

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 36/MP/2016  
With IA. No 9/2016**

**Coram:  
Shri Gireesh B. Pradhan, Chairperson  
Shri A.K Singhal, Member  
Shri A.S Bakshi, Member  
Dr. M.K. Iyer, Member**

**Date of Hearing: 12.4.2016  
Date of Order : 19.8.2016**

**In the matter of**

Petition under Section 38(2) of the of the Electricity Act, 2003 read with Section 79 (1)(c) and Section 79(1)(k) of the Act, along with (i) Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010; (ii) Regulations 111 and 114 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and (iii) Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 for Grant of Regulatory Approval for execution of the Transmission System for Ultra Mega Solar Power Park at Tumkur (Pavagada) Karnataka.

**And  
In the matter of**

Power Grid Corporation of India Limited  
"Saudamini", Plot No.2,  
Sector-29, Gurgaon (Haryana)- 122001.

**....Petitioner**

Vs

1. Karnataka Solar Power Development Corporation Ltd.  
39, Shanthi Gruha,  
Bharath Scouts and Guides Building,  
Opp. The Chief Post Master General Office,  
Palace Road, Bangaluru-560 001

2. Tamil Nadu Generation and Distribution Corporation Ltd.  
NPKRR Maaligai, 800, Anna Salai  
Chennai-600 002

3. Karnataka Power Transmission Corporation Ltd.  
Kaveri Bhawan, Bangalore-560 009.
  
4. Transmission Corporation of Andhra Pradesh Ltd.  
Vidyut Soudha,  
Hyderabad-500 082
  
5. Kerala State Electricity Board  
Vidyuthi Bhavanam,  
Pottom, Thiruvananthapuram-695 004
  
6. Electricity Department  
Government of Goa,  
Vidyut Bhawan, Panji,  
Near Mandvi Hotel, Goa- 403001
  
7. Electricity Department  
Govt. of Pondicherry,  
Pondicherry-605001
  
8. Eastern Power Distribution Company of Andhra Pradesh Limited  
APEPDCL, P&T Colony,  
Seethmmadhara, Vishakhapatnam,  
Andhra Pradesh
  
9. Southern Power Distribution Company of Andhra Pradesh Limited  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirpuati-517 501, Chittoor District, Andhra Pradesh
  
10. Central Power Distribution Company of Andhra Pradesh Limited  
Mint Compound, Hyderabad-560 063
  
11. Northern Power Distribution Company of Andhra Pradesh Limited  
Opp NIT Petrol Pump,  
Chaitanyapuri, Kazipet, Warangal-506 004, Andhra Pradesh
  
12. Transmission Corporation of Telangana Limited  
Vidhyut Sudha, Khairatabad,  
Hyderabad-500 082
  
13. Bangalore Electricity Supply Company Limited  
K.R.Circle, Bangalore-560 001, Karnataka
  
14. Gulbarga Electricity Supply Company Ltd.

Station Main Road, Gulbarga, Karnataka

15. Hubli Electricity Supply Company Ltd  
Navanagar, PB Road,  
Hubli, Karnataka

16. Mangalore Electricity Supply Company Ltd.  
MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle, Mangalore-575 001

17. Chamundeshwari Electricity Supply Corporation Ltd.  
927, L.J.Avenue, Ground Floor,  
New Kantharaj Urs Road,  
Saraswatipuram, Mysore-570 009

...Respondents

**Following were present:**

Shri Amit Bhargana, PGCIL  
Shri Aryman Saxena, PGCIL  
Shri Sandeep Kumawat, PGCIL  
Shri Jigesh, PGCIL  
Shri S.Vallinayagam, Advocate, TANGEDCO

**ORDER**

This petition has been filed by the petitioner, Power Grid Corporation of India Limited (PGCIL) for seeking regulatory approval for execution of transmission system associated with Solar Power Parks at Tumkur, Karnataka.

2. Gist of the submissions of the petitioner is as under:

(a) Government of India, Ministry of New and Renewable Energy (MNRE) vide its letters dated 14.7.2015 notified Karnataka Solar Power Development Corporation Pvt. Ltd. (KSPDCL) as the Solar Power Park Developers (SPPD) for 2000 MW solar power park respectively at Pagavada Taluk, Tumkur district in Karnataka.

(b) Karnataka Solar Power Development Corporation Private Limited (KSPDCL), a Joint Venture company of Karnataka Renewable Energy Development Limited (KREDL) and Solar Energy Corporation of India Limited (SECI) have made an application to CTU for grant of connectivity/LTA for 2000 MW Ultra Mega Solar Park (UMSPP) to be set up in Tumuk District of Karnataka as per the Central Electricity Regulatory Commission (Grant of Connectivity, Long Term Access and Medium term Open Access in inter-State transmission and related matters) Regulations, 2009.

(c) Solar Power Park Developer, KSPDCPL vide its letter dated 13.8.2015 has undertaken that it will bear all liabilities on behalf of the Solar Project Developers to be set up in the Solar Park in compliance with the Commission's notification dated 15.5.2015.

(d) The project to be developed in two phases (2x1000MW) is scheduled to be commissioned by April, 2017 and September, 2017. However, due to ROW issue, timeline for completion of Phase I and II of the transmission scheme is kept as September, 2017 and September 2018 respectively. The efforts shall be made to commission the transmission scheme with the commissioning of the project.

(e) PGCIL has identified the Transmission System for evacuation/transfer of power from Solar Power Parks in Tumkur (Pavagada), Karnataka, comprising of the following:

## **Phase-I**

- (i) LILO of 400 kV Gooty-Tumkur (Vasantnarsapur) D/C at Tumkur (Pavagada) Pooling station
- (ii) Tumkur (Pavagada) Pooling station - Hiriya 400 kV D/C
- (iii) LILO of 400kV Bellary Pool-Tumkur (Vasantnarsapur) D/C (Quad)(both circuits) [KPTCL line] at Tumkur (Pavagada) Pooling station
- (iv) Establishment of 3x500 MVA, 400/220 KV Pooling station at Tumkur (Pavagada) along with 1x125 MVar bus reactor
- (v) 8 Nos. 220 kV line bays at Tumkur (Pavagada) Pooling Station for Solar Interconnection

## **Phase-II**

- (i) Hiriya - Mysore 400 kV D/C line<sup>\$</sup>
- (ii) Tumkur (Pavagada) Pooling station - Devanahalli (KPTCL) 400kV D/C (Quad)\*
- (iii) Augmentation of 2x500 MVA, 400/220 KV transformer at Tumkur (Pavagada) Pooling station
- (iv) 1x125 MVAR bus reactor (2nd) at Tumkur (Pavagada) Pooling Station
- (v) Third 400/220kV, 1x500 MVA transformer at Tumkur (Vasantnarsapur) S/s
- (vi) 1x80 MVAR switchable Line reactor at Mysore end of Hiriya- Mysore D/C (each ckt)
- (vii) 8 nos. 220kV line Bays at 400/220kV Tumkur (Pavagada) Pooling station for Solar interconnection

<sup>\$</sup>With the completion of this line, it would be connected with Tumkur (Pavagada) Pooling station- Hiriya 400kV D/C line to form Tumkur (Pavagada)-Mysore D/C line

\*KPTCL would complete establishment of 400/220 kV substation at Devanahalli including inter-linking 400 kV and 220 kV lines before Phase-II at Ultra Mega Solar Power Park

- (f) The issue of implementation of the transmission scheme associated with the

Solar Power Park was discussed in the 39<sup>th</sup> meeting of the Standing Committee on Power System Planning of Northern Region held on 28/29.12.2015.

(g) On 26.11.2014, Ministry of Power, Govt. of India convened a meeting with the representatives of the Central Electricity Authority (CEA), PGCIL, MNRE, SECI and the Commission in which Ministry of Power clarified the scope of work to PGCIL. In the said meeting, Ministry of Power directed PGCIL to seek regulatory approval from the Commission to construct the transmission system associated with Solar Parks as ISTS.

3. The petitioner has placed on record the complete Project Inception Report in terms of Regulation 4(2) of the Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010 (Regulatory Approval Regulations). The petitioner has submitted that as per the provisions of the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 ("Sharing Regulations") as amended from time to time, solar based generation are exempted from transmission charges and losses for the use of ISTS network for the useful life of the projects commissioned during the period 1.7.2014 to 30.6.2017. The petitioner has further submitted that with regard to development of the Ultra Mega Solar Power Park at Tumuk, KSPDCL and TANGEDCO are obligated to coordinate with PGCIL for transmission of electricity generated by it under Section 10 (3) (b) of the Electricity Act, 2003 and other respondents are the beneficiaries of the generation and transmission projects.

4. Against the above background, the petitioner has made the following prayers:

“(a) Grant Regulatory approval for taking up implementation of identified transmission systems at Enclosure -1;

(b) Grant of approval for recovery of transmission charges of the assets through CERC (Sharing of Transmission charges and losses for ISTS) Regulations, 2010 or any other sharing mechanism notified by CERC from time to time;

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

(d) Pass such other relief as the Hon’ble Commission deems fit and appropriate under the circumstances of the case.”

5. The petitioner has filed IA No. 9/2016 to list the petition at the earliest and to pass appropriate order.

6. The petition was heard on 12.4.2016 after notice to the respondents. The petitioner was directed to submit copy of Connectivity and LTA applications filed by SPPDs, copy of LTA Agreement signed by CTU with SPPDs, legible copy of Schematic Diagram, and status of generation development in the Solar Park and list of generation developers.

7. The petitioner, vide its affidavit dated 4.5.2016, has submitted the following information:

(a) The details Connectivity and LTA applications submitted by SPPDs are as under:

SPPD	Connectivity			LTA			
	Quantum (2000 MW)	Application date	Date from which connectivity is required	Application date	Quantum (MW)	Period for which LTA is required	Beneficiary
KSPD CL	(Ph-I: 1000 MW)	13.8.15	Ph-I: 1.9.2017	13.8.15	1000	25 year	Karnataka/ SR

	Ph-II: 1000MW)		Ph-II: 1.9.2018		1000	25years	Karnataka/ SR
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DISCOMs of Karnataka- 600 MW from Phase-I and 500 MW form Phase-II. Third Party/Captive/IPPs/Any States in SR- 400 MW from Phase-I and 500 MW form Phase-II.

(b) With regard to LTA Agreement to be signed by CTU with SPPDs, the petitioner has submitted that the grant of LTA to KSPDCL has been intimated on 11.4.2016 and LTA agreements are under process of signing. Accordingly, the LTA agreements shall be placed on record as soon as they are executed.

(c) The petitioner has submitted the status of generation development in the Solar Park is as under

I. Status of the Land:

- (i) Total land required: Out of 11000 acres proposed to be acquired on lease basis for establishment of 2000 MW Solar Park at Pavagada.
- Land already in possession with SPPD: KSPDCL has already is in possession around 8500 acres of land on lease basis.
  - Land category (Govt./Pvt.): Out of 11000 acres of total land, 240 acres is government land and rest land vests with farmers (private parties).

II. Status of generation development by solar power generator:

S. No.	Solar generators tied up	Capacity allotted	Plot allotment to generator by SPPD	Current status of generation development
1.	600 MW under JNNSM Scheme by NTPC	600 MW	3000 Acres	<ul style="list-style-type: none"> <li>For 500 MW under open category tariff has been discovered through reverse auction by NTPC.</li> <li>For 100 MW under DCR Category tariff is yet to be discovered.</li> </ul>
2.	1000 MW under EPC Scheme by NTPC	1000 MW	5000 Acres	<ul style="list-style-type: none"> <li>750 MW under open category, bid submission and bid opening are due on 12.5.2016 and 13.5.2016 respectively.</li> </ul>



				<ul style="list-style-type: none"> <li>• 250 MW under DCR category, bid opening are due on 12.5.2016 and 13.5.2016 respectively.</li> </ul>
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8. Reply to the petition has been filed by the Tamil Nadu Generation and Distribution Corporation Limited and Karnataka Solar Power Development Corporation Limited. The petitioner has filed rejoinders to the replies.

9. Karnataka Solar Power Development Corporation Limited vide its reply dated 4.4.2016 has submitted that the KSPDCL vide its letter dated 11.1.2016 had raised its objection for construction of 16 Nos. of 220 kV line bays at 400/220 kV station by PGCIL and requested the petitioner to construct only 8 Nos. of 220 kV line bays at 400/220 kV station. KSPDCL has submitted that it does not concur for the following investment to be made by the petitioner for evacuation of power from 2000 MW Pavagada Solar Park. However, KSPDCL does not have any objection for taking up the following transmission schemes under any of the Southern Regional transmission strengthening schemes:

**a. Phase I:**

- i. Tumkur (Pavagada) Pooling station - Hiriya 400 kV D/C: Rs. 113.36 crore
- ii. Transformer bays and line bays (Phase I): Rs. 23.16 crore (apportioned cost)
- iii. Total disallowance on project cost: Rs. 136.52 crore
- iv. Total disallowance on IDC & Centages:Rs.24.57 crore

**b. Phase II:**

- i. Hiriya-Mysore 400 kV D/C line: Rs.197.6 crore
- ii. Tumkur (Pavagada) Pooling station- Devanahally (KPTCL) 400kV D/C (Quad):Rs.225 crore
- iii. Third 400/220kV, 1x500 MVA transformer at Tumkur (Vasantnarasapur) S/s: Rs.20.54 crore

c. 1X80 MVAR switchable Line reactor at Mysore end of Hiriyr- Mysore D/C (each ckt): Rs.21 crore

10. KSPDCL has requested to grant regulatory approval for taking up implementation of identified transmission system by PGCIL duly excluding the transmission works specified in para 18 and 19 of the reply and considering the project cost of Rs. 783.53 crore instead of Rs. 1545 crore. Subsequently, KSPDCL vide its letter dated 22.6.2016 has submitted that it has no objection/comments on the petition filed by PGCIL.

11. Tamil Nadu Generation and Distribution Corporation Limited in its reply dated 7.4.2016 has submitted as under:

(a) In the meeting of Standing Committee, no discussion was held on sharing of the transmission charges since, the transmission system developed by the petitioner is mere evacuation system for the State owned solar project in which DISCOMs of Karnataka are the only beneficiaries.

(b) The usage of the power evacuation system for Solar Projects would be restricted to the hours of solar insolation. During the rest of the time the transmission network would be redundant. Therefore, inclusion of this system into existing ISTS would only be an additional burden without any benefit to other respondents.

(c) The entire cost towards development of the project including transmission schemes should be borne by the targeted beneficiaries.

(d) Ministry of Power in its letter dated 12.12.2014 has spelt out that if the capital expenditure for the evacuation network is high, then a separate proposal may also be considered for funding from National Clean Energy Fund, Green Corridor programme or any other source. Moreover, TANGEDCO is no way responsible for sharing of the transmission charges since it is neither the beneficiary of the solar project nor is it using the transmission lines. The power generated and consumed within the State of Karnataka does not entitle levy of transmission charges on TANGEDCO.

(e) As per Regulation 3 (1) (iii) of the Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010, onus is on the SPPD to bear all the liabilities towards development of ISTS portion of the transmission system as well as internal transmission system. The prayer of the petitioner for recovery of the transmission system through sharing mechanism under PoC is contrary to the provisions of said regulations.

(f) Since the Ultra Solar Power Park is developed and owned by the State of Karnataka and the beneficiaries are Karnataka Discoms, the asset should not be included in the PoC charges through sharing mechanism.

(g) The petitioner's prayer for inclusion of the system under the common TSA is illegitimate and TANGEDCO is no way responsible and is not bound by the terms and conditions of the TSA.

12. The petitioner in its rejoinder to the reply of KSPDCL has submitted that based on the requirement of KSPDCL, the petitioner had planned to construct total 16 nos.220 kV line bays at 400/220 kV Tumbku (Pavagada) Pooling Station for Solar Interconnection which was discussed and agreed in the 39<sup>th</sup> Standing Committee Meeting on Power System Planning of Southern Region held on 28/29.12.2015. Subsequently, KSPDCL vide its letter dated 11.1.2016 requested PGCIL to modify the scope for 8 nos 220 kV line bays for Solar Park in Tumkur which shall be discussed in the forthcoming Standing Committee on Power System Planning of Southern Region with the stakeholders.

13. The petitioner in its rejoinder dated 4.5.2016 to the reply TANGEDCO has submitted that the transmission system covered in the present petition has been planned pursuant to the application made by KSPDCL, the Solar Power Park Developer (SPPD), for grant of LTA. As per the LTA application, out of 2000 MW, 1600 MW power would be consumed by Karnataka DISCOMs and balance 400 MW would be consumed by the beneficiaries of the Southern Region. The petitioner has submitted that the transmission system was discussed and agreed in the 39<sup>th</sup> Meeting of the Standing Committee on Power System Planning of Southern Region held on 28/29.12.2015 wherein the representatives of all the stakeholders including TANGEDCO were present.

14. The petitioner has published a notice in the newspapers in accordance with the Regulatory Approval Regulations. In response to the public notice, no suggestions/objections have been received.

## **Analysis and Decision:**

15. We have considered the submissions of the petitioner and KSPDCL and TANGEDCO. Government of India has taken the initiative for development of Solar Power Parks in various parts of the country. Ministry of Power, Government of India vide letter dated 8.1.2015 conveyed the approval regarding implementation of work related to transmission system for evacuation of power from nine Solar Parks with a total capacity of 7020 MW capacity being set up in seven States, namely Gujarat, Andhra Pradesh, Karnataka, Uttar Pradesh, Meghalaya and Rajasthan. Subsequently, Ministry of Power, Government of India vide its letter No. 11/64/2014-PG dated 4.8.2015 conveyed the approval for implementation of work related to transmission system for evacuation of power from solar parks in the country. According to the said approval,

- (i) Transmission lines connecting solar parks to ISTS shall be declared as part of ISTS; and
- (ii) PGCIL is assigned to take up the construction of transmission line including pooling station from solar generation parks on compressed time schedule basis.

16. Regulation 3 of the Regulatory Approval Regulations provides for regulatory approval of the transmission for evacuation of power from the solar park. Regulation 3 of the Regulatory Approval Regulations as amended from time to time reads as under:

“.....3. Scope and applicability

(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.

(iii) ISTS Scheme proposed by CTU, for which the Central Government authorised Solar Power Park Developer has sought long term access, and for which consultation with CEA and beneficiaries wherever identified has been held for setting up the ISTS scheme and the Solar Power Park Developer undertakes to bear all liabilities on behalf of the solar power generators to be set up in the Solar Park.

(2) These regulations shall not apply to ISTS Scheme, for which all the beneficiaries/respective STUs have signed Bulk Power Transmission Agreement to share the transmission charges."

17. Regulation 2 (1) (b) (i) (f) of (Grant of Connectivity, Long-Term Access and Medium-Term Open Access to the Inter-State Transmission and Related Matters) Regulations, 2009 (Connectivity Regulations) provides that any company authorized by the Central Government as Solar Power Park Developer shall be eligible for applying for connectivity to the ISTS. Further, Regulation 2 (1) (iii) of the Connectivity Regulations provides that any company authorized by the Central Government as Solar Power Park Developer shall be eligible for applying for long term access. Fourth Proviso to clause (1) of Regulation 8 of the Connectivity Regulations provides as under:

"Provided also that the application by the applicant defined under Regulation 2(1) (b) (i) (f) shall be considered by CTU only if the Solar Power Park Developer is authorised by the Central Government to undertake infrastructural activities including arrangement for connectivity on behalf of the solar power generators."

18. In the present case, Karnataka Solar Power Development Corporation Pvt. Ltd. a Joint Venture company of Karnataka Renewable Energy Development Limited and Solar Energy Corporation of India Limited, has been designated as the Solar Power Park Developer (SPPD) for the solar park at Tumkur (Pavagada) District in the State of Karnataka with capacity of 2000 MW vide letter dated 14.7.2015 issued by Ministry of New and Renewable Energy (MNRE). MNRE has also stated in the said letter that KSPDCL shall undertake infrastructural activities including arrangement of connectivity on behalf of the solar power generator in the solar park.

19. The petitioner vide its affidavit dated 4.5.2016 has filed copies of the revised LTA application and revised connectivity application made by KSPDCL vide its letter dated 13.8.2015. KSPDCL has applied for connectivity for 2000 MW in two phases i.e Phase I for 1000 MW with effect from September 2017 and Phase 2 for 1000 MW with effect from September 2018 commensurate with the commissioning schedule of generating station of 1000 MW in Phase-I and 1000 MW in Phase-II. According to the petitioner, grant of LTA had been intimated to KSPDCL on 11.4.2016 and the LTA agreement is under process of signing.

20. According to TANGEDCO, since the usage of the power evacuation system for Solar Projects should be restricted to the hours of solar insolation, the transmission network during the rest of the time of the day would be redundant. TANGEDCO has submitted that inclusion of the proposed transmissions system into existing ISTS would only be an additional burden without any benefit to other respondents and therefore, entire cost towards development of the transmission project including transmission

schemes should be borne by the targeted beneficiaries, not by TANGEDCO. TANGEDCO has also submitted that as per the guidelines issued by the Ministry of Power, Government of India vide its letter dated 12.12.2014, if the capital expenditure for the evacuation network is high, then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Program or any other source.

21. The petitioner has submitted that the transmission system was discussed and agreed in the 39<sup>th</sup> Meeting of the Standing Committee on Power System Planning of Southern Region held on 28/29.12.2015 wherein the representatives of all the stakeholders including TANGEDCO were present. The petitioner has submitted that Ministry of Power vide its letters dated 8.1.2015 and 4.8.2015 has entrusted the implementation of work related to transmission system for evacuation of power from nine Solar Parks including the instant Solar Parks in Karnataka to PGCIL and also conveyed the approval regarding the transmission system connecting solar parks to ISTS be declared as part of ISTS. The petitioner has submitted that fund received from National Clean Energy Fund (NCEF), Green Corridor Program or any other source, credit of grant, if any, for implementation of these transmission scheme, would be suitably passed on to the beneficiaries.

22. We have considered the submissions of the petitioner and TANGEDCO. Perusal of the minutes of 39<sup>th</sup> Meeting of the Standing Committee on Power System Planning of Southern Region held on 28/29.2.2015 reveals that the proposed ISTS scheme for evacuation of power from the Ultra Mega Solar Power Park at Tumkur (Pavagada), Karnataka was discussed at length with all constituents of Southern Region in the said



meeting including Member (Distribution), TNEB. It is observed that some of the constituents of Southern Region had raised the issue of PoC mechanism. In para 25.12, it has been clearly mentioned that “based on the discussions, the following inter-State transmission system was agreed for Tumkur (Pavagada) ultra mega solar power park (2000 MW) to be implemented by PGCIL.” Since the transmission system is being implanted as part of ISTS, the sharing of the transmission charges for the transmission system covered in the present petition shall be governed by the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

23. KSPDCL vide its reply dated 4.4.2016 has raised the objections with regard to necessity of some of the transmission lines/sub-stations included in the proposal of PGCIL. KSPDCL has requested for grant of regulatory approval for taking up implementation of identified transmission system by PGCIL duly excluding the transmission works at para 18 and 19 of the reply. In response, PGCIL in its rejoinder dated 4.5.2016 has submitted as under:

“2.4. ..the petitioner has planned for implementation of instant inter-State Transmission Scheme based on the discussion and agreement in the 39<sup>th</sup> Meeting of the Standing Committee on Power System Planning of Southern Region held on 28-29<sup>th</sup> December, 2015 and 19<sup>th</sup> Meeting of SR Constituents regarding LTA and Connectivity Applications in SR held on 29<sup>th</sup> December 2015 by all the concerned stakeholders including Respondent No.1 present in LTA meeting.”

24. Subsequently, KSPDCL vide its letter dated 22.6.2016 has submitted as under:

“ KSPDCL as a Respondent No.1 has no objection/comments on the petition filed by POWERGRID . Hon`ble Commission may pass such orders deems fit and appropriate.”

25. It appears that the petitioner and KSPDCL have sorted out the differences with regard to the necessity of the transmission line for the Solar Park. Accordingly, we are of the view that the transmission assets included in the scope of work for which regulatory approval has been sought should be considered for regulatory approval.

26. Ministry of New and Renewable Energy vide its letter dated 14.7.2015 authorized KSPDCL, a joint venture company of KREDL and SECI to apply to CTU for grant of connectivity and Long Term Access in ISTS. Accordingly, KSPDCL, made an application to CTU for grant of Connectivity and Long Term Access. Relevant portion of the said letter dated 14.7.2015 is extracted as under:

“With reference to the notifications of Central Electricity Regulatory Commission (CERC) dated 15.5.2015 for including Solar Power Park Developer as an Applicant of Connectivity and Long Term Access in Inter-State Transmission System, the Ministry of New and Renewable Energy hereby declares Karnataka Solar Power Development Corporation Pvt. Ltd. (KSPDCL), a JVC of Karnataka Renewable Energy Development Limited (KREDL) and Solar Energy Corporation of India (SECI), as the Solar Power Park Developer (SPPD) for Solar park at Pavagada Taluk, Tumkur District, Karnataka with capacity 2000 MW. The SPPD shall undertake infrastructural activities including arrangement of connectivity on behalf of solar power generator in the stated Parks.”

27. The transmission scheme was discussed in the 39<sup>th</sup> Standing Committee on Power System Planning of Western Region meeting held on 28/29/12.2015. Minutes of the said meeting dated on 28/29/12.2015 is extracted as under:

“Based on the discussions, the following Inter-State Transmission was agreed for Tumkur (Pavagada) ultra mega solar power park (2000MW) to be implemented by PGCIL:

**Phase-I (1000 MW)**

(i) LILO of 400 kV Gooty-Tumkur (Vasantnarsapur) D/C at Tumkur (Pavagada) Pooling station

(ii) Tumkur (Pavagada) Pooling station - Hiriyur 400 kV D/C (as part of Tumkur (Pavagada) Pooling Station-Mysore line)

- (iii) LILO of 400 kV Bellary Pool-Tumkur (Vasantnarsapur) D/C (Quad) (both circuits) [KPTCL line] at Tumkur (Pavagada) Pooling station \*
- (iv) 3x500 MVA, 400/220 KV Pooling station at Tumkur (Pavagada)
- (v) 1x125 MVAR bus reactor at 400/220 k V Tumkur (Pavagada) Pooling Station
- (v) 220 kV bays (8 Nos.) at Tumkur (Pavagada) PS for Interconnection with solar project.

\*KPTCL would complete Bellary Pooling Station-Tumkur (Vasantnarsapur) line D/C (Quad) by December-2016

**Phase-II (1000 MW)**

- (i) Hiriyur - Mysore 400 kV D/C line<sup>\$</sup>
- (ii) Tumkur (Pavagada) Pooling station - Devanhally (KPTCL) 400kV D/C (Quad)<sup>^^</sup>
- (iii) Augmentation of 2x500 MVA, 400/220 KV transformer at Tumkur (Pavagada) Pooling station
- (iv) 1x125 MVAR bus reactor (2nd) at Tumkur (Pavagada) Pooling Station
- (v) Third 400/220kV, 1x500 MVA transformer at Tumkur (Vasantnarsapur)
- (vi) 1x80 MVAR switchable Line reactor at Mysore end of Hiriyur- Mysore D/C for each circuit
- (vii) 8 nos. 220kV line Bays at 400/220kV Tumkur (Pavagada) PS for Solar interconnection

*\$With the completion of this line, it would be connected with Tumkur (Pavagada) Pooling station- Hiriyur 400kV D/C line to form Tumkur (Pavagada)-Mysore D/C line*

*^^KPTCL would complete establishment of 400/220 kV sub-station at Devanhally including inter-linking 400 kV and 220 kV lines before Phase-II at Ultra Mega Solar Power Park."*

28. As per Regulation 4 (1) of the Regulatory Approval Regulations, the petitioner is required to submit Project Inception Report along with the application for grant of regulatory approval. Accordingly, the petitioner has placed on record the Project Inception report indicating consent of the beneficiaries. Accordingly, on 7.3.2016, the

petitioner filed the present application for grant of regulatory approval in terms of the provisions of Regulatory Approval Regulations.

29. Karnataka Solar Power Development Corporation Pvt. Ltd. vide letter dated 13.8.2015 has undertaken to bear all liabilities related to LTA and connectivity in accordance with the Regulations/orders framed/issued by the Commission on behalf of the Solar Power Generators to be set up in the Ultra Mega Solar Project.

30. We are of the view that the transmission system needs to be implemented matching with the time schedule of the generation projects so that the generation from Ultra Mega Solar Power Projects in Tumkur (Pavagada) District in the State of Karnataka do not get stranded. Accordingly, we accord regulatory approval under Regulation 3 of the Regulatory Approval Regulations for execution of the following transmission scheme:

**Phase-I**

- (i) LILO of 400kV Gooty-Tumkur (Vasantnarsapur) D/C at Tumkur (Pavagada) Pooling station
- (iii) Tumkur (Pavagada) Pooling station - Hiriya 400 kV D/C
- (iii) LILO of 400kV Bellary Pool-Tumkur (Vasantnarsapur) D/C (Quad) (both circuits) [KPTCL line] at Tumkur (Pavagada) Pooling station
- (iv) Establishment of 3x500 MVA, 400/220 KV Pooling station at Tumkur (Pavagada) along with 1x125MVar bus reactor
- (v) 8 Nos. 220kV Line bays at Tumkur (Pavagada) Pooling Station for Solar Interconnection

**Phase-II**

- (i) Hiriya - Mysore 400 kV D/C line<sup>s</sup>

- (ii) Tumkur (Pavagada) Pooling station - Devanhalli (KPTCL) 400kV D/C (Quad)<sup>^^</sup>
- (iii) Augmentation of 2x500 MVA, 400/220KV transformer at Tumkur (Pavagada) Pooling station
- (iv) 1x125MVAR bus reactor (2nd) at Tumkur (Pavagada) Pooling Station
- (v) Third 400/220kV, 1x500 MVA transformer at Tumkur (Vasantnarsapur) S/s
- (vi) 1x80 MVAR switchable Line reactor at Mysore end of Hiriyur- Mysore D/C (each ckt)
- (vii) 8 nos. 220kV line Bays at 400/220kV Tumkur (Pavagada) Pooling station for Solar interconnection

*§With the completion of this line, it would be connected with Tumkur (Pavagada) Pooling station- Hiriyur 400kV D/C line to form Tumkur (Pavagada)-Mysore D/C line.*

<sup>^^</sup>KPTCL would complete establishment of 400/220 kV sub-station at Devanahally including inter-linking 400 kV and 220 kV lines before Phase-II at Ultra Mega Solar Power Park.

31. In regard to development of transmission system matching with generation projects in the Solar Park at Tumkur (Pavagada), CTU is directed to coordinate with the SPPD who is responsible for development of internal transmission system. CTU shall pace the development of transmission system matching with the progress of different phases of the Solar Park. We further direct the CTU to submit quarterly progress report as per Annexure to this order which shall also contain the status of execution of the transmission system for which regulatory approval has been accorded, the progress of solar based generation projects in the Solar Power Park and the internal transmission system within the solar park. Perusal of quarterly reports submitted by CTU vide its letter dated 4.5.2016 in Petition Nos. 29/MP/2015 and 228/MP/2015 reveals that CTU

signed LTA Agreement with SPPDs on 17.12.2015 for evacuation of power from NP Kunta Solar Park. However, in respect of REWA Ultra Mega Solar Power Park, CTU had not signed LTA Agreement with SPPDs till 4.5.2016. It is noted that PGCIL in its Petition No. 26/TT/2016 has submitted that the transmission system related to NP Kunta-Part-A has been commissioned on 25.4.2016. Accordingly, we direct CTU to sign LTA Agreement with SPPDs immediately, if not signed.

32. With regard to recovery of transmission charges on account of delay in commissioning of solar generation, in the Statement of Reasons for the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-state Transmission and related matters) (Fifth Amendment) Regulations, 2015, and Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) (First Amendment) Regulations, 2015, the following has been clarified:

“8.2.1 With regard to the suggestions of PGCIL, it is clarified that SPPD who shall apply for Connectivity/Long term Access shall be liable to deposit Application Bank Guarantee/Construction Bank Guarantee as required under Connectivity Regulation. Further, SPPD shall also be liable for payment of transmission charges for delay in commissioning of generator and relinquishment charges towards transmission access under Connectivity Regulations and Sharing Regulations. Regulation 7(1)(u) of the Sharing Regulations provides that "No transmission charges for the use of ISTS network shall be charged to solar based generation" is applicable only when the power is evacuated through the transmission system to the beneficiaries after the commercial operation of the generating station. Therefore, transmission charges for delay in commissioning of solar power generators shall be payable by such solar generators/SPPD on the same line as the liability for payment by the thermal and hydro generating station in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

8.2.2 With regard to delay of internal system, it is clarified that SPPD shall be executing internal system on behalf of solar power generators. The treatment of delay or other modalities should be covered in Agreement between solar power generators and SPPD. In regard to NTPC's comments on development of transmission matching with

generation, it is clarified that CTU shall carry out coordination with the SPPD/solar power generators in accordance with Section 38 of the Act.”

Therefore, the transmission charges for delay in commissioning of solar power generators shall be paid by such solar generators/SPPD in accordance with the relevant regulation of the Commission.

33. The regulatory approval granted to CTU for the above transmission system is subject to following conditions:

(a) SPPD shall sign LTA Agreement with CTU and provide construction Bank Guarantee (BG) as per the provisions of Connectivity Regulations as amended from time to time; and

(b) SPPD shall accept the scheduled commissioning date of the transmission system for evacuation of power from Pavagada Solar Power Park as September 2017 and September, 2018 for Phase I and II respectively and plan the commissioning of the generation projects accordingly. However, the petitioner shall make all reasonable efforts to commission the transmission system matching with commissioning of the generation projects.

34. The petition and IA. are disposed of with the above.

Sd/-  
**(Dr. M.K.Iyer)**  
**Member**

sd/-  
**(A.S. Bakshi)**  
**Member**

sd/-  
**(A. K. Singhal)**  
**Member**

sd/-  
**(Gireesh B. Pradhan)**  
**Chairperson**

**1. Status of Solar Park (Internal Transmission System)**

Scope	Land	MoEF	Current status

**2. Status of Solar Power Generator:**

List of Generators identified	Capacity	Schedule date of commissioning	Land	MoEF	EPC	Current status

**3. Date of Signing of LTA agreement and furnishing of BG by the Applicant.**

(To be submitted only once post signing of LTA Agreement and furnishing bank guarantee).