

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No.29/MP/2015**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri A.K.Singhal, Member  
Shri A.S.Bakshi, Member**

**Date of Order: 6.8.2015**

**In the matter of**

Petition under Section 38(2) read with Section 79(1)(c) and Section 79(1)(k) of the Electricity Act, 2003 along with (i) the 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; (iii) Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010; and grant of regulatory approval for execution of the transmission system for Ultra Mega Solar Power Park (UMSPP) having capacity of 1000 MW in Anantpur district, Andhra Pradesh.

**And**

**In the matter of**

Power Grid Corporation of India Limited  
Saudamini, Plot No. 2, Sector 29,  
Gurgaon-122 001, Haryana

**....Petitioner**

**Vs**

1. Andhra Pradesh Solar Corporation Pvt. Ltd.  
Room No. 218, 2<sup>nd</sup> Floor,  
Vidyut Soudh, Khairatabad,  
Hyderabad-500 081, Telengana.

2. Bangalore Electricity Supply Company Ltd.  
Power Purchase, 2<sup>nd</sup> Block,  
2<sup>nd</sup> Floor, Corporate Office, KR Circle,  
Bangalore – 560 001, Karnataka

3. Gulbarga Electricity Supply Company Ltd.,  
Corporate Office, Station Main Road,  
Gulbarga – 585 102, Karnataka



4. Hubli Electricity Supply Company Ltd.  
Corporate Office, Navanagar, PB Road  
Hubli – 580025, Karnataka

5. Jindal Power Ltd.  
6<sup>th</sup> Floor, MTNL Building  
8, Bhikaji Cama Place  
New Delhi -110066

6. Adani Enterprises Ltd.  
Adani House, Plot No. 83  
Sector-32,Gurgaon, Haryana – 122001

7. KSK Mahanadi Power Company Ltd.  
8-2-293/82/A/431/A Road No. 22, Jubilee Hills  
Hyderabad-500033, Andhra Pradesh

8. National Energy Trading and Services Ltd.  
Lanco House, Plot No. 397  
Udyog Vihar, Phase--III  
Gurgaon-122016, Haryana

9. Visvesvarayia Iron and Steel Plant  
SAIL,Bhadravathi–577301, Karnataka

10. Mangalore Electricity Supply Company Ltd.  
Corporate Office, Paradigm Plazsa AB Shetty  
Circle, Mangalore – 575001, Karnataka

11. Chamundeshwari Electricity Supply Corporation Ltd.  
# 927, LJ Avenue, GF New Kanthraj URS Road  
Saraswathipuram, Mysore – 570009, Karnataka

12. Andhra Pradesh Power Co-ordination Committee  
Room No. 547, 5<sup>th</sup> Floor, Block – A,  
Vidyut Soudha, Somajiguda,  
Khairathabad,  
Hyderabad – 500 082, Andhra Pradesh

13. Kerala State Electricity Board,  
Cabin No. 817, 8<sup>th</sup> Floor,  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram – 695004, Kerala

14. Tamil Nadu Generation and Distribution Company



7<sup>th</sup> Floor, Eastern Wing, 144, Anna Salai  
Chennai – 600 002

15. Pondicherry Electricity Department,  
Govt. of Puducherry, No. 137,  
Nethaji Subhash Chandra Bose Salai,  
Puducherry – 605 001

16. Goa Electricity Department,  
Govt. of Goa, Curti-Ponda,  
Goa – 403 401

17. Lanco Kondapalli Power Ltd.  
Lanco House, Plot No. 4,  
Software Units Layout, Hitech City,  
Madhapur, Hyderabad – 500 081,  
Andhra Pradesh

.....Respondents

**Parties Present:**

**For the Petitioner:** Ms Suparna Srivastava, Advocate  
Shri Y.K.Sehgal  
Ms. Joyti Prasad  
Shri Kashish Bhambhan  
Shri A.M.Pavgi

**For the Respondents:** Shri M.K.Malviya, NTPC  
Shri S.K.Mandal, NTPC  
Shri Nishany Gupta, NTPC  
Shri V.K.Garg, NTPC  
Shri Ajay Dua, NTPC  
Shri Rohit Chabbra, NTPC  
Shri Abhishek Kumar Ambala, APSPLC  
Shri G.Adishesu, APSPCL  
Shri A. Venkates Warku, APSPCL

**ORDER**

This petition has been filed by the petitioner, Power Grid Corporation of India Limited (PGCIL), for seeking regulatory approval for undertaking the development of the transmission system for evacuation of power from the Solar Energy generators to be



located within the Solar Power Park to be developed at NP Kunta, in Anantpur district of Andhra Pradesh. The petitioner has made the following prayers:

“(a) Grant the Regulatory Approval for execution of the transmission system entrusted to the petitioner; and

(b) Grant approval for inclusion of the asset for which transmission charges are to be recovered through the CERC (Sharing of Transmission charges and losses for ISTS), 2010.”

### **Background of the case:**

2. Government of India planned to set up Solar Parks for promotion of Solar Power. Ministry of New and Renewable Energy (MNRE) vide letter dated 12.12.2014, conveyed the intent of Government of India to provide a framework for setting up at least 25 Solar Parks in different parts of the country with a target of over 20,000 MW installed capacity of solar power in a span of 5 years from 2014-15 to 2018-19. As regards the transmission and evacuation facility, the letter of MNRE stated as under:

**“8. Transmission and evacuation of power from solar park:** Interconnection of each plot with pooling stations through 66 kV /other suitable voltage underground or overhead cable will be the responsibility of the solar project developer. The designated nodal agency will set up the pooling stations (with 400/220, 220/66 kV or as may be suitable switchyard and respective transformers) inside the solar park and will also draw transmission line to transmit power to 220 kV/400 KV sub-station. The responsibility of setting up a sub-station nearby the solar park to take power from one or more pooling stations will lie with the Central Transmission Utility (CTU) or the State Transmission Utility (STU), after following necessary technical and commercial procedures as stipulated in the various regulations notified by the Central/State Commission.”

3. The petitioner has submitted that on 16.9.2014, a meeting was held between Union Minister of State for Power, Coal and New and Renewable Energy and Chief Minister of Andhra Pradesh for setting up of Ultra Mega Solar Power Park in the State of



Andhra Pradesh. Accordingly, Govt. of Andhra Pradesh vide its letter No. 2314/PR.II/2014 dated 26.9.2014 informed the petitioner about setting up of 1000 MW of Solar Park at NP Kunta at Anantpur district in Andhra Pradesh and requested to take up evacuation infrastructure to evacuate power from proposed solar power park.

4. The petitioner has submitted that on 26.11.2014, Ministry of Power (MoP), Govt. of India convened a meeting with the representatives of the Central Electricity Authority (CEA), PGCIL and the Commission in which Ministry of Power informed that the tendering process for setting up of Solar Power Project in the Solar Power Park at NP Kunta already been started by NTPC. In the said meeting, it was decided that PGCIL would start the tendering process for construction of the transmission line within a year matching with the completion of the solar power project. In the said meeting, MoP directed PGCIL to seek regulatory approval from the Commission to construct the transmission lines as ISTS lines.

5. Subsequently, the petitioner, vide its letter dated 9.1.2015, submitted the following with regard to the transmission scheme:

(a) Govt. of India has formulated a scheme for setting up of Solar Parks and Ultra Mega Solar Power Projects in the country with installed capacity of 500 MW and above in a span of 5 years from 2014-15 to 2018-19. Under the scheme, the solar parks would be developed in collaboration with the State Governments and their agencies. Solar Energy Corporation of India (SECI) would be Nodal agency of MNRE for handling this scheme.

(b) Under MNRE scheme, the implementing agency would be sanctioned a grant of ₹ 20 lakh/MW or 30% of project cost (whichever is lower) in a phased manner based on achievement of specific mile stones.

(c) Govt. of Andhra Pradesh is planning to develop two Solar Parks at N.P. Kunta-1500 MW (Ananthapur and Kadapa districts) and Pinnapuram/Gani-1000 MW (Kurnool district). For taking benefits under the scheme, the Govt. of Andhra Pradesh has set up an implementing agency, namely Andhra Pradesh Solar Power Corporation Pvt. Ltd. (APSPCL) as per Mode 2 of the MNRE Scheme, wherein Solar Energy Corporation of India (SECI), Andhra Pradesh Power Generation Corporation Ltd. (APGENCO) and New and Renewable Energy Development Corporation of Andhra Pradesh Limited (NREDCAP) have held 50%, 41% and 9% equity respectively to develop these Parks with all the infrastructure facilities including evacuation of power.

6. The petitioner, vide its subsequent affidavit dated 2.2.2015 submitted the following in regard to the implementation of the transmission scheme:

(i) Ministry of Power, Govt. of India vide its letter No. 11/64/2014-PG dated 8.1.2015 brought the following two aspects for evacuation of power from nine solar parks (7020 MW capacity) being set up in seven States including Andhra Pradesh Solar Ultra Mega Park:

(a) Transmission line connecting solar parks to ISTS to be declared as part of ISTS;



(b) PGCIL is assigned to take up construction of transmission line including pooling station from solar generating parks on compressed time schedule basis.

(ii) Andhra Pradesh Solar Power Corporation Pvt. Ltd. (APSPCL), a Joint Venture of SECI, APGENCO and NREDCAP, vide its letter dated 9.1.2015 informed that as decided in the meeting held on 16.9.2014 between Chief Minister, Andhra Pradesh and MoSP, Govt. of India, PGCIL is required to implement transmission system for 1500 MW solar park at NP Kunta, districts Anantpuram (1000 MW) and district Galivedu Kadapa (500 MW). APSPCL also indicated requirement of 8 nos. 220 kV feeder bays to be established both in Phase-I (NP Kunta- 250 MW) and Phase-II (NP Kunta- 750 MW).

(iii) Proposed transmission scheme was also discussed in 25<sup>th</sup> TCC/26<sup>th</sup> SRPC meeting held 19.12.2014. TCC, in the said meeting dated 19.12.2014, recommended to discuss the transmission scheme in Standing Committee on Power System Planning for necessary ratification.

(iv) The petitioner placed on record the revised Project Inception Report as well as revised scope of transmission system including 4 nos. 220 kV line bays as part of Phase-II scheme.

7. The petitioner, vide its affidavit dated 4.2.2015, has submitted that on 29.1.2015 and 2.2.2015, APSPCL made applications for grant of connectivity and LTA respectively for the proposed 1500 MW solar power plant at NP Kunta in which it was also stated



that “the Solar Power Plant of 1500 MW would be consisting of individual Solar Inverter module of 1~2 MW with the generation voltage of 360~415 V. This voltage would be stepped up to 33 kV at the inverter level itself and pooled at the Pooling Station which will be setup within the Solar Project. The voltage would again be stepped up to 220 kV at the Solar Project Pooling station and again stepped up to 400 kV at the proposed 400 kV sub-station to be constructed by PGCIL at Solar Power Project to match with the voltage level at PGCIL's Cuddapah (Chinalampalli) 400 kV sub-station. APTRANSCO will establish 4 nos. of 220/33 kV pooling stations at NP Kunta site to evacuate 1000 MW solar power developed by NTPC and connected to 400/220 kV grid station via 4 Nos. 220 kV D/C lines. APTRANSCO will also establish two more 220/33 kV pooling stations at Galiveedu site to evacuate 500 MW which will be connected to the said PGCIL`s 400/220 kV sub-station via 2 Nos. 220 kV double circuit lines.”

8. During the hearing of the petition on 10.2.2015, the representative of the petitioner submitted that the present petition has been filed for regulatory approval for 1000 MW and for additional 500 MW, the regulatory approval would be taken subsequently. The representative of the petitioner further submitted that the transmission scheme would be discussed in the Standing Committee meeting to be held on 25.2.2015. The Commission directed the petitioner to file the following information:

- (a) 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);

- (b) Copy of notices published in newspapers in terms of Regulation 4(7) of Regulatory Approval Regulations;
- (c) Detailed Project Report for transmission system for 1000 MW Solar Power Park;
- (d) Joint Venture (JV) documents for development of Solar Park of 1000 MW;
- (e) Duration of diurnal peak power flow in the line for assessment of peak availability for justifying the quantum of power flow in the line, and
- (f) Any international/national studies in practice.

9. The petitioner, vide affidavit dated 25.2.2015, has placed on record the Project Inception Report for 1500 MW (Annexure I of the affidavit ), advance copy of Detailed Project Report for Phase-I (250 MW) (Annexure-II of the affidavit), copy of Joint Venture document between SECI, APGENCO and NREDCAP for development of Solar Park in AP (Annexure-III of the affidavit), agenda for assessment of peak availability and duration of diurnal peak flow in the line and load flow diagram (Annexure IV of the affidavit). The petitioner has submitted that APSPCL has made application to CTU for grant of LTA for 1500 MW and has prayed for grant of regulatory approval of 1500 MW for the following scope of work:

**Phase-I Scheme (250 MW)**

- (i) Establishment of 3x500 MVA, 400/220kV Substation at NP Kunta Pooling Station
- (ii) LILO of 400kV Kadapa(Cuddapah) - Kolar S/c line at NP Kunta Pooling Station
- (iii) 2 nos. 220kV line bays at NP Kunta Pooling Station



- (iv) 1x125 MVAR Bus Reactor at NP Kunta Pooling Station
- (v) ±100 MVAR STATCOM at 400kV NP Kunta Pooling Station

**Phase-II Scheme (750 MW)**

- (i) LILO of Kadapa(Cuddapah) – Hindupur 400kV D/c (Quad) line at NP Kunta Pooling Station
- (ii) 6 nos. 220kV line bays at NP Kunta Pooling Station

**Phase-III Scheme (500 MW)**

- (i) Augmentation of transformation capacity at NP Kunta station with 4th, 1x500 MVA, 400/220kV transformer
- (ii) 4 nos. 220kV line bays at NP Kunta Pooling Station

10. During the course of hearing on 24.3.2015, learned counsel for CTU submitted that the issue of implementation of the transmission line for connecting the Solar Power Parks to the ISTS was discussed in the 38<sup>th</sup> meeting of the Standing Committee on Power System Planning of Southern Region held on 7.3.2015 and it was agreed that the proposal was technically in order and could be firmed up subject to resolving the regulatory issues. The representative of CTU clarified that NTPC was advised to make application for grant of connectivity. Since, NTPC denied to apply for connectivity, it was decided after discussion with the distribution companies of Andhra Pradesh that AP Solar Corporation Pvt. Ltd as the developer of the Solar Power Project, would make application for grant of connectivity and LTA. Accordingly, APSPCL has made application for grant of connectivity and LTA indicating the connectivity schedule for Phase-I, II and III by December, 2015, September, 2016 and December, 2016 respectively.

11. The Commission directed the staff of the Commission to convene a meeting on 27.3.2015 at 1430 hrs with the representatives of CTU, NTPC, APSCPL, MNRE and



CEA to suggest measures/solution to facilitate regulatory approval for transmission system associated with the NP Kunta, Solar Park. After holding the meeting, staff of the Commission informed the Commission that no consensus on the solution could be arrived at in the said meeting. Thereafter, the Commission initiated the process of amendment to the Connectivity Regulations and Regulatory Approval Regulations. After following due process, the Commission modified 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 the Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) (First Amendment) Regulations, 2015, enabling SPPD to apply for grant of Connectivity and LTA and enable CTU to apply for regulatory approval on the basis of the LTA granted to SPPD.

12. Replies to the petition have been filed by NTPC Ltd. (NTPC) and Kerala State Electricity Board Limited (KSEB).

13. NTPC vide its reply dated 6.4.2015 has submitted as under:

(a) On 16.9.2013, Memorandum of Understanding (MoU) was signed between NTPC and Govt. of Andhra Pradesh to develop 1000 MW Solar Power Project(s) in a phased manner. NTPC has submitted that as per MoU, power generated from the proposed 1000 MW solar power project (s) shall be allocated to the distribution companies of Andhra Pradesh. NTPC has stated that as per clause 3.1 (b) of MoU, statutory clearances and approvals for the

project(s), availability of land and other required infrastructure such as approach road, water supply, power evacuation, etc. are required to be facilitated by Govt. of Andhra Pradesh at no cost to NTPC. Further, in terms of clause 3.1 (c) of MoU, Govt. of Andhra Pradesh is required to facilitate through suitable agency, the establishment of any sub-station and/or transmission line from the solar project up to grid sub-station that may be required for power evacuation, at no cost to NTPC. Therefore, no connectivity of NTPC Solar system with ISTS is envisaged. Since, as per the MoU, the evacuation system of power is responsibility of the distribution companies of Andhra Pradesh/APSPCL, NTPC is not required to make application for grant of LTA/connectivity.

(b) Since the sale of electricity shall be at the Inter-connection point i.e. 33 kV sub-pooling switchgear at the premises of generating station and it is the obligation and responsibility of distribution companies of Andhra Pradesh to make the required arrangement for evacuation of electricity from such inter-connection point of the generating station, the charges for utilization of transmission system(s) owned by the transmission licensee and transmission losses for wheeling of the electricity beyond inter-connection point of the station shall be paid directly by distribution companies of Andhra Pradesh to the transmission licensee. NTPC is not responsible for payment of such charges.

(c) As regards the Commission`s query whether the generators in the solar Park are envisaged with LVRT, NTPC has submitted that the Central Electricity Authority (Technical Standard for Connectivity to the Grid) (Amendment)



Regulations, 2013 do not provide for LVRT compliance for solar power generators.

14. Kerala State Electricity Board Ltd. (KSEB) in its reply affidavit dated 7.5.2015 has submitted that the present petition includes transmission system for evacuation of power of 1500 MW solar park at NP Kunta in Andhra Pradesh. However, all benefits are accruing to the beneficiaries of the project. In the instant case, Andhra Pradesh has 90% share from the project. Only 10% of the power is set apart for allocation to Southern Region and no PPA has been signed with any utility of Southern Region. Therefore, possibility of power flow out of the State to ISTS is very rare. KSEB has further submitted that the higher cost of the transmission system implemented as ISTS for evacuation of power has to be borne by all utilities of Southern Region by increase in PoC charge in the entire Southern Region as per the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010. Considering the adverse effects on all utilities in Southern Region, KSEB has requested the Commission that,

- (i) the cost of transmission system for evacuation should be recovered from the beneficiaries of the project;
- (ii) the project should not be exempted from transmission charges and losses;
- (iii) the required transmission system should be built as a dedicated transmission system;



(iv) even if the transmission system is built as ISTS, the transmission line should be treated as dedicated till signing of PPA with firm beneficiaries for the 10% power injected into the Grid.

(v) since only 10% power is to be injected into the grid after signing of PPA, only 10% of the cost of transmission system should be shared by other beneficiaries of the project.

(vi) the cost of STATCOM to be shared by DISCOMs of AP.

(vii) the petitioner may be directed to avail funds from 'Green Energy Fund' envisaged by MNRE for the development of renewable energy sector in India for implementation of the transmission scheme, so as to reduce the transmission charges on the beneficiaries of the project.

15. The petitioner, vide its affidavit dated 25.5.2015, has submitted as under:

(a) In order for a scheme to be covered under Regulation 3(1)(iii) of the Regulatory Approval Regulations, following conditions ought to be satisfied:

(i) CTU being in receipt of LTA application from a Solar Power Park Developer;

(ii) The LTA applicant-Solar Power Park Developer has been authorized by the Central Government;

(iii) Consultation with CEA and beneficiaries wherever identified has been held for setting up the ISTS scheme;



(iv) The Solar Power Park Developer undertakes to bear all liabilities on behalf of the Solar Project Developers to be set up in the Solar Park.

(b) In compliance with the provisions of said regulations, the petitioner has enumerated the following developments:

(i) CTU has received LTA application.

(ii) The Solar Power Park Developer has complied with the provisions of Amended Regulations.

(iii) MNRE`s letters dated 28.11.2014 and 2.12.2014 informing about the grant of in-principle approval for nine solar parks including those which are the subject matter of the petition has already been submitted to the Commission.

(iv) The transmission system was discussed and approved in the 38<sup>th</sup> Standing Committee Meeting of Power System Planning in Southern Region.

(v) The undertaking of the Solar Park Developer to bear the liabilities is awaited.

16. NTPC, vide its affidavit dated 26.5.2015, has submitted that since no CEA Technical Standards for Solar Projects is available as on date and also the present Connectivity Regulations do not have provisions for LVRT compliance for solar power generators, the power conditioning units (inverters) specified for NP Kunta Solar project are as per German technical guidelines. NTPC has submitted that according to his understanding, it has complied with LVRT functionality.



17. The petitioner in its rejoinder affidavit dated 11.6.2015 to the reply of KSEB has submitted as under:

(a) As per MNRE`s letter dated 2.12.2014, the instant Solar Park is a part of 25 Solar Parks to be implemented in various parts of the country and most of these solar parks shall have a component of power flowing outside the State. Therefore, it would be favourable if implementation of evacuation scheme is taken up by PGCIL.

(b) MoP had vide its letter dated 26.11.2014 clarified the scope of work to PGCIL and it was decided that the external transmission network would be developed by PGCIL in case power would flow outside the home State. MoP in the said letter dated 26.11.2014 directed PGCIL to obtain regulatory approval from the Commission.

(c) The Solar Park Developer has applied for LTA and Connectivity. However, the PPA for the same has not been signed.

(d) The petitioner has filed the present petition for grant of regulatory approval pursuant to the directions of MoP. Since the initial approval was only for 1000 MW (phase-I and Phase-II), regulatory approval for 1000 MW was sought. As approval was later revised to 1500 MW, the petitioner has prayed for grant of regulatory approval for 1500 MW. As gestation period in case of Solar Generation is low, it is prudent and wise to seek regulatory approval for the entire project.

(e) At the time of amendment of Connectivity Regulations and Regulatory Approval Regulations, comments were invited from all the stakeholders and a public hearing was also conducted in this regard. However, KSEB did not participate in the public hearing to project its grievances and is now challenging the very constitutionality of the Regulations which is not appropriate at this stage.

18. MNRE vide its letters dated 3.6.2015 and 29.6.2015 has designated the Solar Power Park Developers to apply for Connectivity and LTA and has authorized to undertake all responsibility for development of the Solar Power Park respectively.

**Analysis and Decision:**

19. We have considered the submissions of the petitioner, NTPC, KSEB and APTRANSCO.

20. The Energy Department, Government of Andhra Pradesh vide its letter dated 26.9.2014 informed the petitioner for setting up of 1000 MW of Solar Park at NP Kunta at Anantpur district in Andhra Pradesh and requested to take up evacuation infrastructure to evacuate power from above proposed Solar Power Park. On 16.9.2014, the said Ultra Mega Solar Power Park was discussed in the meeting between Union Minister of State for Power, Coal and New and Renewable Energy and the Chief Minister of Andhra Pradesh. Subsequently, Ministry of New and Renewable Energy (MNRE) vide its letter dated 2.12.2014 granted in-principle approval to set-up nine solar parks including Solar Power Park at Anantpur district. As per MNRE`s letter dated 2.12.2014, most of these solar parks will have a component of power flowing outside the State. MNRE also directed the petitioner to take up the development of evacuation



system for most of these parks and requested the petitioner to conduct a study and plan the evacuation system for each of these parks. On 26.11.2014 a meeting was held in Ministry of Power under the Chairmanship of Joint Secretary (Transmission), Ministry of Power wherein it was decided that the petitioner would seek and obtain regulatory approval from the Commission to construct these lines as ISTS.

21. MNRE issued a letter dated 12.12.2014 regarding 'Implementation of a Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects in the country commencing from 2014-15 and onwards (i.e. from the year 2014-15 to 2018-19)' which *inter alia* provides as under:

**“6. Fund for power evacuation**

The power evacuation arrangement will consist of two parts i.e. pooling station network within park to collect power from each project and transmitting sub-station at the park boundary as the first part and the transmission sub-station along the transmission line up to CTU/STU existing grid as the second part. The implementing agency would be responsible for the first part and CTU/STU would be responsible for second part. For both these parts i.e. entire evacuation arrangement, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be as a component to fund the power evacuation infrastructure by the implementing agency and CTU/STU. 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 Programme or any other source.

**7. Central Financial Assistance (CFA)**

- CFA @Rs. 25.00 lakh (Rs twenty five lakh) per park would be released by MNRE to SECI for DPR preparation for the Solar Park, conducting surveys, etc.
- Besides, CFA of up to Rs. 20.00 lakh (Rs twenty lakh) per MW or 30% of the project cost, including Grid-connectivity cost, whichever is lower, would be released to SECI on achieving the milestones given under para 7 of the scheme. For release of requisite funds, the state Govt. will send a formal proposal to MNRE.
- The grant will be managed and released by SECI, on behalf of MNRE, for which SECI will be given a fund handling fee of 1% of the grant released.”

Further, the Annexure to the letter dated 12.12.2014 *inter alia* provides as under:

**“ 8. Transmission and evacuation of power from solar park**



Interconnection of each plot with pooling station through 66 kV/ other suitable voltage underground or overhead cable will be responsibility of the solar project developer.

The designated nodal agency will set up the pooling station (with 400/220, 220/66 kV or as may be suitable switchyard and respective transformers) inside the Solar Park and will also draw transmission to transmit power to 220kV/400 kV sub-station.

The responsibility of setting up a sub-station nearby the solar park to take power from one or more pooling stations will lie with CTU or STU after following necessary technical and commercial procedure as stipulated in various regulation notified by the Central/State Commission.

If the State Government is willing to buy over 50% of the power generated in the solar park, preference will be given to STU, which will ensure setting up of sub-station and development of necessary infrastructure for transmission of power form sub-station to load centers.”

22. On 8.1.2015, the petitioner filed the present application for grant of regulatory approval in terms of the provisions of Regulatory Approval Regulations. The petitioner subsequently, vide its affidavit dated 4.2.2015, submitted the applications of Andhra Pradesh Solar Power Corporation Limited (APSPCL), a Joint Venture of SECI, APGENCO and NREDCAP dated 29.1.2015 and 2.2.2015 for grant of Connectivity and LTA respectively for the proposed 1500 MW solar power plant at NP Kunta. APSPCL in its application dated 2.2.2015 for grant of LTA indicated that APTRANSCO would establish 4 nos. of 220/33 kV pooling stations at NP Kunta site to evacuate 1000 MW solar power developed by NTPC and connected to 400/220 kV grid station via 4 nos. 220 kV D/C lines. APTRANSCO would also establish two more 220/33 kV pooling stations at Galiveedu site to evacuate 500 MW which will be connected to the 400/220 kV grid sub-station via 2 Nos. 220 kV double circuit lines. In this regard, we have perused the minutes of 38<sup>th</sup> Standing Committee meeting held on 7.3.2015, relevant portion of which is extracted as under:

“**21.12** Director (SP&PA), CEA asked whether the 220 kV substations and transmission lines within N P Kunta Solar Park are being implemented by APTRANSCO or APSPCL.



The LTA and connectivity application indicates that these works are being implemented by APTRANSCO.

**21.13** APTRANSCO clarified that the internal transmission system at 220 kV level is being carried out by them on deposit work basis from M/s APSPCL.”

23. As per the provisions of Connectivity Regulations, only generating stations or bulk consumers are eligible for grant of connectivity, and only generators or trading licensees, bulk consumers or distribution licensees are eligible for grant of LTA. APSPCL did not fulfill any of the above requirements to apply for grant of connectivity and LTA. However, CTU has sought regulatory approval on the basis of application of APSPCL. While granting LTA and connectivity, CTU should ensure that the LTA/connectivity applications are as per the provisions of Connectivity Regulations. In the present case, CTU enclosed the Connectivity and LTA applications of APSPCL knowing fully with that these applications were made by ineligible applicant under the then prevailing Regulations. The Commission expects that CTU being the Nodal Agency to grant LTA and connectivity to ISTS, discharges its statutory responsibility assigned under the Act and the Connectivity Regulations so that the Commission before deciding the case gets the advantage of CTU having considered the matter in accordance with law. We expect that CTU thoroughly examines the applications and brings out the facts plainly before the Commission.

24. With due regard to the need for providing regulatory support for promotion of solar energy in the overall interest of the nation's energy security and to facilitate the endeavour of Govt. of India to implement and achieve the set goals for solar power generation, the Commission amended the Connectivity Regulations to make "Solar Power Park Developer" an eligible entity for grant of connectivity and LTA. Further the



Commission amended the Regulatory Approval Regulations to enable the CTU to approach for regulatory approval on the basis of the applications of Solar Power Developers for grant of Connectivity and LTA. As per the amended provisions of the Connectivity Regulations, any company authorized by the Central Government as Solar Power Park Developer is eligible to apply for Connectivity and LTA subject to the following conditions to be fulfilled in the respect of Connectivity.

"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."

The amended provision of the Regulatory Approval Regulations are extracted as under:

"3. (1) (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."

25. Pursuant to the above provisions, APSPCL submitted an application to CTU requesting to treat its applications for grant of connectivity and LTA made vide letters dated 29.1.2015 and 2.2.2015 respectively as per the applications made under the amended regulations. MNRE vide letter dated 26.6.2015 modifying its earlier letter dated 3.6.2015, authorized APSPCL as the solar power Park Developer for NP Kunta to apply to CTU for grant of connectivity and LTA in ISTS. The relevant portion of the said letter dated 26.6.2015 is extracted as under:

"With reference to the notifications of Central Electricity Regulatory Commission (CERC) dated 15.5.2015 for including Solar Park Developer as an Applicant for Connectivity and Long Term Access in Inter-State Transmission System, the Ministry of New and Renewable Energy hereby declares Andhra Pradesh Solar Power Corporation Pvt. Limited, a JVC of Andhra Pradesh Power Transmission Corporation Limited (APGENCO), New & Renewable Energy Development Corporation of AP Limited



(NREDCAP) and Solar Energy Corporation of India (SECI), as the Solar Park Developer (SPDD) for N.P Kunta Solar Park with capacity 1500 MW in Anantpur and Kadapa districts and Kurnool Solar Park with capacity of 1000 MW in Kurnool district. The SPPD shall undertake infrastructural activities including arrangement of connectivity on behalf of solar power generator in the stated Parks. This supersedes the earlier letter of even no dated 3.6.2016”

26. KSEB has contended that the project should not be exempted from transmission charges and losses and the cost of transmission system should be recovered from the beneficiaries of the project. In this regard, it is clarified that the Commission after following a transparent process, has amended the Sharing Regulations taking care of the concerns raised by stakeholders, wherein KSEB was given ample opportunity to express its concern before the Commission. We are of the view that as per third amendment to the Sharing Regulations, solar based generation shall be 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.

27. KSEB has also requested to direct the petitioner to avail funds from ‘Green Energy Fund’ envisaged by MNRE for the development of renewable energy sector in India for implementation of the transmission scheme in order to reduce the transmission charges on the beneficiaries of the project. It is clarified that MNRE vide its sanction order dated 12.12.2014 has permitted the petitioner to use grant from MNRE/loans from multilateral and bilateral agencies as a component to fund the power evacuation infrastructure. The said letter dated 12.12.2014 has been extracted in para **21** above.

28. APSPCL vide letter dated 5.6.2015 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 NP Kunta



Solar Park. The petitioner vide its affidavit dated 1.7.2015, has placed on record MNRE`s letter dated 29.6.2015 authorizing APSPCL for creating internal transmission system on behalf of Solar Project Developers for NP Kunta Solar Park and Kurnool Solar Park in Andhra Pradesh.

29. 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 reportedly been received.

30. We are of the view that there is a necessity to implement the transmission system with the matching time schedule so that the generation from the NP Kunta Solar Park and Kurnool Solar Park in Andhra Pradesh 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 Scheme (250 MW)**

- (i) Establishment of 3x500 MVA, 400/220kV Substation at NP Kunta Pooling Station
- (ii) LILO of 400kV Kadapa (Cuddapah) - Kolar S/c line at NP Kunta Pooling Station
- (iii) 2 nos. 220kV line bays at NP Kunta Pooling Station
- (iv) 1x125 MVAR Bus Reactor at NP Kunta Pooling Station
- (v)  $\pm$ 100 MVAR STATCOM at 400 kV NP Kunta Pooling Station

**Phase-II Scheme (750 MW)**

- (i) LILO of Kadapa (Cuddapah)-Hindupur 400kV D/C (Quad) line at NP Kunta Pooling Station
- (ii) 6 nos. 220 kV line bays at NP Kunta Pooling Station

**Phase-III Scheme (500 MW)**

- (i) Augmentation of transformation capacity at NP Kunta station with 4th, 1x500 MVA, 400/220 kV transformer
- (ii) 4 nos. 220 kV line bays at NP Kunta Pooling Station



31. The regulatory approval granted to CTU for the above transmission system is subject to signing of Long Term Agreement (LTA) with Solar Power Park Developer (SPPD) and taking construction Bank Guarantee (BG) from SPPD as per the provisions of Connectivity Regulations as amended from time to time. With regard to STATCOM, we have perused the minutes of the 38<sup>th</sup> meeting of the Standing Committee on Power System Planning of Southern Region held on 7.3.2015. It has been indicated in the minutes at para 21.21 that STATCOM has been agreed due to urgency in the matter as a special case. We are inclined to approve the STATCOM in this particular case, but would expect that future STATCOMS would be deliberated in detail in the Standing Committee(s) on Transmission and decisions based on the detailed deliberations of the Standing Committee would be final and binding.

32. In regard to development of transmission system matching with generation projects in the Solar Park at NP Kunta, 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 price.

33. With regard to recovery of transmission charges on account of delay in commissioning of solar generation, it has been clarified in the Statement of Reasons to



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 that transmission charges for delay in commissioning of solar power generators are required to be paid by such solar generators/SPPD on the same line as the liability for payment by the thermal and hydro generating stations in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. The relevant portion of the Statement of Reasons is extracted as under:

“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.”

34. The petition is disposed of with the above.

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 (APSPCL)**

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