CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 197/2011

Coram: Shri S. Jayaraman, Member
Shri V. S. Verma, Member
Shri M. Deena Dayalan, Member

Date of Hearing: 10.1.2012 **DATE OF ORDER: 23.1.2012**

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 Inter-State Transmission system and related matters) Regulations, 2009 for grant of regulatory approval for execution of (a) Associated Transmission System of Krishnapatnam Part-B (for achieving synchronous interconnection of SR with NEW grid) and (b) Associated Transmission System of Krishnapatnam Part-C1 (for operationalisation of common system associated with ISGS projects in Krishnapatnam area of Andhra Pradesh).

And

In the matter of

Power Grid Corporation of India Limited, Gurgaon ……**Petitioner**

Vs

1. Karnataka Power Transmission Corporation Ltd, Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd, Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Generation and Distribution Corporation Ltd, Chennai
5. Electricity Department, Goa
6. Electricity Department, Pondicherry
7. Eastern Power Distribution Company of Andhra Pradesh Ltd, Vishakhapatnam
8. Southern Power Distribution Company of Andhra Pradesh Ltd, Tirupati
9. Central Power Distribution Company of Andhra Pradesh Ltd, Hyderabad
10. Northern Power Distribution Company of Andhra Pradesh Ltd, Warangal
11. Bangalore Electricity Supply Company Ltd, Bangalore
12. Gulbarga Electricity Supply Company Ltd, Karnataka
13. Hubli Electricity Supply Company Ltd, Karnataka

14. MESCOM Corporate Office, Mangalore
15. Chamundeswari Electricity Supply Corporation Ltd, Mysore
16. Madhya Pradesh Power Trading Company Ltd, Jabalpur
17. Maharashtra State Electricity Distribution Co. Ltd, Mumbai
18. Gujarat Urja Vikas Nigam Ltd, Vadodara
19. Electricity Department, Administration of Daman & Diu, Daman
20. Electricity Department, Silvassa
21. Chhattisgarh State Electricity Board, Raipur
22. Madhya Pradesh Audyogik Kendra, Indore
23. Coastal Andhra Power Ltd, Mumbai ….**Respondents**

The following parties were present:

1. Shri M.G. Ramachandran, Advocate for PGCIL
2. Smt. Swapna Seshadri, Advocate for PGCIL
3. Shri R.V.M.M. Rao, PGCIL
4. Shri Dilip Rozekar, PGCIL
5. Shri Pankaj Kumar, PGCIL
6. Shri Rakesh Prasad, PGCIL
7. Shri Anil Rawal, RPTC
8. Shri Rupin, RPTC
9. Shri V. Venugopal, SLDC, Delhi
10. Shri Raju, SLDC, Delhi

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking grant of regulatory approval for execution of Associated Transmission System of Krishnapatnam Part B (for achieving synchronous interconnection of SR with NEW grid) and Associated Transmission System of Krishnapatnam Part C1 (for operationalisation of common system associated with ISGS projects in Krishnapatnam area of Andhra Pradesh) 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

Inter-State Transmission system and related matters) Regulations, 2009. The petitioner has also made the following additional prayers:-

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

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

2. The petitioner has submitted that the transmission system planning is done on the basis of overall optimization of the transmission additions taking into consideration the requirement for a given time frame. In this exercise, often transmission system evolved for a given time frame serves more than one generation project as well as grid strengthening requirement. The evolved transmission requirements are clubbed as Associated Transmission System (ATS) with generation project and/or separate grid strengthening scheme. Therefore, the successful operation of any given scheme shall depend upon materialization of the other schemes in that time frame. In an event of any generation getting delayed, the ATS planned with that particular generation cannot be entirely deferred as some of the elements in the scheme are required for meeting the grid requirement.

3. The petitioner has submitted that it is implementing transmission system associated with Krishnapatnam Ultra Mega Power Project (KUMPP) generation project. In the Joint Monitoring Committee for KUMPP held on 2.6.2011, it was observed that

the generation developer has stopped work and the project may be delayed. The petitioner has submitted that the scheme has been evolved by CEA and CTU in the Standing Committee considering the generation of KUMPP, which includes immediate evacuation scheme for KUMPP and system strengthening schemes for synchronizing the Southern grid with the NEW grid.

4. The petitioner also submitted that KUMPP transmission system consists of three parts namely, Part A which is Krishnapatnam – Gooty transmission line, Part B Associated Transmission System of Krishnapatnam (for achieving synchronous interconnection of SR with NEW grid) and Part-C1 Associated Transmission System of Krishnapatnam (for operationalisation of common system associated with ISGS projects in Krishnapatnam area of Andhra Pradesh).

5. All India synchronous grid is envisaged to achieve overall optimal utilization of the resources in the country. At present, the NEW grid is interconnected with the Southern Regional grid through HVDC. The petitioner has submitted that keeping in view of large number of proposed generation addition particularly in coastal Andhra Pradesh like KUMPP as well as wind generation in Southern Region(SR), it has planned to implement synchronous interconnection between the NEW grid and SR grid by 2013-14 (within the time frame of KUMPP). It has sought regulatory approval of the following transmission schemes delinking them with the commissioning of KUMPP:-

(a) ATS of Krishnapatnam Part B (for achieving synchronous interconnection of SR with NEW grid) and

(b) ATS of Krishnapatnam Part C1 (for operationalisation of common system associated with ISGS projects in Krishnapatnam area of Andhra Pradesh).

6. The petitioner has submitted that for synchronous interconnection between the Southern Region and Western Region, the following elements are proposed to be implemented.

(a) 765 kV S/C Raichur (SR) – Sholapur (WR) line – I [being implemented under tariff based competitive bidding process]

(b) 765 kV S/C Raichur (SR) – Sholapur (WR) line – II

(c) 765 kV S/C Sholapur – Pune line with 240 MVAr switchable line reactors at each end

(d) Establishment of new 765/ 400 kV sub-stations at Raichur, Sholapur and Pune

(e) LILO of existing 400 kV D/C Quad Raichur – Gooty line at Raichur (new) sub-station

(f) LILO of 400 kV D/C Aurangabad – Pune line at Pune (GIS)

(g) LILO of 400 kV D/C Parli – Pune line at Pune (GIS)

7. The transmission element at (a) above has been awarded to JV of Patel Engineering Limited, Simplex Infrastructure Limited and BS Transcom Limited under tariff based competitive bidding with completion schedule of January, 2014. The transmission elements from (b) to (g) are to be implemented by the petitioner as part of KUMPP Transmission Scheme. The petitioner has submitted that it has already tendered and completed the survey works and acquired land for Raichur and Sholapur

sub-stations and land acquisition for Pune sub-station is in advanced stage. As Raichur, Sholapur and Pune 765/400 kV sub-stations and both the circuits at Raichur and Sholapur are required at the same time for synchronous operation of Southern Region and Western Region, the petitioner has undertaken all the activities to implement above assets to match with the assets at (a) above.

8. The petitioner has also submitted that the generation projects by the Independent Power Producers (IPPs) in Krishnapatnam area are progressing well. The petitioner is required to implement the "Common System Associated with IPPs of Krishnapatnam area in Andhra Pradesh" to match with the requirements of generation projects. Therefore, 765/400 kV sub-station at Kurnool along with its connectivity to grid viz. LILO of 400 kV Nagarjunsagar-Gooty line at Kurnool (New) sub-station and 400 kV D/C quad line from Kurnool (New) to Kurnool (APTRANSCO) has been delinked from KUMPP generation project and the same is taken up along with common system of IPP project in Krishnapatnam areas.

9. The petitioner has submitted that the synchronous inter-connection between Southern Region and NEW Grid is needed on urgent basis due to following reasons:-

(a) The existing inter-regional capacity between Western Region and Southern Region is inadequate to meet the Southern Region's maximum demand during the summer season. Due to congestion, there was large variation in price of electricity in Southern grid and NEW grid. In the 27th meeting of Empowered Committee on Transmission held on 6.9.2011, CEA observed that due to delay in

execution of IPPs in coastal Tamil Nadu and further delay in NLC and Kudankulam Atomic Power Project coupled with double digit growth in demand in Tamil Nadu and Karnataka necessitates increase in the inter-regional power transfer requirement.

(b) The renewable energy capacity in Southern Region is presently in the order of 9,800 MW and it is likely to grow in near future. The augmentation of inter-regional capacity would facilitate renewable energy sources access to the market.

10. The petitioner has submitted that due to likely delay in execution of the KUMPP generation project, the present scheme was discussed and approved in 17th meeting of SRPC held on 12.8.2011 subject to the approval by the Standing Committee. CEA vide its letter dated 1.8.2011 had given its in-principle approval for de-linking Part B and C1 from ATS of KUMPP subject to the approval by the Standing committee on Power System Planning in Southern Region. However, in view of the urgency of the transmission system, the petitioner was advised by CEA to start the project preparation activities to avoid any further delay in implementation. It has been submitted that in the 33rd Meeting of Standing committee of Power System Planning in Southern Region held on 20.10.2011it was agreed to delink Part B and Part C1from ATS of KUMPP.

11. The petitioner has also submitted the Project Inception Report (PIR) stating that the estimated cost of Part B of the system is ₹ 2300 crore and the estimated cost of Part C1 is ₹ 360 crore. As per PIR, the transmission tariff for Part B would be ₹ 414 crore

and for Part C1 is ₹ 64.8 crore and as per the information available from IEX the Southern Region constituents had to pay additional charges of ₹ 573 crore towards purchase of electricity during November, 2010 to May 2011 due to transmission congestion in the power exchange.

12. During the hearing on 15.11.2011, the Commission directed the petitioner to submit the backup plan for the Krishnapatnam UMPP. The petitioner, vide its letter dated 2.12.2011 has submitted the backup plan for KUMPP is as under:-

> *" …the elements covered in ATS of KUMPP Part B and Part C1 for which regulatory approval has been sought is same as original scheme of ATS of KUMPP Part B and C. Therefore, the same shall be available whenever the generation project materializes.*
> *The elements covered under ATS of KUMPP Part C2 shall be taken for implementation with the materialization of KUMPP generation.*
> *Regarding the elements under ATS of KUMPP Part-A which are getting re-aligned shall be restored to original ATS of KUMPP Part A in the following manner*
>
> - *It is proposed to construct KUMPP generation switchyard - Nellore Pooling Station 400 kV 2xD/C (quad) lines and one of the lines shall be joined with Nellore Pooling Station – Gooty 400 kV D/C (quad) line to make KUMPP – Gooty 400 kV D/C (quad) line and other line shall be terminated at Nellore Pooling Station in the vacated bay.*
> - *This way the original system envisaged under Part-A shall be restored."*

13. The petitioner has also submitted that in the Krishnapatnam area, three IPPs have been granted long term access (LTA) viz. Simhapuri Energy Pvt. Ltd. (SEPL) (installed capacity–600 MW, LTA granted–546 MW), Meenakshi Energy Pvt. Ltd. (MEPL) (installed capacity–1,000 MW, LTA granted–819 MW) and Thermal Powertech Corporation of India Ltd. (TPCIL) (installed capacity–1,320 MW, LTA granted–1,320 MW). Out of these three IPPs, SEPL and MEPL are nearing commissioning and have already started drawing startup power since November/December, 2011. TPCIL has

indicated that it would start drawing startup power by June, 2013. The petitioner has therefore submitted that IPPs in the Krishnapatnam area are progressing well matching with the requirement of these generation projects. It has also initiated implementation of “Common System Associated with ISGS projects of Krishnapatnam area in Andhra Pradesh" with commissioning schedule of September, 2014, as per BPTA signed with the IPP developers in Krishnapatnam area.

14. We are of the view that Part B of the system is required for the synchronous operation of the Southern Region with rest of the country. National Electricity Policy (NEP), notified by the Central Government on 12th February, 2005 under section 3 of the Electricity Act, 2003, stipulates that efficient and coordinated action is required to be taken to develop a robust and integrated power system for the country. Further, action is required to be taken as per the National Electricity Policy for the continued development of the National Grid to provide adequate infrastructure for inter-State transmission of power and to ensure that underutilized generation capacity is facilitated to generate electricity for its transmission from surplus regions to deficit regions.

15. We note that the Standing Committee on Transmission Planning has already de-linked Part B of the scheme from the ATS of the Krishnapatnam UMPP. Even after delinking from the ATS of KUMPP, Part B of the system is essential for integration of the Southern Grid with the NEW Grid. Keeping with the mandate for pan-India grid in the NEP, there is an imperative need for development of the Part B of the system.

16. The petitioner has submitted that Part C1 of the scheme is required for the evacuation of the generating projects like SEPL, MEPL and TPCIL, which are in an advanced stage of commissioning, and two of them, namely, SEPL and MEPL have already started drawing startup power through an interim arrangement. Moreover, the project developers have already signed the BPTAs and submitted the requisite Bank Guarantee.

17. Para 7.1.4 of the Tariff Policy notified by the Central Government vide Resolution 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 in the NEP, prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/ STU should undertake network expansion by after identifying the requirements in consonance with the National Electricity Plan and in consultation with stakeholders, and taking up execution after due regulatory approvals."*

18. Accordingly, CTU has been entrusted with the responsibility to plan the associated transmission system at the inter-State levels and inter-regional levels to match the generation capacity addition with the load projection as per the Electricity Power Survey (EPS) published by the Central Electricity Authority. In the absence of prior agreement with the beneficiaries, the CTU can plan and execute the transmission capacity addition after seeking due regulatory approval.

19. Regulation 3 of the Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of inter-State Transmission Scheme to the Central Transmission Utility) Regulations, 2010 on “Scope and applicability” 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."*

20. The transmission systems for which the petitioner has sought approval are covered under the above said regulation, as Part B of the scheme is for power flow across the regions through synchronization of Southern region with rest of the country. CTU has submitted that implementation of Part B would eliminate the congestion between New Grid and SR grid and between S1 and S2 bid areas (of the power exchange) in the SR grid enabling free flow of power from New Grid to SR grid and vice versa and within SR. This would result in tangible and intangible benefits both to the generators and the deficit States. As regards Part C1, PPAs have not been signed with the beneficiaries. The petitioner has submitted that SR constituents had to pay ₹ 573 crore on account of congestion in the power exchange for the period November, 2010 to May 2011,whereas the annual transmission charges would be approximately

₹ 478.8 crore for Part B and Part C1. Considering the benefits that would accrue to the constituents of the Southern Grid on account of the commissioning of Part B and Part C1 of the system, it would be prudent to go ahead with the development of the transmission system as proposed by CTU. Accordingly, we accord in-principle approval for implementation of both Part B and Part C1 of the scheme as mentioned in Para 5 of this order.

21. This order disposes of Petition No.197/2011.

Sd/-	Sd/-	Sd/-
(M. DEENA DAYALAN)	(V.S. VERMA)	(S. JAYARAMAN)
MEMBER	MEMBER	MEMBER