CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 233/2009

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

Date of Hearing: 25.2.2010 **Date of order: 31.05.2010**

In the matter of

Approval under Regulation 24 read with Regulation 111 and 113 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2004, for grant of regulatory approval and other reliefs for execution of evacuation systems required in connection with grant of long–term open access to a group of developers.

And in the matter of

Power Grid Corporation of India Ltd. ……**Petitioner**

Vs

1. Adhunik Thermal Energy Ltd.
2. Ind Barath Energy Ltd.
3. Simhapuri Energy Pvt. Ltd.
4. PTC
5. WBSEDCL
6. Maruti CCPL
7. Madhya Bharat Power Corporation Ltd.
8. KVK Nilachal Power Pvt. Ltd.
9. Krishnapatnam Power Corporation Ltd.
10. East Coast Energy Pvt. Ltd.
11. Aryan Coal Benefications
12. SKS Ispat & Power Ltd.
13. Vandana Global Ltd.
14. Coastal Energen Pvt. Ltd.
15. Andhra Pradesh Power Development Company Ltd.
16. KSK Energy & Wardha Power
17. NCC Power Projects Ltd., NCC Infrastructure Holding Ltd.
18. Dheeru Powergen Ltd.

19. Lanco Amarkantak Power Pvt. Ltd.
20. PTC (Dheeru)
21. RKM Powergen Ltd.
22. Athena Chhattisgarh Power Pvt. Ltd.
23. CESC Ltd. (dumka)
24. Jaiprakash Power Ventures Ltd. (JPVL)
25. Teesta Hydro Power Pvt. Ltd.
26. Sterlite Energy Ltd.
27. PTC India Ltd.
28. Korba West Power Co. Ltd.
29. Bharat Aluminium Co. Ltd
30. Corporate Power Ltd.
31. DANS Energy Pvt. Ltd.
32. Shiga Energy Ltd.
33. Jal Power Corporation Ltd.
34. IND-Barath Power (Madras) Ltd.
35. Monet Power Company Ltd., Monnet Ispat & Energy Ltd.
36. DB Power Ltd.
37. Gati Infrastructure Bhasmey Pvt. Ltd.
38. Essar Power (Jharkhand) Ltd.
39. GMR Energy Ltd.
40. TT Energy Ltd.
41. Gati Infrastructure Sda-Mangder Power Pvt. Ltd.
42. Jindal Power Ltd.
43. Lanco Babandh Power Pvt. Ltd.
44. Navbharat Power Private Ltd.
45. The ESE (INTER STATE), BSEB
46. The Chief Engineer (Commercial), WBSEB
47. The Sr. General Manager (PP.), Grid Corporation of Orissa Ltd.
48. The Chief Engineer (COMML), DVC
49. The Addl. Chief Engineer (SLDC/EHV), Power Deptt., Govt. of Sikkim
50. The Chief Engineer (COMML), JSEB
51. The Chairman, RRVPNL
52. The Suptd. Engineer, RRPC, AVVNL
53. The Suptd. Engineer, RRPC, Jaipur Vidyut Vitran Nigam Ltd.
54. The Suptd. Engineer, RRPC, Jodhpur Vidyut Vitran Nigam Ltd.
55. The Director (IS), HPSEB
56. The Director (ISB), PSEB
57. The Chief Engineer (COMML), Haryana Power Purchase Centre
58. The Chief Engineer (COMML), Power Development Deptt.
59. The DGM, Electricity Import, Export & Payment Circle,
60. The Chairman, DTL
61. The General Manager (SO/COMML). Chandigarh Admin.
62. The Ex. Engineer (Operation-Div), Uttrakhand Power Corporation Ltd.
63. The Manager, BSES Yamuna Power Ltd.
64. The Manager, BSES Rajdhani Power Ltd.
65. The Manager, North Delhi Power Ltd.
66. The Director (Commercial/Power), NDMC
67. The Senior DEE/TRD., North Central Railway
68. The Chairman, Karnataka Power Transmission Corporation Ltd.

69. The Managing Director, BESCOM
70. The Managing Director, GESCOM
71. The Managing Director, HESCOM
72. The Managing Director, MESCOM
73. The Managing Director, CESE
74. The Chairman, Transmission Corporation of Andhra Pradesh Ltd.
75. The Managing Director, Eastern Power Distribution Co. of Andhra Pradesh Ltd.
76. The Managing Director, Southern Power Distribution Co. of Andhra Pradesh Ltd.
77. The Managing Director, Central Power Distribution Co. of Andhra Pradesh Ltd.
78. The Managing Director, Northern Power Distribution Co. of Andhra Pradesh Ltd.
79. The Chairman, Kerala State Electricity Board
80. The Chairman, TNEB
81. Chief Secretary, Electricity Dept., Govt. of Pondicherry
82. Chief Engineer, Electricity Dept., Govt. of Goa
83. The Chairman, Madhya Pradesh Tradeco
84. The CEO, Madhya Pradesh Audyogic Kendra Vikas Nigam
85. The CEO, M/s Jindal Powers Ltd.
86. The Chairman, Maharashtra State Electricity Distribution Co Ltd.
87. The Chairman, Gujrat Urja Vikas Nigam Ltd.
88. The Secretary (Power), Electricity Dept., Admin. of Daman & Diu
89. The Secretary (Power), Electricity Dept., Admin. of Dadra Nagar Haveli
90. The Chairman, Chhattisgarh State Electricity Board ……**Respondents**

The following were present:

1. Shri Avdesh Kumar, CEO, MPCL
2. Shri Bimal Dhar, MPCL
3. Shri Sanjay Sen, DB Power Ltd.
4. Shri K.R.Nagendran Kumar, Jindal Power Ltd.
5. Shri J. Balasubodhmanya, Athena Chhattisgarh Power Pvt. Ltd.
6. Shri S. S. Mendiratta, DB Power Ltd.
7. Shri B. Naaasimka Rao, Athena Chhattisgarh Power Pvt. Ltd
8. Shri S. Ramesh, NPPL
9. Shri Vaibhavgarg, Manager, NPPL
10. Shri R. B. Sharma, BSEB
11. Shri Y.K. Sehgal, Powergrid
12. Shri Dilip, Powergrid
13. Ms. Maju Gupta, Powergrid
14. Shri A. M. Pavgi, Powergrid
15. Shri Prashant Sharma, Powergrid
16. Shri Ram Chandra, Powergrid
17. Shri Anil K. Meena, Powergrid
18. Shri Sanjeev K Bhardwaj, Advocate, Aryan Coal
19. Shri S.H. Khan, Advisor, Coastel Energen Pvt. Ltd.
20. Shri S.S.Sharma, PTC India
21. Shri Arun Kumar, Powergrid.

ORDER

The petitioner, Power Grid Corporation of India Limited (PGCIL) has filed this petition seeking regulatory approval for development and execution of certain identified transmission systems for evacuation of power from various generation projects planned to be promoted by the Independent Power Producers (IPPs). The petitioner has made the following prayers in the petition:

Quote

a) Grant Regulatory approval for taking identified transmission system for evacuation of power from the first phase priority generation projects.

b) Direct LTOA applicants for firming up the beneficiaries immediately before POWERGRID takes up the investment

c) Utilise the appropriate platform like Forum of Regulators for early finalization of source of power requirement for States through Case-I bidding as this shall help in firming up the beneficiary States by the LTOA applicants.

d) Ensure recovery of the capital investment of the POWERGRID (in the event of not taking of some of the above generating projects) by way of evolving alternate methodology.

e) To pass such order as deemed fit in the interest of justice and equity.

Unquote

2. The Petitioner has submitted that in accordance with Regulation 8 of the Central Electricity Regulatory Commission (Open Access in Inter-state Transmission) Regulations, 2004 (hereafter 2004 regulations), it being the Central Transmission

Utility(CTU) is the designated nodal agency for processing the requests for long term open access (LTOA) to the inter-State transmission system. The Petitioner has received overwhelming response from the Independent Power Producers (IPP) seeking LTOA for the new generation projects proposed to be set up under the de-licensed regime.

3. The Commission in its Record of Proceedings dated 25.11.2009 had directed the Petitioner to submit the corridor-wise details of the scheme. The Petitioner in its affidavit dated 1.1.2010 had submitted a Project Inception Report(PIR) covering 9 nos of High Capacity Power Transmission Corridors (HCPTC) for 48 nos of IPPs with description/justification of each of the corridors with tentantive cost estimates and the minutes of the forums where these corridors were deliberated. The details of the nine HCPTC are as under:

	High Capacity Power Transmission Corridor (HCPTC)	Rs. Crs
1	HCPTC – I (Transmission System Associated with Phase-I Generation Projects in Orissa)	8,752
2	HCPTC – II (Transmission System Associated with IPP projects in Jharkhand)	5,709
3	HCPTC – III (Transmission System Associated with IPP projects in Sikkim)	1,304
4	HCPTC – IV (Transmission System Associated with IPP projects in Bilaspur complex, Chattisgarh & IPPs in Madhya Pradesh)	1,243
5	HCPTC – V (Transmission System Associated with IPP projects in Chattisgarh)	28,824
6	HCPTC – VI (Transmission System Associated with IPP projects in Krishnapatnam Area, Andhra Pradesh)	2,065
7	HCPTC – VII (Transmission System Associated with IPP projects in Tuticorin Area, Tamil Nadu)	2,357
8	HCPTC – VIII (Transmission System Associated with IPP projects in Srikakulam Area, Andhra Pradesh)	2,986
9	HCPTC – IX (Transmission System Associated with IPP projects in Southern Region for transfer of power to other regions)	4,821

Total		58,061

4. During the hearing on 12.1.2010, the Commission had directed the Petitioner to seek the information regarding the progress of the power projects from the developers, prioritize the HCPTCs depending upon the expected commissioning of the related generation projects and likelihood of the utilization of the transmission system on the commissioning, and Bank Guarantee in accordance with the provisions of Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009.

5. During the hearing on 25.2.2010, the petitioner made a presentation on Nine High Capacity Power Transmission Corridors (HCPTC) proposed to be constructed for evacuating power from the IPPs in various parts of the country. The petitioner submitted that it had arranged a meeting with all the developers of IPPs on 24.2.2010 for signing BPTA and submitting Bank Guarantee (BG) for payment security of transmission charges. While 37 IPPs had already signed BPTAs, some of them had submitted BGs totaling 875 Crore and the remaining IPPs had been requested to submit BGs by 31.3.2010. The Petitioner had prioritized 7 no. of HCPTC (HCPTC-I,II,III,IV,V,VII,IX) as first priority and 2 nos of HCPTC (HCPTC-VI and VIII) as second priority.The Petitioner has accordingly prayed for grant of regulatory approval for implementation of 9 nos. of HCPTCs for ensuring recovery of capital investment of the Petitioner in the event of non materialization of some of the identified generation projects

6. After hearing the Petitioner and representatives of some of the IPPs and on perusal of the documents on record., we decided to address the following three issues:

i) Construction of dedicated transmission lines by the CTU.

ii) PPAs to be signed with the beneficiaries for the IIPs.

iii) Time required for submitting the Bank Guarantee(BG) after signing the BPTAs.

7. In our order dated 26.3.2010, we had clarified the issues as under:

> "16. As regards the construction of dedicated transmission lines by the CTU, we are of the view that under section 10 (1) of the Electricity Act, it is the duty of the generating company to install, operate and maintain the dedicated transmission lines in accordance with the provisions of the Act or the rules or regulations made there under. The 2004 Regulations did not provide for inclusion of the dedicated transmission lines as part of system strengthening and accordingly the CTU has not planned the dedicated transmission lines in the HCPTCs for which the regulatory approval has been sought in this petition. However, recently in 2009, the Commission after detailed deliberation has decided that the CTU should also develop the dedicated transmission lines as part of planned and coordinated development of inter- State transmission system and accordingly, provisions have been made in the 2009 Regulations. Such arrangement cannot be extended in case of the transmission lines which were planned prior to the said regulations as it will delay the construction of the HCPTCs and consequently bottle up the generation projects.
>
> 17. As regards the requirement for signing of PPAs with the beneficiaries, we observe that the IPPs have not been able to come forward to sign the PPAs, primarily because the States have not yet gone ahead with the bidding process for evacuation of power. However, linking the signing of the PPAs with regulatory approval will hamper the progress of the transmission projects. The Tariff Policy issued vide Govt. of India in para 7.1.4 does not make it mandatory for network expansion by the CTU/STU. The said para reads 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."*
>
> In view of the above mandate of the Tariff Policy, we are of the view that the CTU should carry out consultation with the stake holders and satisfy itself about the bonafide nature of generation projects which are likely to materialize during the next three years and submit the detailed report about such projects, including the

physical progress made wherever feasible and approach the Commission by first week of April, 2010.

8. In compliance with our directions, the Petitioner has carried out the verification of physical progress made by the IPPs in different HCPTCs and submitted the report for HCPTCs –I, III, IV, V ,VIII and IX on 21.4.2010; for HCPTC –II on 29.4.2010 and for HCPTCs VI and VIII on 12.5.2010. It has been clarified by the Petitioner that the progress of these projects has been submitted by the IPPs to CTU through affidavit.

9. We have examined in detail the proposal of the Petitioner with regard to the 9 HCPTCs along with the tentative cost estimates and the milestones achieved by the generation projects which are the prospective beneficiaries of these corridors. The details of the transmission systems as submitted by the Petitioner are enclosed as **Annexures I to IX** of this order. The progress of the corridor-wise generation projects (HCPTCs I to VIII) with respect to certain milestones, including land acquisition, fuel, MOE and Forest clearances, awarding of EPC Contracts, signing of BPTA and submission of Bank Guarantees are enclosed at **Exhibits I to VIII** to this order. The HCPTC-IX corridor is a grid strengthening Scheme from Southern Region to Western Region/Northern Region. Our observations on the HCPTCs from the point of view of regulatory approval are discussed in the succeeding paragraphs.

A. HCPTC-I : Corridor for Orissa IPPs

10. With regard to HCPTC – I, the Petitioner has submitted as under:

> "This corridor has been proposed for transfer of power from 7 nos of IPPs in the State of Orissa seeking LTOA for about 6080 MW. Based on the present exercise, it has been observed that about 3000 MW power injection from projects, where there is good physical progress (viz. GMR-800 MW, Monnet-900 MW, Sterlite-400 MW & Ind-Barath-616 MW), is likely to materialize with

good level of certainty. As regards, the utilization of proposed HCPTC-I, it is pertinent to mention the proposed corridor envisages only skeleton transmission system which in any case shall be required even if 50% of the LTOA quantum (6000 MW) is materialised.

In view of the above, it is proposed that HCPTC-I may be taken up for implementation, however, the commissioning of the elements shall be phased out keeping in view the progress of the generating units."

11. After examination of the submissions made by CTU, we are of the view that out of the seven IPPs, four developers have signed the BPTA and submitted the Bank Guarantee. The report of physical progress shows that work is in progress in all these projects. The remaining three projects viz. Sterlite (Long-term access (LTA) sought for 400 MW), Jindal India Thermal Power (LTA for 1044 MW) and Navbharat Power Pvt. Ltd. (LTA for 720 MW) have submitted the Bank Guarantee, though they have not signed the BPTA as yet. However, out of these, both Sterlite and Jindal India Thermal Power have fulfilled all the milestones shown in Annexure-I. In the case of Sterlite, commissioning of Unit no. I is also under progress. All these plants have also awarded the EPC contract. We fully agree with the suggestion of the CTU that HCPTC-I be taken up for implementation. However, the commissioning of the projects shall be phased out in keeping with the progress of the generating units.

B. HCPTC-II : Corridor for Jharkhand IPPs

12. The Petitioner has submitted that HCPTC-II has been proposed for transfer of power from 3 nos of IPPs and byWBSEDCL for sale of surplus of State power through LTOA. Based on the present exercise, about 3000 MW power injection from projects is expected in this corridor. However initially only about 1500 MW (i.e Adhunik : 500 MW and 1000 MW surplus power from State sector generating stations

in West Bengal) may become available. The Petitioner has sought regulatory approval of the complete scheme. However commissioning of the elements may be phased out keeping in view the progress of the generating units.

13. On consideration of the proposal of the CTU, we are of the view that WBSEDCL has four projects, viz. Katwa (1000 MW), Purulia PSS (900 MW), Sagardighi (1100 MW) and Bakreahwar (1050 MW), a few of which are already commissioned and the other ones would be commissioned progressively by 2014-2015. Therefore, there is immediate need for evacuation of power from these projects. Besides this, all three IPPs, viz. M/s Adhunik Power, Corporate Power and Essar Power have already signed the BPTA and submitted the Bank Guarantee. M/s Adhunik Power has already started boiler erection, completed the TG hall foundation, and awarded other major works like CW system and switchyard while TG casing is under progress. M/s Corporate Power has already awarded the BTG to BHEL, civil works to Simplex. M/s Areva are already working for setting up the switchyard. M/s Essar Power has already awarded the BTG package to Harbin PE, China. These plants are slated for commissioning from 2012 to 2013. Therefore, considering the progress of the generation projects, we are of the view that this corridor needs to be developed urgently. Accordingly we approve the proposal of the CTU for implementation of the corridor in phases matching with the progress of the generating units. However, if some generation units get commissioned before the commissioning of the proposed transmission system, CTU should identify interim transmission arrangements for the intervening period.

C. **HCPTC-III : Corridor for Sikkim IPPs**

14. With regard to the progress of HCPTC-III, the Petitioner has submitted as under:

> "This Corridor has been proposed for transfer of power from 7 nos of IPPs seeking LTOA for about 2160 MW. In the present exercise it has been observed that capacity addition of about 2100 MW is expected with good level of certainty. Further, the above projects include 1200 MW of Teesta-III which is in quite advanced stage of construction. The proposed corridor envisages only two nos of 400 kV circuits to facilitate the transfer of power these proposed projects which shall be required even with the commissioning of Teesta-III project which is quite certain as regards its materialization.
>
> Therefore, it is proposed that HCPTC-III may be taken up for implementation, however, commissioning of the elements shall be phased out in keeping in view the progress of the generating units."

15. On consideration of the material on record, we find that these projects are progressing at a very fast pace and their commissioning are expected to start from the year 2010 and be completed by 2014. Project developers of five out of seven projects have signed the BPTA and submitted the Bank Guarantees. The transmission project involves construction of only two numbers 400 Kv circuits, one no of 220 kV D/c line and some LILO arrangements for transfer of power from these generation projects. Therefore, we are satisfied that these corridors and other arrangements of LILO are urgently needed and hence we agree with the proposal of CTU that HCPTC-III may be taken up for immediate implementation; however, commissioning of the elements shall be phased out keeping in view the progress of generating units.

D. HCPTC-IV : Corridor for MP and Chhattisgarh IPPs

16. The Petitioner has made the following submissions with regard to the progress of HCPTC-IV:

"This Corridor has been proposed for transfer of power from 6 nos of applicants including 5 nos of IPPs and Chattisgarh State Power Trading Co. Ltd(CSPTCL) for transfer of its share from these IPPs. The quantum of LTOA sought is about 3700 MW. It has been found that out of the above 5 nos of IPPs, 2 nos of projects with LTOA 1500 MW is expected to get commissioned with good level of certainty. As regards the utilization of proposed HCPTC-IV, it is pertinent to mention that the proposed corridor envisages strengthening of grid beyond Indore through 765 kV S/c line only, therefore, it shall be utilized even with 2 nos of IPPs which are likely to materialize with good level of certainty.

In view of the above, it is proposed that HCPTC-IV may be taken up for implementation."

17. After considering the proposal of the Petitioner, we have noted that all the five IPPs have signed the BPTA and four have submitted the Bank Guarantee. Site work is in progress in case of Jaiprakash Power Venture (LTA 1241 MW) and Bina Power Supply Co. (LTA 265 MW). In the case of Maruti Clean Coal (LTA 171 MW), fencing of land is under progress. In the case of Dhiru Powergen (LTA 450 MW) and Aryan MP (LTA 1122 MW), although some milestones have been achieved, there is no site work under progress, which could be due to their expected commissioning in 2013-14. We are of the view that since the proposed corridor envisages strengthening of grid beyond Indore through 765 kV S/c line only and would be utilized even with 2 nos of IPPs which are likely to materialize with good level of certainty, this corridor needs to be taken up for implementation.

E. HCPTC-V : Corridor for Chhattisgarh IPPs

18. With regard to progress of HCPTC-V, the Petitioner has made the following submission:

"This Corridor has been proposed for transfer of power from 12 nos of IPPs seeking LTOA for about 13630 MW. All the applicants of Chattisgarh area

have signed BPTA. Further all the IPPs except 2 nos IPPs viz. Athena and Chattisgarh Steel & Power have given Bank Guarantee(BG).

These IPPs are clustered in two areas viz. Champa (5 IPPs) and Raigarh(7 IPPs). Based on the recent site visit, it has been observed that all the 5 nos of IPPs of LTOA quantum 6054 MW in Champa area have high degree of certainty for materialization. Further, in Raigarh area, out of 7 nos of IPPs, good progress is observed at premises of 3 IPPs having LTOA quantum 3885 MW.

From the above, it may be seen there is fairly high degree of certainty of generation projects materialization of about 8 nos of IPPs with LTOA quantum 9940 MW (Champa - 6054 MW and about 50% projects in Raigarh area of LTOA quantum 3885 MW).

As regards utilization of the proposed HCPTC-V, it may be mentioned that the proposed system envisages establishment of skeleton transmission system to evacuate power from projects coming Champa and Raigarh area. The proposed system comprises of 765kV AC system of about 8000MW and HVDC system of about 7000MW capacity totaling to about 15000MW. As observed above, capacity addition of about 10,000 MW is likely with good level of certainty. Therefore, the utilization of HCPTC-V is expected to be more than 70% with the commissioning of generation projects having high degree of certainty.

In view of the above, it is proposed that HCPTC-V may be taken up for implementation, however, commissioning of the elements shall be phased out keeping in view the progress of the generating units."

19. We have observed that all the 12 nos. of IPPs have signed the BPTA and 9 nos have submitted the Bank Guarantee. Most of the projects have achieved most of the milestones. All the projects have awarded the EPC contracts. Site works are in progress in 9 out of 12 projects. Therefore, there is considerable certainty that a sizeable number of projects would come up in this corridor starting from 2010 onwards. Therefore, there is urgency to develop this corridor to match with the commissioning of the generation projects. We are inclined to agree with the CTU that

this corridor should be taken up for implementation; however, commissioning of the elements shall be phased out keeping in view the progress of generating units.

F. HCPTC-VI : Corridor for IPPs in Krishnapatnam Area, Andhra Pradesh)

20. The Petitioner has submitted that this Corridor has been proposed for transfer of power from 5 nos of IPPs seeking LTOA for 5020 MW. Two IPPs have signed BPTA and three IPPs have furnished BG, however balance are yet to sign BPTA and furnish BG shortly. The capacity of 2460 MW of Simhapuri, Meenakshi & Thermal Powertech is likely to materialize with good degree of certainty and capacity of 3300 MW of Krishnapatnam Power & Kineta Power have comparatively lower degree of certainty due to non-achievement of major milestones. The proposed HCPTC-VI envisages establishment of 765 kV corridor from Nellore pooling station towards Kurnool and Raichur. The capacity of this corridor shall be of the order of 4400 MW under "N-0" contingency. However, if all the above mentioned generation projects materialize in this area, then additional system strengthening will be required in this corridor and shall be identified later. Considering the progress of generation projects, it is expected the proposed corridor shall be fully utilized taking into consideration the physical progress of generation projects in Krishnapatnam area The Petitioner has proposed that HPCTC-VI for IPPs in Krishnapatnam area may be taken up for implementation, however, commissioning of the elements shall be phased out keeping in view the progress of the generating units.

21. We have observed that out of 5 nos of IPPs, two have signed the BPTA and 3 have submitted the BG while four IPPs have acquired land. Work is in an advanced stage of implementation in two projects viz. Simhapuri (LTA 491 MW) and

Meenakshi(LTA 546 MW) . These projects are likely to materialize with good degree of certainty which justifies the need for the transmission corridor. Keeping In view the submission by CTU that the corridor is presently planned with "N-0" contingency, we are in agreement with CTU that this corridor is also required to come up urgentlyto cater to the needs of the generating companies for evacuation of power.

G. HCPTC-VII : Corridor for Tuticorin IPPs

22. With regard to the progress of work in this corridor, the Petitioner has submitted the following:

> *"This Corridor has been proposed for transfer of power from 2 nos of IPPs seeking LTOA for 2000 MW. Both the applicants have signed BPTA and submitted BG.*
>
> *Based on the present exercise, it is seen that capacity of 1100 MW is likely to materialize with good degree of certainty. Further taking into consideration that the proposed HCPTC-VII corridor envisages only establishment of 765 kV corridor (initially charged at 400 kV) from Tuticorin area upto Bangalore, therefore, the corridor shall be utilized to large extent even with the commissioning of one project viz. Coastal Energen (1100 MW).*
>
> *In view of the above, it is proposed that HCPTC-VII may be taken up for implementation, however, commissioning of the elements shall be phased outkeeping in view the progress of the generating station*."

23. From the material placed on record, we find that both the IPPs in this region have signed the BPTA and submitted the Bank Guarantee. Both projects have achieved their major milestones except the clearance from Ministry of Environment and Forest in respect of Ind -Barath Power Ltd (LTA 900 MW). Coastal Energen(LTA 1100 MW) is likely to materialize with good degree of certainty and supply of plant and machinery is expected from June,2010. Hence, the corridor is urgently needed for

evacuation of power. We endorse the suggestion of CTU that the corridor should be taken up for implementation; however, charging of line at 765 kV and commissioning of the elements shall be phased out keeping in view the progress of generating units.

H. HCPTC-VIII : Corridor for Srikakulam IPPs(Andhra Pradesh)

24. The Petitioner has submitted that this Corridor has been proposed for transfer of power from 2 nos of IPPs seeking LTOA for 2640 MW. The proposed HCPTC-VIII envisages establishment of 765 kV corridor (initially at 400 kV with two 660 MW units) from Srikakulam pooling station to Angul pooling station in Orissa. The capacity of this corridor shall be of the order of 2500 MW (765 kV charged at 400 kV), however under N-1 contingency the capacity is not adequate and therefore the 765 kV transmission corridor shall be charged at rated voltage with commissioning of 3rd 660MW unit of any generation project. Beyond Angul, the corridor is further extended to Jharsuguda and Dharamjaigarh. Considering the progress of generation project, it is expected that 50% capacity of the proposed corridor shall be utilized with the commissioning of one project. Both the applicants are expected to sign BPTA and submit BG shortly in May/June 2010 due to change in capacity/target beneficiaries. Both the projects have achieved all the major milestones except NCC Power, which is yet to award the EPC contract.

25. On perusal of the material on record, it is apparent that the capacity of East Coast generation project (LTA 1320 MW) of IPP generation project is likely to materialize with good degree of certainty. The Physical progress at East Coast generation project is at full swing, with pile foundation for boiler and chimney under progress and construction power available. In view of the above, we agree with the CTU that the

HCPTC-VIII for IPPs in Srikakulam area, Andhra Pradesh may be taken up for implementation; however commissioning of the elements shall be phased out keeping in view the progress of generating units. However, we are of the view that the project may be initiated only after signing the BPTA and submission of Bank Guarantee by the IPPs.

I. HCPTC-IX : Corridor for transfer of power to NR/WR

26. With regard to the physical progress of HCPTC-IX, the Petitioner has submitted as under:

> *"This corridor has been proposed to facilitate transfer of power from various IPP's located in the coal belt of Chhattisgarh, Orissa and imported coal based generation projects in coastal Tamil Nadu & Andhra Pradesh. The HCPTC-IX primarily envisages establishment of 765 kV S/c corridor from Jabalpur pooling station upto Sonipat via Orai and Bulandhshar in addition to minor strengthening.*
>
> *This HCPTC is for transferring power to NR and WR. The petitioner has assessed that, based on physical progress, out of 17198 MW LTA from these IPPs, allocation to NR is 5015 MW. Hence there is a requirement of transmission capacity of 5000 MW from WR to NR. Transmission Capacity of 5100 MW is planned in other HCPTC Schemes between WR and NR through Gwalior-Jaipur 765 kV S/C (in HCPTC-I) and Champa-Kurukshetra +/- 800 kV HVDC bipole (in HCPTC-V). It is seen that the transfer capacity barely meets the transmission requirement and the system would face constraints in evacuation of power. The 765 kV corridor would enhance the power transmission capacity by 2100 MW.*

27. We agree with the Petitioner that the transmission capacity planned being just enough to carry power to NR, without any redundancy, whatsoever, the additional 765 kV corridor would be needed to enhance the capacity by 2100 MW. We are satisfied,

that HCPTC-IX may be taken up for implementation, however, commissioning of the elements shall be phased out keeping in view the progress of generating units.

28. From the foregoing discussion, we are satisfied that there is a pressing need for developing the nine HCPTC in order to harness the generation projects and bring the power to the load centres. Next we consider the prayer of the Petitioner for regulatory approval to these transmission corridors. The Petitioner has approached the Commission under Regulations 24, 111 and 113 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 (hereinafter "Conduct of Business Regulations"). The regulations are extracted hereunder:

> "24. The Commission may initiate any Proceedings suo motu or on a Petition filed by any affected or interested person.
>
> 111. Nothing in these Regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for ends of justice or to prevent the abuse of the process of the Commission.
>
> 113. Nothing in these Regulations shall, expressly or impliedly, bar the Commission to deal with any matter or exercise any power under the Act for which no Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit."

29. M/s Athena Chhattisgarh Power Pvt. Ltd, Respondent No.22 has raised preliminary objections as regards the maintainability of the petition under the Conduct of Business Regulations. It has been submitted that the power under Regulation 24 can be exercised by the Commission only when there is apparent circumstance or situation or condition which can cause serious prejudice to the ultimate consumer or for which no remedy has been provided under the Act or the regulations etc. As the instant case is covered under Central Electricity Regulatory Commission (Open Access in inter-State

Transmission) Regulations, 2004 and Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium Term Access in inter-State Transmission and related matters) Regulation,2009, there is no apparent circumstance or situation or condition which can cause serious prejudice to the ultimate consumer. Therefore, the petitioner cannot invoke Regulation 24 of the Conduct of Business Regulations. The petitioner has further stated that the petition is not maintainable under Regulation 111 of the Conduct of Business Regulation, 1999 in view of the law settled by the Hon'ble Commission in its order dated 28.4.2009 in Petition No. 54/2009 wherein the Commission have held that in the absence of any substantive petition pending before the Commission under the Act, an application under Section 111 would not be maintainable.

30. We have considered the objection raised by Respondent No. 22. In our view, the petition is maintainable under Regulations 24 and 113 of the Conduct of Business Regulations. Both these regulations read together mean that the Commission on its own or on a petition filed by an interested or aggrieved person can deal with any matter or exercise any power under the Act for which no regulation has been framed.

31. The Petitioner, being the Central Transmission Utility, is vested with the function under clause (c) of sub-section (2) of Section 38 of the Act "to ensure development of an efficient, co-ordinated and economical system of inter-State transmission lines for smooth flow of electricity from generating stations to the load centres". .In order to facilitate development of the transmission system for evacuation of power from the upcoming generating stations in the coal belt of Orissa, Jharkhand, Chattisgarh, hydro projects in Sikkim and coastal projects in Andhra Pradesh and Tamil Nadu, the

Petitioner has approached the Commission for regulatory approval for 9 nos of High Capacity Power Transmission Corridors (HCPTC) which is consistent with its functions under Section 38(2)(c) of the Act.

32. The Commission has the power under Section 79(1)(c) of the Act to regulate inter-State transmission of electricity. The word 'regulate' has not been defined in the Act. The dictionary meaning of the word 'regulate' is to adjust, to govern or manage according to certain standard of law, rules, restrictions or governing principles. The Hon'ble Supreme Court in the matter of Jiyajeerao Cotton Mills Ltd. V. M.P. Electricity Board {(1989) 2 SUPP SCC 52} has observed that it has been found difficult to give the word 'regulate' a precise definition. The word has different shades of meaning and must take its colour from the context it is used having regard to the purpose and objects of the relevant provisions, and the court while interpreting the expression must necessarily keep in view the object to be achieved and the mischief sought to be remedied. Further, Hon'ble Supreme Court in K Ramanathan Vs State of Tamil Nadu {(1985)2SCC116} has explained the scope of the 'power to regulate' as under:

> "19. It has often been said that the power to regulate does not necessarily include the power to prohibit, and ordinarily the word 'regulate' is not synonymous with the word 'prohibit'. This is true in a general sense and in the sense that mere regulation is not the same as absolute prohibition. At the same time, the power to regulate carries with it full power over the things subject to regulation and in absence of restrictive words, the power must be regarded as plenary over the entire subject. It implies the power to rule, direct and control, and involves the adoption of a rule or guiding principle to be followed, or the making of a rule with respect to the subject to be regulated."

33. Considered against the backdrop of the judicial authority as discussed above, the Commission, which has been entrusted with the functions to regulate inter-State transmission of electricity, has got the plenary power over inter-State transmission including the power to accord approval for regulated development of the inter-State

transmission system. Regulation 113 of the Conduct of Business Regulations empowers the Commission to deal with any matter or exercise any power under the Act for which no regulation has been framed in any manner that the Commission thinks fit. The Commission is yet to finalise and notify the regulations dealing with the procedure for regulatory approval. However, pending notification of regulations, the Commission has the power to accord regulatory approval if it is in accordance with the provisions of the Act and National Electricity Policy and Tariff Policy. Thus, the present petition is maintainable under Regulation 24 and 113 of the Conduct of Business Regulations and the Commission has the power under Section 79(1)(c) of the Act to accord regulatory approval for execution and implementation of the inter-State transmission system.

34. Para 5.3 of the National Electricity Policy notified under Section 3 of the Act vide Ministry of Power, Government of India Resolution No. No. 23/40/2004-R&R (Vol.II) dated 12.2.2005 recognises that the transmission system requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country by augmenting adequate transmission capacity, keeping in view the massive increase planned in generation and for development of power market. While planning new generation capacities, requirement of associated transmission capacity would need to be worked out simultaneously in order to avoid mismatch between generation capacity and transmission facilities. The policy enjoins upon the CTU the responsibility for planning and development of the national and regional transmission system. 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 pre-condition 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."

Para 7.1.4 of the Tariff Policy notified vide Govt. of India Ministry of Power 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."

35. From the above discussion, 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.

36. The development of the proposed transmission corridors is considered necessary for evacuation of power from the projects envisaged during the 11th Plan. The shortage in the country for the year 2009-10, as per the CEA's report on the power supply position is 10.1.% in energy terms and 12.7% in peak demand terms. It is necessary to bring in huge generation capacity in order to mitigate the shortages. The

Govt of India's policy is also to eliminate shortages by the end of the 11th Plan. The Commission, based on the report furnished by CTU on physical progress of Generating Units of IPPs, is satisfied that these High Capacity Transmission corridors are required for evacuation of the power from these IPPs and any delay in implementation of these transmission schemes may result in bottling up of the power.

37. In order to ensure that no capacity either in generation or in transmission remains idle, there is an imperative necessity for both to come up simultaneously. However, transmission system elements can come up only as lumped elements and cannot be exactly matched with the generating unit capacity, MW to MW. Therefore, there are bound to be periods of some under utilization of the transmission systems, which can be mitigated 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. 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.

38. 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) or in the hydro rich areas of the North-East. Power from these projects has to be brought to the

load centres 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.

39. We have have examined all these aspects in general and have also gone into the corridor-wise requirement of the proposed transmission network. 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, consultations with CEA at forums including LTOA Meetings, Standing Committee Meetings of CEA for Power System Planning and in the respective Regional Power Committee meetings. We are of the view that these transmission systems need to be implemented matching with the commissioning schedules of the IPPs.

40. As already stated, Central Transmission Utility is required to discharge all functions of planning and coordination relating to inter-state transmission system as provided for in section 38 (2) (b) of the Act. Transmission planning involves system studies to be conducted by CTU taking into account the scenarios for the nine transmission corridors under consideration. Therefore, it is presumed that CTU would have conducted these studies to ensure coordinated planning. At this stage we wish to make it clear that the Commission has not gone into the depth of optimum system planning since that is the function of CEA U/s 73 of the Electricity Act 2003 and since consultations on the planning have taken place in the standing committee of CEA on transmission planning., it is assumed that CEA has taken care of this aspect. The

Commission has only checked the feasibility of the proposed nine corridors based on likelihood of IPPs coming up, based on physical progress and whether the payment security mechanism is in place. CTU has claimed that the estimated cost for development of the HPCTC is based on the latest 3rd quarter 2009 price level. The cost aspect has not been examined by the Commission in detail. The same shall be vetted at the time of approving tariff after prudence check in accordance with the prevalent regulations on terms and conditions of tariff.

41. 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. Hence, we accord regulatory approval for execution of the nine nos. of HCPTCs proposed by CTU as per the project scope as mentioned in Annexures -I to IX of this order. As for HCPTC-VIII for IPPs in Srikakulam area, we direct that the work on the corridor may be initiated only after signing the BPTA and submission of BG by the IPPs.

42. The petitioner is directed to ensure that the proposed transmission projects for which regulatory approval has been granted are executed within the time frames matching with the commissioning schedules of the IPPs so that the beneficiaries are not burdened with higher IDC. The Petitioner has also prayed for ensuring recovery of its capital investment by way of evolving alternate methodology. We would like to clarify for the benefit of all concerned that the transmission charges and its sharing by the constituents will be determined by the Commission in accordance with the

applicable regulations on terms and conditions of tariff as specified by the Commission from time to time.

43. It is evident from submission of the Petitioner that in certain cases, the project developers of IPPs have given consent to bear the transmission charges till the time beneficiaries are firmed up. It shall be the responsibility of the Central Transmission Utility to to ensure completion of these projects at optimum cost using best contractual practices including International Competitive bidding.

44. We further 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.

45. Petition No.233/2009 is disposed of in terms of our directions above.

Sd/-	**Sd/-**	**Sd/-**
[V. S. VERMA]	**[S. JAYARAMAN]**	**[Dr. PRAMOD DEO]**
MEMBER	**MEMBER**	**CHAIRPESON**

Annexure-I

HCPTC – I (Transmission System Associated with Phase-I Generation Projects in Orissa)

I. Transmission System for Phase-I Generation Projects in Orissa - Part-A

- Angul Pooling Station – Jharsuguda Pooling Station 765 kV 2xS/c line
- LILO of Rourkela – Raigarh 400 kV D/c at Jharsuguda Pooling station
- LILO of Meramundali – Jeypore 400 kV S/c line at Angul pooling station
- LILO of one ckt of Talcher – Meramundali 400 kV D/c at Angul pooling station
- Establishment of 765/400 kV Pooling Station at Jharsuguda
- Establishment of 765/400 kV Pooling Station at Angul

II. Transmission System for Phase-I Generation Projects in Orissa - Part-B

- Jharsuguda Pooling Station – Dharamjaygarh / near Korba (WR) 765 kV D/c line
- LILO of Ranchi – WR Pooling (near Sipat) 765 kV S/c line at Dharamjaygarh / near Korba
- Dharamjaygarh / near Korba – Jabalpur Pool 765 kV D/c line
- Jabalpur Pooling Station – Jabalpur 400 kV D/c (high capacity) line
- Establishment of 765 kV sub-station at suitable location near Dharamjaygarh / Korba
- Establishment of 765/400 kV Pooling Station at Jabalpur

III. Transmission System for Phase-I Generation Projects in Orissa - Part-C

- Jabalpur Pooling Station – Bina 765 kV D/c line
- Bina – Gwalior 765 kV S/c (3^{rd} circuit) line
- Gwalior – Jaipur 765 kV S/c line
- Jaipur – Bhiwani 765 kV S/c line

Under Private Sector – Part-D

- Establishment of 2x1500MVA, 765/400kV Bhopal Pooling Station
- Jabalpur Pool – Bhopal – Indore 765kV S/c
- Bhopal New substation – Bhopal (M.P.) 400kV D/c (high capacity)

Annexure-II

HCPTC – II (Transmission System Associated withIPP projects in Jharkhand)

Transmission System for Phase-I Generation Projects in Jharkhand & West Bengal : Part-A

- Ranchi – Gaya 400 kV (Quad) line via pooling station proposed near Essar / Corporate generation projects
- Ranchi New (765/400kV S/s) - Dharamjayagarh 765kV S/c
- Establishment of 400kV Pooling Station (Jharkhand Pool) near Essar and Corporate generation projects(depending upon progress of Essar and Corporate IPPs) . This will be a switching station without ICTs.

Transmission System for Phase-I Generation Projects in Jharkhand & West Bengal : Part-B

- New 2x1500 MVA, 765/400 kV substation at Varanasi and Kanpur
- Gaya – Varanasi 765 kV S/c
- LILO of one circuit of Tillaiya/Gaya - Balia 765 kV line at Varanasi
- Varanasi – Kanpur 765 kV D/c
- Kanpur – Jhatikra 765 kV S/c
- 400kV connectivity for new 765/400kV S/s at Varanasi & Kanpur
  - Varanasi - Sarnath (UPPCL) 400kV D/c (quad)
  - LILO of Sasaram - Allahabad 400kV line at Varanasi
  - Kanpur (765/400kV) - Kanpur (Existing) 400kV D/c (quad)

Common Strengthening Transmission System for Transfer of power from generation projects in Jharkhand to NR/WR under the Scope of Private Sector

- **In Western Region**

- Dharamjaygarh – Jabalpur 765kV D/c (2nd line)

  Note : Associated 765kV line bays at Dharamjaygarh and Jabalpur sub-station would be under the scope of POWERGRID

Annexure-III

HCPTC – III (Transmission System Associated with IPP projects in Sikkim

Part-A : Transmission System for development of pooling station at Kishanganj in Northern part of West Bengal/Bihar

- LILO of Siliguri (Existing) – Purnea 400kV D/c line(quad) at new pooling station Kishanganj
- LILO of Siliguri (Existing) – Purnea 400kV D/c line(on which reconductoring is being carried out) at Kishanganj with the higher capacity(HTLS) conductor
- LILO of Siliguri – Dalkhola 220kV D/c line at new pooling station in northern part of West Bengal / Bihar
- LILO of Gangtok-Melli 132kV S/c line upto Rangpo pooling point, where Chuzachen-Rangpo 132kV D/c would be connected so as to form Chuzachen-Gangtok and Chuzachen-Melli 132kV S/c lines.
- New 2x315 MVA, 400kV sub-station at Kishanganj along with associated bays.

Part-B : Transmission System for development of pooling substations within Sikkim and transfer of power to a new pooling station Kishanganj in northern Part of West Bengal/Bihar

- LILO of Teesta III – Kishanganj 400kV D/c line(quad) at New Melli
- Rangpo – New Melli 220kV D/c line (with twin Moose conductor)
- LILO of Gangtok-Rangit 132kV S/c line at Rangpo and termination of Gangtok-Rangpo/Chujachen and Melli – Rangpo/Chujachen 132kV lines (constructed under part-A through LILO of Gangtok-Melli 132kV S/c line upto Rangpo) at Rangpo sub-station
- LILO of Teesta V – Siliguri 400kV D/c line at New Melli
- Kishanganj – Patna 400kV D/c (quad) line
- Establishment of 220/132kV, 3x100MVA Gas Insulated Substation at Rangpo
- Establishment of 10x167MVA, 1 phase, 400/220kV Gas Insulated substation at New Melli

Annexure-IV

HCPTC – IV (Transmission System Associated with IPP projects in Bilaspur complex, Chattisgarh & IPPsin Madhya Pradesh)

1) Indore- Vadodra 765kV S/c
2) Vadodra – Pirana 400kV D/c (Quad)
3) Establishment of 765/400kV, 2x1500 MVA substation at Vadodra

Annexure-V

HCPTC – V (Transmission System Associated with IPP projects in Chattisgarh)

(1) Common transmission system strengthening to be implemented by POWERGRID

- Raigarh Pooling Station (Near Kotra) – Raipur Pooling Station 765kV D/c
- Champa Pooling Station – Dharamjaygarh Pooling Station 765kV S/c
- Champa Pooling Station – Raipur Pooling Station 765kV D/c
- Raigarh Pooling Station(Near Kotra) – Champa Pooling Station 765kV S/c
- Raigarh Pooling Station (Near Tamnar) – Raigarh Pooling Station(near Kotra) 765kV D/c
- Raigarh Pooling Station(Near Kotra) – Raigarh(PG) 400kV D/c(to be opened at later date)
- Raipur Pooling Station – Raipur (PG)400kV D/c (to be opened at later date)
- Raipur Pooling Station – Wardha 765kV 2xD/c
- Wardha – Aurangabad (PG) 765kV 2xD/c
- Aurangabad(PG) – Padghe(PG) 765kV D/c
- Aurangabad(PG) – Khargar(MSTECL) 400kV D/c(Quad)
- Padghe(PG)- Padghe(MSTECL) 400kV D/c(Quad)
- ±600kV, 4000MW HVDC bipole between Raigarh Pooling Station(Near Kotra) – Dhule(PG)
- Vadodara – Asoj(GETCO) 400kV D/c(Quad)
- ±800kV, 3000MW HVDC bipole between Champa Pooling Station Kurukshehtra(NR) with provision to upgrade to 6000MW at a later date
- Dhule(PG) – Dhule(New) 400kV D/c(Quad)
- Dhule(PG) – Malegaon (MSETCL) 400kV D/c(Quad)
- Dhule(PG) – Nasik(MSETCL) 400kV D/c(Quad)
- Establishment of 400/220kV, 2x315MVA substation at Dhule(PG)
- Establishment of 765/400kV 4x1500MVA Raigarh Pooling Station(near Kotra)
- Establishment of 765/400kV Raigarh Pooling Station(near Tamnar)
- Establishment of 765/400kV 3x1500MVA Champa Pooling Station
- Establishment of 765/400kV 1x1500MVA Raipur Pooling Station
- Establishment of 4000MW 600KV HVDC bipole terminal each at Raigarh Pooling station(near Kotra) and Dhule(PG) respectively.
- Establishment of 3000MW 800KV HVDC bipole terminal each at Champa Pooling station and Kurukshetra(NR) respectively (provision to upgrade the terminals at 6000MW at a later date).
- Establishment of 765/400kV 2x1500MVA Padghe(PG) GIS S/s
- Establishment of 765/400kV 2x1500MVA Aurangabad(PG) S/s
- Strengthening in Northern region
  - Kurukshetra(NR) - Jallandhar 400kV D/c(Quad) one ckt. via 400/220kV Nakodar S/s
  - LILO of Abdullapur – Sonepat 400kV D/c(triple) at Kurukshetra
  - Establishment of 400/220kV 2x500 MVA S/s at Kurukshetra

(2) Common transmission system strengthening under tariff based competitive bidding

- Aurangabad(PG) – Dhule (New) 765kV S/c
- Dhule (New) – Vadodara 765kV S/c
- Dhule (New) – Dhule (MSETCL) 400kV D/c Quad
- Establishment of 765/400kV, 2x1500MVA Dhule(New) S/s

Annexure-VI

HCPTC – VI (Transmission System Associated with IPP projects in Krishnapatnam Area, Andhra Pradesh)

a. Establishment of 765/400 kV, 2x1500 MVA pooling station at Nellore by LILO of Simhapuri-Nellore 400 kV D/c quad line
b. Nellore Pooling station – Kurnool 765 kV 2x S/c
c. Kurnool – Raichur 2nd 765 kV S/c line
d. Associated 765 kV & 400 kV bays at Nellore Pooling station, Kurnool and Raichur stations.

Annexure-VII

HCPTC – VII (Transmission System Associated with IPP projects in Tuticorin Area, Tamil Nadu)

e. Establishment of 765 kV pooling station in Tuticorin and Salem (initially charged at 400 kV)
f. LILO of both circuits of Tuticorin JV – Madurai 400 kV D/c (quad) line at Tuticorin Pooling Station
g. Tuticorin Pooling station – Salem Pooling station 765 kV D/c line initially charged at 400 kV.
h. Interconnection of Salem pooling station with existing Salem 400/230 kV substation through 400 kV D/c (quad) line.
i. Salem pooling station – Madhugiri pooling station 765 kV S/c initially charged at 400 kV.

Annexure-VIII

HCPTC – VIII (Transmission System Associated with IPP projects in Srikakulam Area, Andhra Pradesh

a. Establishment of 2x1500 MVA, 765/400 kV Pooling station at Srikakulam
b. Provision of 1x1500 MVA, 765/400 kV substation at Angul.
c. Srikakulam Pooling Station – Angul 765 kV D/c (initially charged at 400 kV)
d. Angul – Jharsuguda – Dharamjaigarh 765 kV D/c
e. Associated 400kV bays at Srikakulam & Angul substations
f. Associated 765 kV bays at Angul, Jharsuguda & Dharamjaigarh substations.

Annexure-IX

HCPTC – IX (Transmission System Associated with IPP projects in Southern Region for transfer of power to other regions)

a. Sholapur – Pune 765 kV 2nd S/c (1st circuit already covered under transmission associated with Krishnapatnam UMPP).
b. Establishment of 2x1000MVA 765/400 kV station at Orai by LILO of one circuit of Satna – Gwalior 765 kV line.
c. Establishment of 2x1500MVA 765/400 kV station at Bulandshahar by LILO of Agra – Meerut 765 kV line.
d. Establishment of 2x1500MVA 765/400 kV station at Sonipat by LILO of Bhiwani – Meerut 765 kV line.
e. Jabalpur Pooling station – Orai 765 kV S/c line.
f. Orai – Bulandshahar – Sonipat 765 kV S/c line.
g. Orai-Orai (UPPCL) 400kV D/c Quad – 20 km
h. Sonipat-Kurushetra 400kV D/c (Quad)- 120 km
i. Sonipat (New) - Sonipat (Under Construction) 400kV D/c (Quad)– 20 km
j. Bulandshahr - Hapur (UPPCL) 400kV D/c (Quad) - 40 km

PHASE - I GENERATION PROJECTS IN ORISSA

Exhibit - I

Sl. No.	Organisation	Capacity (MW)	LTOA (MW)	Sch.	Land	Fuel	MoE	Forest	EPC	BPTA	BG
1	Sterlite Energy	2400	400	Jun'10							
2	GMR Kamalanga Energy Ltd.	1050	800	Nov'11							
3	Navabharat Power Pvt. Ltd.	1050	720	Mar'12			For project	No forest			
4	Monnet Ispat & Energy Limited	1050	900	Jun'12	**667/937**						
5	Jindal India Thermal Power Ltd.	1200	1044	May'12							
6	Lanco Babandh Power Pvt. Ltd.	2640	1600	Dec'13							
7	Ind-Bharat Energy (Utkal) Limited	700	616	Dec'11	**668/1400**						

Legend

Available	
Not Available	

IPP PROJECTS IN JHARKHAND & WEST BENGAL **Exhibit - II**

Sl. No.	Organization	Capacity (MW)	LTOA (MW)	Schedule	Land	Fuel	MoE	Forest	EPC	BPTA	BG
1	Adhunik Power & Natural Resources Ltd.	1080*	850*	Jan'12	220/1507						
2	Corporate Power Ltd.	540	480	Sep'13	66/505						
3	Essar Power (Jharkhand) Ltd.	1200	1100	Mar'13	550/1000						
4	West Bengal State Electricity Distribution Company Ltd.	Surplus of state	1000	Progressively by 2014-15	Surplus power from various existing, on-going and future generation projects. Details of the projects					-	

*- Subsequently, the developer has reduced the installed capacity to 540 MW and LTOA quantum to 450 MW.

Available	
Not Available	

IIP PROJECT IN SIKKIM **Exhibit - III**

Sl. No.	Organisation	Capacity (MW)	LTOA (MW)	Schedule	Land	Fuel	MoE	Forest	EPC	BPTA	BG
1	PTC India Limited (Teesta-III)	1200	1200	Aug'11							
2	Lanco Energy Pvt. Ltd	500	500	Nov'12							
3	Dans Energy Pvt. Ltd	96	96	Apr'12							
4	JAL Power Corp. Ltd.	120	120	Jun'13							
5	Madhya Bharat Power Corporation Ltd.	96	96	Sep'14							
6	Gati Infrastructure Limited	99	99	Sep'10							
7	Gati Infrastructure Bhasmey Power Pvt. Ltd.	51	51	Jun'12							

Legend

Available	

Not Availabl e	

IPP PROJECTS IN BILASPUR (CHHATTISGARH) & MADHYA PRADESH Exhibit IV

Sl. No.	Organisation	Capacity (MW)	LTOA (MW)	Schedule	Land	Fuel	MoE	Forest	EPC	BPTA	BG
1	Jaiprakash Power Ventures Ltd. (2x660)	1320	1241	May'13, Nov'13							
2	Bina Power Supply Company Ltd (2x250)	500	265	Sep'11, Dec'11							
3	Maruti Clean Coal & Power Ltd. (1x300)	300	171	Dec'12							
4	Dheeru Powergen Pvt. Ltd. (3x350)	1050	450	Sep'13 Dec'13 Mar'14	50% Acqu.						
5	Aryan MP Power generation Pvt. Ltd (2x600)	1200	1122	Mar'14, Sep'14	Not Acqu.						
6	Chhattisgarh State Power Trading Co. Ltd.		432		Allocation from above IPPS						NA

Legend

Available	
Not Available	

IPP PROJECTS IN CHHATTISGARH

Exhibit - V

Sl. No.	Organisation	Capacity (MW)	LTOA (MW)	Schedule	Land	Fuel	MoE	Forest	EPC	BPTA	BG
1	R.K.M. Powergen Pvt. Ltd.	1440	819	Jun'11							
2	Athena Chhattisgarh Power Pvt Ltd	1200	683	Jun'13	15% Poss.						
3	Jindal Power Ltd	2400	1400	Mar'12	50% Acqr.						
4	Jindal Power Ltd	400	400	Jul'10							
5	SKS Power Generation (Chhattisgarh) Ltd	1200	683	Dec'12	65% Acqr.						
6	Korba West Power Co Ltd	600	240	Nov'12	65% Acqr.						
7	DB Power Limited	1200	705	Oct'13	34% Acqr.						
8	KSK Mahanadi Power Ltd (Wardha Power)	3600	2340	Feb'12							
9	Bharat Aluminum Company Ltd	1200	200	Oct'10							
10	Vandana Vidhyut Ltd	540	265	Jan'12							
11	Lanco Amarkantak Power Pvt Ltd.	1320	858	Jan'12							
12	Chhattisgarh Steel & Power Ltd	285	167	Jun'13							
13	Chhattisgarh State Power Transmission Co. Ltd.		4871		Allocation from above IPPS						NA

Legend

Available	
Not Available	

IPP PROJECTS IN KRISHNA PATANAM AREA (ANDHRA PRADESH) **Exhibit - VI**

Sl. No	Applicant	Capacity (MW)	LTOA (MW)	Gen. Sch.	Land	Fuel	MoEF	Forest	EPC	BPTA	BG
1	Simhapuri Energy Private Ltd.	540	491	Aug, 10							
2	Meenakshi Energy Private Ltd.	600	546	Sept, 10							
3	Thermal Powertech Corporation India Ltd.	1320 (2x660)	1228	Oct, 13						By May / Jun, 2010	
4	Krishnapatnam Power Corporation Ltd.	1320 (2x660)	925	Dec, 12						By May / Jun, 2010	By May / Jun, 2010
5	Kineta Power Private Ltd.	1980 (3x660)	1830	Sept, 13						By May / Jun, 2010	By May / Jun, 2010

Legend

Available	
Not Available	

IPP PROJECTS IN TUTICORIN AREA (TAMIL NADU) **Exhibit - VII**

Sl. No.	Organisation	Capacity (MW)	LTOA (MW)	Schedule	Land	Fuel	MoE	Forest	EPC	BPTA	BG
1	**Coastal Energen Pvt. Ltd.**	**1200**	**1100**	**Mar'12**							
2	**IND-Barath Power (Madras) Ltd.**	**1320**	**900**	**Mar'12**							

Legend

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Not Availab le	

IPP PROJECTS IN SRI KAKULM AREA (ANDHRA PRADESH) **EXHIBIT - VIII**

Sl. No	Applicant	Capacity (MW)	LTOA (MW)	Gen. Sch.	Land	Fuel	MoEF	Forest	EPC	BPTA	BG
1	East Coast Energy Private Limited	1320 (2x660)	1320	March, 2013						By May / Jun, 2010	By May / Jun, 2010
2	NCC Power Projects Limited	1320 (2x660)	1320	January, 2014						By May / Jun, 2010	By May / Jun, 2010

Legend

Available	
Not Available	