power Company Ltd (1200 MW) with LTA of 1150 MW and PEL Power Ltd (1050 MW) with LTA of 987 MW. Besides these, grant of Connectivity/LTA to two more generation projects viz. NSL Nagapatnam Power & Infratech (1320 MW) with LTA of 800 MW and PPN Power (1080 MW) with LTA of 360 MW has been finalized in the 12th Connectivity/LTA meeting held on 08.06.2011 at New Delhi.

b) BPTAs for the subject transmission system were signed by the

petitioner before 5 January 2011. However, in line with the decisions of the Empowered Committee, the trunk transmission corridor is proposed to be developed under the Tariff based bidding and the pooling stations/Substations along with their interconnection with the grid would be implemented by the petitioner under cost plus basis.

c) The RFQ for package-A of the trunk transmission corridor viz. Nagapattinam - Salem 765 kV D/c line and Salem – Maduhgiri 765 kV S/c line for implementation through tariff based competitive bidding has already been issued and bids have been opened.

d) The time schedule specified in the RFQ for the scheme has been given as 36 months from the effective date as per the TSA approved by MOP. Therefore, assuming that the RFP process and effective transfer to IPTC is achieved by March, 2012, then the likely commissioning date for the system would be March, 2015.

e) The petitioner shall implement the associated substations/pooling stations and their interconnection to the grid matching with the above time schedule.

f) The studies for evolution of transmission system was discussed and

finalised in consultation with CEA, generation developers and various utilities. It was agreed that the charges of the transmission system would be borne by the generation developers till the time beneficiaries are firmed up and agree to bear its transmission charges.

g) As the synchronous operation of SR and NEW grid by 2013-14 through Raichur–Sholapur 765 kV 2xS/c lines is being achieved, it is desirable that Narendra–Kolhapur 765 kV D/c link should be available by that timeframe for smooth synchronization. Accordingly, the Narendra–Kolhapur section alongwith necessary interconnections has been decided to be delinked from generation development in the Cuddalore/Nagapattinam area and is being taken up separately as regional system strengthening scheme (SRSS-XVII). The 765 kV operation of this link shall be undertaken matching with the progress of generation projects in Cuddalore/Nagapattinam area.

h) The subject transmission system is required to be taken up for implementation immediately.

20. The petitioner has submitted that as per the report of site visit of the IPPs, in case of one generating station out of four power plants, i.e. IL&FS, physical activities like, construction of site office, construction of sub-station for construction power etc. are under progress. In other three cases, there is no physical activity except fencing work at PEL Power Ltd. EPC orders were awarded by IL&FS and PPN Power, and in the other two cases, it is under process.

21. It is observed that the work of IL&FS (1200 MW) is in progress and there is possibility of implementation of PPN Power (1080 MW). Total LTA granted in this corridor is 3297 MW. Keeping in view the petitioner's submission that this transmission system would be required even if one generation project is materialised and the RFQ process for one of the trunk lines has already been started, the implementation of HCPTC-XI be taken up by the petitioner.

22. The petitioner has submitted that the Narendra – Kolhapur section alongwith necessary interconnections has been decided to be delinked with generation development in the Cuddalore/Nagapattinam area and is being taken up separately as regional system strengthening scheme (SRSS-XVII). In that case, implementation of the elements under this scheme, which are part of HCPTC-XI, should be implemented in time frame of synchronisation of NEW grid with SR grid the balance elements of

this corridor should be implemented in phases matching with the progress of the generating units.

C. Transmission System Strengthening in WR-NR Transmission Corridor for IPP projects in Maharashtra/ MP Area.

23. The petitioner has made following submissions with regard to this corridor:

a) IPPs who have been granted LTA have signed BPTAs in Maharashtra and Madhya Pradesh are Dhariwal Infrastructure Ltd. (600 MW) with LTA of 300 MW, Today Energy (M.P) Ltd.(1320 MW) with LTA of 800 MW, DB Power(MP) Ltd. (1320 MW) with LTA of 810MW.

b) These transmission systems have been discussed and finalised in consultation with CEA, various state utilities and generation developers. The charges of the transmission system will be borne by the generation developers.

c) This transmission system consists of 2nd ckt. of Jabalpur Pool – Orai - Bulandshahar 765kV corridor and regulatory approval has already obtained for development of 1st 765kV ckt. Considering the Right-of-way constraints, this corridor has been proposed to be developed as D/c line to optimize Right-of-way. 2nd ckt has

been proposed to be commissioned matching with the 1st ckt. which is envisaged to be commissioned by 2015-16.

d) M/s Today Energy and M/s Dhariwal Infrastructure have signed BPTAs with the petitioner and M/s Dhariwal has submitted Bank Guarantee for implementation of this corridor. In addition to above IPPs, M/s DB Power MP Ltd. (1320MW) has also been granted LTA for 810MW along with above identified strengthening scheme in the recent 32nd Meeting of Standing Committee of WR and 14th meeting of WR Constituents held on 13.05.11. Since the transmission corridor is proposed to be implemented as D/c line by 2015-16, regulatory approval of this corridor is urgently required so that DPR preparation and pre-award activities can be started immediately.

24. From the details of progress of generating stations it is observed that progress of two generating stations i.e Dhariwal and D.B Power is satisfactory, for which EPC contracts are awarded and fuel linkage as well as environment and forest clearance are also available. The other generating station i.e. Today Energy, though have signed BPTA with the petitioner but it does not fulfill essential requirements like land, forest clearance, fuel linkage etc. Since first ckt. of Jabalpur Pool – Orai - Bulandshahar 765 kV corridor has already been approved, CTU shall asses

the requirement of 2nd ckt. based on the progress of generating stations related to first as well as second ckt. and then the implementation shall be taken up in phases matching with the progress of the generating units.

D. Transmission System Strengthening in WR-NR Tr. Corridor for IPP projects in Chhattisgarh Area :

25. The petitioner has submitted following information regarding this corridor:

a) IPPs have been granted LTA and have signed BPTA in Chhattisgarh area are Karnataka Power Corporation Ltd. (1600 MW), Sarda Energy and Minerals (350 MW) and Jaiswal Neco Urja Ltd. (600 MW).

b) M/s KPCL has signed BPTA with the pettioner and has submitted Bank Guarantee for implementation of this strengthening scheme.

c) The transmission system shall be commissioned based on progress of above IPPs in Chhattisgarh as well as power transfer requirement to NR. As per the present position, it is envisaged to commission this strengthening scheme in the time frame of 2016-17. The petitioner shall implement above transmission system matching with the above time schedule.

d) This transmission system consists of upgradation of ±800kV, 3000MW

HVDC bi-pole between Champa Pooling Station and Kurukshehtra (NR) to 6000 MW. Regulatory approval has been obtained for 3000 MW bipole as a part of High Capacity Transmission Corridor for IPPs in Chhattisgarh and is in tendering stage. It is expected to be commissioned in December 2015.

e) Since ±800kV HVDC terminal takes a long duration (about 48 months) for implementation and progress of generation projects in Chhattisgarh may also become satisfactory in next 1-2 years, therefore, regulatory approval of this project may be granted.

f) This transmission system has been discussed and finalized in consultation with CEA, various state utilities and generation developers. It was agreed that the transmission charges of the transmission system is to be borne by the generation developer.

26. From the information submitted by the petitioner regarding progress of concerned generating stations it is noted that even the basic requirements e.g. acquiring of land and forest & environmental clearance are not available with the generating stations. Out of three generating stations, two have captive coal mines and possibility of coming up of these two is good. However, the progress of generating stations is not satisfactory and the further review of the progress needs to be done

before approval for this scheme. The petitioner itself submitted that progress of generating stations may be satisfactory in 1-2 years. At the same time, we are also conscious about the future requirement of the transmission system, problem of right of way and the time required for ± 800 kV transmission system being relatively new technology. Therefore, we are of the view that a cautious approach is required to be adopted to optimize the investment. Accordingly, the second module of this HVDC system should be implemented only if the concerned generating stations achieve requisite progress. A thorough review of progress of generating stations shall be done after site visit and if it is felt that the second module is required, implementation shall be taken up after intimating to all concerned state beneficiaries as well as this Commission.

E. Transmission System for connectivity of M/s Thermal Powertech Corporation India Ltd.(1320 MW)

27. The petitioner has submitted following information related to this transmission system:

a) The BPTA for the subject transmission system was signed by the petitioner on 24th December 2010. The system shall be implemented by the petitioner on cost plus basis.

b) Detailed Project Report is under preparation and all other preliminary activities like packaging, survey etc. have been commenced. The transmission system as per the BPTA is scheduled

for commissioning by May, 2014. Keeping in view the schedule, the subject transmission system is to be taken up for implementation immediately.

c) Total LTA granted to this project is 1240 MW. This transmission system has been discussed and finalised in consultation with CEA, various state utilities and generation developers. The charges of the transmission system is to be borne by the generation developer.

28. From the details of progress of the generating station, it is observed that the milestones like land possession, environmental & forest clearance, Fuel Supply agreement and EPC award have been achieved. Therefore, we are of the view that this transmission system may be taken up for implementation.

F. Transmission System for connectivity of M/s MB Power (MP) Ltd.(1200 MW) :

29. The petitioner has submitted the following with regard to the progress of this corridor:

i) BPTA for the subject transmission system was signed by the petitioner on 14th June 2010. The LTA granted is 392 MW with WR and NR as target beneficiaries. The system is proposed to be implemented by the petitioner on cost plus basis.

ii) As per "Transmission Agreement" signed with M/s MB Power(M.P) Ltd., the above transmission system would be implemented in a time period of 9 months plus the Commission's time line (30 months for triple conductor line) from zero date (Jun'10). Thus, commissioning schedule of this system is September 2013.

iii) Considering the progress of the generation project, this transmission system is required on urgent basis. Hence, advance action towards implementation of this corridor has been taken up by the petitioner and placement of award of transmission line is in advanced stage. The subject transmission system is required to be taken up for implementation on immediate basis.

iv) The studies for evolution of this transmission system has been discussed and finalised in consultation with CEA and generation developers. The charges of this transmission system are to be borne by the generation developers till the time beneficiaries are firmed up.

30. From the information regarding progress of generating station it is observed that it has already achieved the milestones like land possession, environmental & forest clearance, Fuel Supply Assurance and EPC award. This transmission system may be taken up for implementation.

G. Transmission System for connectivity of M/s Essar Power Gujarat Ltd.(3240MW)

31. The Petitioner has made the following submissions on the progress of works on this corridor:

a. BPTA for the subject transmission system was signed by the petitioner on 3rd January 2011. The system is proposed to be implemented by the petitioner on cost plus basis with expected commissioning schedule as May 2014.

b. Considering the progress of the generation project, this transmission system is required on urgent basis. Hence, pre-award activities for the system have been initiated. DPR of transmission system has been prepared and tenders have been issued in July 2011. The subject transmission system is to be taken up for implementation on immediate basis.

32. From the details submitted by petitioner regarding the progress of the concerned generating stations, it is observed that land is in possession and EPC orders have been signed. However, Environment & forest clearance is not received yet and Fuel Supply Agreement is in place for 1920 MW only, out of total capacity of 3240 MW. Therefore, the generating station is likely to come but there may be some delay. The

implementation of the transmission system may be undertaken by the petitioner matching with commissioning of generating units.

H. Transmission System for connectivity of M/s Chitrangi Power Pvt. Ltd.

33. The petitioner vide affidavit dated 2.9.2011 submitted that since the generation developer has not furnished the Bank Guarantee, the implementation of transmission system for connectivity to this generating station is not being taken up. Therefore, this transmission system has not been considered for approval.

34. In order to ensure optimum utilization of capacity in generation as well as transmission, there is an imperative necessity for both generation and transmission to come up simultaneously by phasing the implementation of the transmission systems as far as possible to match with the commercial operation of the generation projects. Till the time a new IPP comes up, the additional margins in transmission capacity would lead to greater reliability of the grid. Also, interim arrangements like Loop in Loop out (LILO) should be adopted by the CTU to the extent possible. Flexible AC Transmission System (FACTS) devices can be used for increasing the capacity of an existing transmission line. These possibilities should be explored by the CTU to ensure optimum utilization of the transmission systems proposed to be developed with the regulatory approval.

35. We are of the considered view that the power which would become available due to setting up of these corridors would provide impetus to the development of industry in particular and the economy as a whole. The power projects are located either in the coal belt, or in coastal areas (which would use imported coal). Power from these projects has to be brought to the load centers in the Northern and Western Regions which require development of transmission systems. An important matter which has engaged the attention of the Commission is the likelihood of these generation projects coming up as planned, so as not to burden the consumers with transmission charges without getting the benefit of extra power.

36. All the aspects have been examined in accordance with the regulations in general and corridor-wise requirement of the proposed transmission network in particular. We have taken note of the fact that the proposed transmission corridors have been evolved, planned and finalized by the CTU in line with the perspective plans developed by the CEA after holding extensive deliberations with the stakeholders and consultations at the LTOA Meetings, Standing Committee Meetings for Power System Planning and meetings of the Regional Power Committees.

We are of the view that these transmission systems need to be implemented matching with the commissioning schedules of the IPPs.

37. Based on the affidavits submitted by the project developers of IPPs and on the spot assessment by CTU, the progress of IPPs at different stages of implementation is satisfactory and utilization level of proposed HCPTC at the time of their progressive commissioning is expected to be sufficient. Moreover, the project developers of IPPs have signed and submitted Bank guarantee in many cases.

38. From the foregoing discussion, we are satisfied that there is need for developing the above mentioned transmission systems in order to harness the generation projects and bring the power to the load centres. As submitted by petitioner, the transmission system for connectivity to Chitrangi Power Ltd. is not required to be taken up. Therefore, seven transmission systems as per the details given at ***Annexure-I to VII*** of this order be taken up for by the petitioner for implementation. The transmission system for the generation projects in Chhatisgarh should be taken up only after progress of concerned generating stations becomes satisfactory. The petitioner should ensure that the phasing of commissioning of transmission elements shall be done to match with the

generation projects for optimum utilization of the system and to avoid stranded transmission assets.

39. Reliance Power Transmission Limited (RPTL) in its letter dated 12.9.2011 has submitted that granting regulatory approval would be in violation of the Tariff Policy amended w.e.f. 6.1.2011, requiring that investment by transmission developer including CTU/STU(s) would be invited through competitive bids, apart from few exemptions on case to case basis. The Associated Transmission System covered under the petition has not been exempted on a case to case basis by the Central Government. RPTL has further submitted that the petitioner in its capacity as CTU has tried to misuse its dominant position which will have adverse effect on competition in transmission sector. We have also considered the comments from Reliance Power Transmission Limited with regard to implementation of the transmission projects through competitive bidding after 5.1.2011. The representative of RPTL submitted during the hearing on 13.9.2011 stated that though the transmission systems for which BPTAs have been signed before 5.1.2011 are exempted from tariff based competitive bidding as per the revised policy, the BPTAs signed by the petitioner in respect of the transmission systems covered in the petition are different from the regional BPTAs / TSAs signed by CTU with the beneficiaries. He submitted that the Commission may grant regulatory implementation of the transmission system identified for granting long

term assess / connectivity subject to the condition that the Associated Transmission System covered under the petition are implemented through tariff based competed bidding only. In response, the representative of the petitioner submitted that it has signed BPTAs with Project Developers before 6.1.2011 and since beneficiaries have not been firmed up, it has approached the Commission for regulatory approval. Moreover, a substantial part of the transmission systems shall be implemented through tariff based competitive bidding, which would provide opportunities to others including the Reliance Power Transmission Limited.

40. We have considered the submissions of RPTL. Para 5.3 of the National Electricity Policy notified by the Central Government under Section 3 of the Act vide Resolution No. No. 23/40/2004-R&R (Vol.II) dated 12.2.2005 recognizes the importance of adequately augmenting the transmission capacity keeping in view the massive increase planned in generation and for development of power market. The Policy further emphasizes the need for network expansion as under:

> *"Network expansion should be planned and implemented keeping in view the anticipated transmission needs that would be incident on the system in the open access regime. Prior agreement with the beneficiaries would not be a precondition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consultation with stakeholders and taking up the execution after due regulatory approvals."*

41. Para 7.1.4 of the Tariff Policy notified by Central Government vide Resolution No. No.23/2/2005-R&R (Vol.III) dated 6.1.2006 reiterates the need for network expansion after obtaining regulatory approval as under:

> *"In view of the approach laid down by the NEP, prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consonance with the National Electricity Plan and in consultation with stakeholders, and taking up the execution after due regulatory approvals."*

42. From the above provision of the National Electricity Policy and Tariff Policy, it emerges that the CTU has been enjoined with the responsibility to plan the associated transmission capacity at the regional and inter-State levels commensurate with the planning of generation capacity in order to avoid a mismatch between generation capacity and transmission facilities. In the absence of prior agreement with beneficiaries, the CTU can undertake planned network expansion after taking regulatory approval if the requirement for network expansion has been identified in consonance with the National Electricity Plan and in consultation with the stakeholders.

43. The Commission has specified the Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010. Regulation 3 of the said regulations provides as under:

"(1) These regulations shall apply to:

(i) an ISTS Scheme proposed by Central Transmission Utility, for which generators have sought long-term access as per the Central Electricity Regulatory Commission (Grant of Connectivity, Long-Term Access and Medium-Term Open Access to the Inter-State Transmission and Related Matters) Regulations, 2009, and for which consultation with Central Electricity Authority and beneficiaries if already identified has been held for setting up the ISTS Scheme, but for which Power Purchase Agreements with all the beneficiaries have not been signed on the date of application.

(ii) an ISTS Scheme for system strengthening / up-gradation , identified by Central Transmission Utility to enable reliable, efficient, co-ordinated and economical flow of electricity within and across the region for which consultation with Central Electricity Authority and beneficiaries if identified has been held. "

44. The Transmission Systems for which the petitioner has approached the Commission for Regulatory approval are covered under the provision quoted above since PPAs have not been signed by all beneficiaries. Accordingly, we accord in principle approval for implementation of the transmission systems as per the details given in the annexures. As regard the actual implementation of the projects, the petitioner shall ensure that the extant guidelines of the Central Government including the tariff policy are duly complied with.

45. Other prayer made by the petitioner pertains to approval for inclusion of the transmission assets in Point of Connection charges. M/s MB Power has also requested to include the asset i.e. Transmission System for connectivity of M/s MB Power (MP) Ltd. as a part of Basic Network for determination and recovery of the applicable transmission charges

through Point of Connection charge methodology in accordance with PoC Regulations and Connectivity Regulations. M/s M.B. Power has further submitted that in view of various provisions of PoC Regulations and Connectivity Regulations, its project falls within the definition of a Designated ISTS Customer as defined under Regulation 2(1) (1) of the PoC Regulations, 2010 and the dedicated transmission line for Connectivity of the Project is required to be constructed by the Petitioner at its cost, as set out in the subject Petition and such dedicated transmission line should form a part of the 'Basic Network' for determination of the applicable transmission charges and losses under the PoC Regulations.

46. We have considered the submissions of the petitioner and the MB Power on the issue of inclusion of the project under PoC. Regulation 8(8) of Connectivity Regulations provides as under:

> *"8(8) Provided that a thermal generation station of 500 MW and above and hydro generation station of 250 MW and above, other than a captive generating plant, shall not be required to construct a dedicated line to the point of connection as such stations shall be taken into account for coordinated transmission planning by Central Transmission Utility and Central Electricity Authority."*

Further, Regulation 7(1)(c) of the Central Electricity Regulatory Commission (Calculation of Transmission Charges and Losses) Regulations, 2010 provides as under:

> *"7(1)(c). The dedicated transmission lines, constructed owned and operated by ISTS Licensees shall be considered to be a part of the Basic Network.....*

In view of the above provisions, the transmission systems which have been granted regulatory approval under this petition shall be included in PoC charges.

47. Regarding the prayer of the petitioner for granting approval for inclusion of the transmission systems under the TSA to be notified by the Commission, it is clarified that since these schemes are part of coordinated planning of transmission system by CTU and CEA, these transmission systems shall be part of TSA approved by this Commission under PoC charges Regulations.

48. We direct the CTU to submit quarterly progress report of these transmission corridors, along with the progress of the generation projects of the IPPs. In order to ensure optimum utilization of transmission systems created in first phase, CTU shall schedule implementation of various transmission elements in consultation with CEA.

49. Petition No.154/2011 and IA No.17/2011 are disposed of in terms of the above.

Sd/-	**sd/-**	**sd/-**	**sd/-**
(M Deena Dayalan)	**(VS Verma)**	**(S Jayaraman)**	**(Dr Pramod Deo)**
Member	**Member**	**Member**	**Chairperson**

Annexure-I

A. High Capacity Power Transmission Corridor-X (Transmission System associated with IPP projects in Vemagiri area)

1) Vemagiri Pooling Station – Khammam 765kV 2xD/c line

2) Khammam – Hyderabad 765kV 2xD/c line
3) Wardha – Jabalpur Pooling Station 765 kV D/c line
4) Establishment of 765/400kV GIS Pooling station at Vemagiri with 4x1500 MVA transformer
5) LILO of Gazuwaka-Vijayawada 400kV S/c line at Vemagiri Pooling Station
6) Establishment of 765/400kV GIS Pooling station at Khammam & Hyderabad with 2x1500 MVA transformers each
7) Hyderabad 765/400 kV S/s- Hyderabad (existing) 400 kV D/c (quad) line
8) Khammam 765/400 kV S/s- Khammam (existing) 400 kV D/c (quad) line
9) Hyderabad – Wardha 765 kV D/c line

Additional Strengthening

Khammam- Nagarjunasagar 400 kV D/c line

Annexure-II

High Capacity Power Transmission Corridor-XI (Transmission System associated with IPP projects in Nagapattinam / Cuddalore Area, Tamil Nadu)

Package A

a. Nagapattinam Pooling Station - Salem 765 kV D/c line

Package C

a. Madhugiri – Narendra 765 kV D/c line
b. Kolhapur – Padghe 765 kV D/c line (one circuit via Pune)

Common System Associated with ISGS Projects in Nagapattinam/Cuddalore Area of Tamil Nadu – Part A1

a) New 765/400 kV Pooling station at Nagapattinam (GIS) with sectionalisation arrangement to control short circuit MVA (initially charged at 400 kV)
b) LILO of Neyveli- Trichy 400kV S/c line at Nagapattinam Pooling Station for initial arrangement which later shall be by passed
c) 2 nos. 400 kV bays each at Nagapattinam Pooling Station and Salem for terminating Nagapattinam Pooling Station-Salem 765 kV D/c line (initially charged at 400 kV)
d) 1 no. 400 kV bay each at Salem and Madhugiri for terminating Salem - Madhugiri 765 kV S/c line-2 (initially charged at 400 kV)

Common System Associated with ISGS Projects in Nagapattinam / Cuddalore Area of Tamil Nadu – Part A2

a) 2 nos. 400 kV bays each at Madhugiri & Narendra for terminating Madhugiri - Narendra 765 kV D/c line (initially charged at 400 kV)

b) 2 nos. 400 kV bays each at Kolhapur, Padghe & Pune for terminating Kolhapur – Padghe 765 kV D/c line (one circuit via Pune) (initially charged at 400 kV)

System Strengthening in Southern Region-XVII

a) New 400 kV sub-station each at Narendra (GIS) and Kolhapur (GIS) (Which shall be later upgraded to 765 kV)
b) Narendra (GIS) – Kolhapur (new) 765 kV D/c line (initially charged at 400 kV)
c) LILO of both circuits of existing Kolhapur – Mapusa 400 kV D/c line at Kolhapur (new)
d) Narendra (GIS) – Narendra (existing) 400 kV D/c Quad line.

Additional Strengthening

Nagapattinam Pooling Station – Thiruvalem 765kV D/c line

Annexure-III

Transmission System Strengthening in WR-NR Transmission corridor as part of Long-term Access for IPPs in M.P. and Maharashtra

1. Jabalpur Pooling station – Orai 765 kV D/c (2nd ckt)
2. Orai – Bulandshahar 765 kV D/c (2nd ckt)
3. Sonipat-Kaithal 400 kV D/c (Quad)

Annexure-IV

Transmission System Strengthening in WR-NR HVDC corridor as part of Long-term Access for IPPs in Chhattisgarh

1. Upgradation of ±800 kV, 3000 MW HVDC bi-pole between Champa Pooling Station – Kurukshehtra(NR) to 6000 MW
2. Kurukshetra(NR)–Jind 400kV D/c(Quad)
3. Kurukshetra(NR)–suitable location near Ambala 400 kV D/c(Quad)
4. Augmentation of 765/400 kV transformation capacity by 2x1500 MVA at Champa pooling station

Annexure-V

The transmission system for Connectivity of Thermal Powertech Corporation India Limited (TPCIL)

1. TPCIL Switchyard – Nellore Pooling Station 400 kV D/c (quad) line
2. 2 nos. 400 kV line bays at Nellore Pooling Station for terminating above lines.

Note: *The bay extension in the generation switchyard shall be in the scope of generation developer.*

Annexure-VI

1. The transmission system for Connectivity of MB Power (M.P) Ltd. (Anuppur generation Project)

1. MB TPS (Anuppur) – Jabalpur Pooling station 400 kV D/c (triple) via Jabalpur (existing) substation
2. 2 nos. 400 kV line bays at Jablapur pooling station
3. 2 nos. 400 kV line bays at Jabalpur (existing) station (*for interim arrangement*)
4. 2 nos. 50 MVAR Line reactor at 400kV Jabalpur Pooling station end for the above line

Note - Bays and reactors at Generation Switchyard to be implemented by generation developer.

Annexure-VII

1. Essar Power TPS – Bachau 400 kV D/c (Triple)
2. 2 nos. 400kV line bays at Bachau Sub-station
3. 1x63 MVAR line reactor at Bachau end on both circuits of Essar Power TPS – Bachau 400 kV D/c line

Note- Bays and reactors at Salaya Generation Switchyard to be implemented by M/s Essar Power Gujarat Ltd.

APPENDIX

Details of Transmission Systems and Progress of Related Generating Stations

Sl. No.	Transmission System for LTA	Cost (Rs. Crore)	Generating Stations	Installed Capacity (MW)	LTA/ Connectivity (MW)	Commissioning Schedule	Land	Environment & Forest Clearance	Fuel Linkage	EPC Order	BPTA	BG
1	High Capacity Power Transmission Corridor-X (Transmission System Associated with IPP projects in Vemagiri Area + Hinduja - Vemagiri Pool & Khammam - N sagar	9,144	Reliance Infra Samalkot Private Ltd.	2400	2,200	Dec,11	Acquired	Obtained	No	Placed	Signed	Submitted
			Spectrum Power Generation Ltd.	1400	1,350	Mar,13	Acquired	Obtained	No	NIT Issued	Signed	Submitted
			Hinduja National Power Ltd.	520 X2	725	Jun,13	Acquired	Obtained	Assurance from MoC	Placed	No	No
			GMR Rajahmundry Energy Ltd.	384x2	775	September, 2011	Acquired	obtained	No	Placed	No	No
2	High Capacity Power Transmission Corridor-XI (Transmission System Associated with IPP projects in Nagapattinam/ Cuddalore Area + Nagapattinam - Thiruvalam 765 kV D/c (initally charged at 400 kV)	7,985	IL&FS	600 X2	1,150	June,13	Partly Acquired	Obtained	Acquired Captive Mines in Indonesia	Placed	Signed	Submitted
			PEL	1050	987	Apr,14	Acquired	Obtained	Assurance from MoC	No	Signed	Submitted
			NSL	1320	1,240	Oct,14	Partly Acquired	Obtained	70 %- Granted by MoC ; 30%- Import	NA	No	No
			PPN	1080	360	Sep,13	Acquired	Obtained	Tied up	No	No	No

3	Transmission System Strengthening in WR-NR Tr. Corridor for IPP projects in Maharashtra/ MP Area	1,610	Dhariwal Infrastructure Ltd	300 X2	300	Oct,12	Acquired	Obtained	Available	Placed	Signed	Given
			Today Energy (MP) Ltd.	2X660	800	Jun,15	Partly Acquired	No	No	No	Signed	Not Given
			DB Power (MP) Ltd.	2X 660	810	July,14	Mostly Acquired	Obtained	Received for one unit	Shortly	NA	
4	Transmission System Strengthening in WR-NR Tr. Corridor for IPP projects in Chhattisgarh Area	4,448	Karnataka Power Corporation Ltd.	2 X 800	1,278	Sep,15	Under Process	No	No	No	Signed	Given
			Sarda Energy and Minerals Ltd.	350	156	Jan,14	Partly Acquired	No	Captive Coal Mine	No	NA	
			Jayaswal Neco Urja Ltd.	600	600	Dec,13	Partly Acquired	No	Captive Coal Mine	No	NA	
5	Transmission System for connectivity of M/s Thermal Powertech Corporation India Ltd	96	Thermal Powertech Cor. India Ltd.	2 X660	1,320	Jan,14	Acquired	Obtained	70 %- Granted by MCL ; 30%- Import	Placed	Signed	
6	Transmission System for connectivity of M/s MB Power (MP) Ltd.	458	M. B. Power (MP) Ltd.	2 X600	1,200	Aug,13	Acquired	Obtained	Assurance for 1000 MW ; sanction for 200 MW	Placed	Signed	
7	Transmission System for connectivity of M/s Essar Power Gujarat Ltd	558	Essar Power Gujarat Ltd.	4 X150 +2 X 660+2 X 600=3240	2,240	Mar,14	Acquired	No	FSA for 1920 MW	Placed	Signed	Given
Total		**24,299**			**17,491**							

8	Transmission System for connectivity of M/s Chitrangi Power Pvt. Ltd.	226			3,960						BG not submitted. No Action is being taken up by PGCIL	