CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 3/MP/2017

Coram:

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

Date of Order: 17th October, 2017

In the matter of

Petition under Section 38(2) 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) Regulation 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 Fatehgarh, distt. Jaisalmer, Rajasthan.

And

In the matter of

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

Vs

1. M/s Adani renewable Energy Park Rajasthan Ltd
Achalraj Building, Opp Mayor Bungalow,
Law Garden, Ahmedabad- 380006
Gujarat

2. PFC Consulting Limited
1st floor, 'Urjanidhi',
1, Barakhamba Lane, Connaught Place,
New Delhi- 110001

3. Delhi Transco Limited
Shakti Sadan, Kotla Road
New Delhi- 110002

4. BSES Yamuna Power Limited
BSES Bhawan, Nehru Place
New Delhi

5. BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place
New Delhi

6. North Delhi Power Limited
Power Trading & Load Dispatch Group
Cennet Building, Adjacent To 66/11 kV Pitampura-3
Grid Building, Near PP Jewelers
Pitampura, New Delhi- 110034

7. Rajasthan Rajya Vidyut Prasaran Nigam Limited
Vidyut Bhawan, Vidyut Marg
Jaipur- 302005

8. Ajmer Vidyut Vitaran Nigam Limited
400 Kv GSS Building (Ground Floor), Ajmer Road
Heerapura, Jaipur

9. Jaipur Vidyut Vitran Nigam Limited
400 Kv GSS Building (Ground Floor), Ajmer Road
Heerapura, Jaipur

10. Jodhpur Vidyut Vitran Nigam Limited
400 Kv GSS Building (Ground Floor), Ajmer Road
Heerapura, Jaipur

11. Himachal Pradesh State Electricity Board
Vidyut Bhawan, Kumar House Complex Building II
Simla- 171004

12. Punjab State Electricity Board
Thermal Shed Tia. Near 22 Phatak
Patiala- 147001

13. Haryana Power Purchase Centre
Shakti Bhawan, Sector- 6
Panchkula- 134109, Haryana

14. Power Development Department
Govt. Of Jammu & Kashmir
Mini Secretariat, Jammu

15. Uttar Pradesh Power Corporation Limited
Shakti Bhawan, 14, Ashok Marg
Lucknow-226001

16. Chandigarh Administration
Sector- 9, Chandigarh

17. Uttarakhand Power Corporation Limited
Urja Bhawan, Kanwali Road, Dehradun

18. North Central Railway
Allahabad

19. New Delhi Municipal Council
Palika Kendra, Sansad Marg
New Delhi-110002 **…….Respondents**

Parties present:

Shri Amit Bhargava, PGCIL
Shri Dharmendra Gupta, AREPRL
Shri N.C. Gupta, PFC Consulting Ltd.

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 transmission system for evacuation of power from the Solar Energy generators associated with the Solar Power Park to be developed at Fatehgarh district of Jaisalmer, Rajasthan.

2. The matter was heard on 9.2.2017. During the hearing, the representative of the Petitioner submitted that application has been submitted by M/s Adani Renewable Energy Park Rajasthan Ltd (AREPRL) (a joint venture of Govt. of Rajasthan and M/s Adani Renewable Energy Park Ltd), the Solar Power Park Developer, with capacity of 1500 MW, seeking connectivity/Long Terms Access for 1000 MW capacity Ultra Mega Solar Parks in Fatehgarh district of Jaisalmer, Rajasthan. The Commission after directing the Petitioner to file the following additional information also directed the respondents to file replies to the petition.

a) Reason for deviation in the scope with reference to the scope as decided in the Standing Committee and ensure that the difference in scope to be considered for the regulatory approval and for the tariff based competitive bidding should be the same;

b) Treatment of ownership of additional space, cost and recovery of the tariff corresponding to the additional space to be procured by the developer; and

c) Provide status of LTA agreement and steps taken to ensure the matching of the timeline of December, 2018 with the Solar Park or generation projects;

3. Gist of the submissions of the Petitioner is as under:

(a) Government of India, Ministry of New and Renewable Energy (MNRE) vide its letter dated 4.2.2016 notified AREPRL as the Solar Power Park Developer (SPPD) for 1500 MW Solar Park at Fategarh, district Jaisalmer, Rajasthan.

(b) Solar Power Park Developer, AREPRL vide letters dated 23.8.2016 and 24.8.2016 has undertaken to bear all liabilities on behalf of the Solar Project

Developers to be set up in the Solar Power Parks in compliance with the Commission's notification dated 15.5.2015.

(c) AREPRL in their two separate LTA applications has sought access to ISTS for 1000 MW capacity with target beneficiaries for transfer of power in Northern Region and have desired LTA from December, 2017. Based on subsequent meeting held on 11.11.2016, AREPRL vide letter dated 5.12.2016 has revised the commissioning schedule of Solar Park as December. 2018. Accordingly, the evacuation system is required to be in place matching with the generation project schedule.

(d) Ministry of Power, Govt. of India vide its letter No. 11/64/2014-PG dated 4.8.2015 conveyed the following approval for implementation of work related to transmission system for evacuation of power from Solar Parks in the country:

(i) Transmission lines connecting solar parks to ISTS to 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.

(e) PGCIL has identified the Transmission system for evacuation/transfer of power from Solar Power parks in Fatehgarh, distt Jaisalmer, Rajasthan comprising of the following:

(i) Establishment of 400 kV pooling station at Fatehgarh with a provision to upgrade at 765 kV level.

(ii) 765 kV pooling sub-station- Bhadla (PG) D/c line

(iii) 2 nos. 400 kV line bays at Fatehgarh pooling station

(iv) 1 x 125 MVAR Bus reactor at 400 kV Fatehgarh pooling sub-station

(v) Space for future 220 kV (6 nos.), 400 kV (6 nos.) and 765 kV (4 nos.) line bays along with line reactors at Fatehgarh pooling station

(vi) Space for future 220/400 kV transformers (2 nos.), 400/765 kV transformers (2 nos.) along with associated transformer bays at each level;

(vii) Space for future 765 kV bus reactor along with associated bays

*(viii) 2 nos. 400 kV line bays at Bhadla (PG) ***
***under Power Grid scope*

(f) The issue of implementation of the transmission system associated with the above Solar Park was discussed and agreed in the 38th meeting of the Standing committee on Power system planning of Northern region held on 30.5.2016, wherein it was decided that the above scheme may be taken up for implementation through TBCB route. However, based on the observations of

PGCIL and RVPNL, the minutes of the said meeting were modified on 19.10.2016 with revision in the scope of the transmission system to be implemented.

(g) Subsequently, in the 36th meeting of Empowered Committee on transmission held on 26.7.2016, it was decided to implement the above scheme through TBCB route. In the said meeting, it was also decided that 2 nos. 400 kV line bays at Bhadla S/s for termination of Fatehgarh- Bhadla transmission line shall be developed by PGCIL.

4. The Petitioner has placed on record the 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 (hereinafter the Regulatory Approval Regulations). The Petitioner has submitted that as per the provisions of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter the 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 from 1.7.2014 to 30.6.2017. The Petitioner has further submitted that with the development of Solar Power Park, AREPRL is obligated to coordinate with PGCIL for transmission of electricity generated by it under Section 10 (3) (b) of the Electricity Act, 2003 and the other Respondents (Respondents 3-19) are the beneficiaries of the generation and the transmission projects.

5. Against the above background, the Petitioner has made the following prayers:

a) Grant regulatory approval for taking up implementation of identified transmission system at Enclosure-I

b) Grant of approval for recovery of transmission charges of the assets through CERC (Sharing of Transmission charges and losses for ISTS) Regulations, 2010 and its amendment(s) notified by CERC from time to time.

c) Grant of approval for inclusion of the above system under the TSA notified by CERC

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

6. The Petitioner has filed IA No. 1/IA/2017 for early listing and expeditious disposal of the Petition. In compliance with the directions of the Commission vide ROP of the hearing dated 9.2.2017, the Petitioner vide affidavit dated 2.3.2017 has clarified as under:

a) The Transmission system for Ultra Mega Solar Power Park (UMSPP) at Fatehgarh was agreed in the 38th meeting of the Standing Committee on Power System Planning of Northern Region held on 30.5.2016 and subsequently in the 36th meeting of the Empowered Committee on transmission held on 26.7.2016.

b) In the 36th meeting of the Empowered Committee on transmission, space provisions for line bays / transformers and bus reactors along with associated bays was agreed as part of transmission scheme at Fatehgarh UMSPP. Based on the outcome regarding additional scope for future provision, the instant petition was filed by the Petitioner.

c) Notwithstanding the above, CEA is being requested to take up the above scope for future provision under Fatehgarh UMSPP transmission scheme for discussion in ensuing meeting of the Standing Committee on Power System Planning for Northern Region.

d) As regards treatment of ownership of additional space, cost and recovery of tariff corresponding to additional space to be procured by the developer, the Petitioner vide communication dated 1.3.2017 has intimated to CEA that the matter may be taken up with the Bid Process Coordinator (BPC) M/s PFC Consulting Ltd. to include the following provision in RFP document-

> *"The TSP for the scheme shall keep the space for the future expansion as per the scope given in the RFP and shall provide that space to the new TSP free of any cost, who would be carrying out the future expansion."*

e) Consequent to intimation of grant of LTAs, LTA agreement has been signed with SPPD on 22.9.2016 and SPPD have submitted the requisite construction bank guarantee.

f) The selection of Transmission Service Provider is being undertaken by BPC under two stage process of 'Request for Qualification' and 'Request for Proposal. The RFQ has already been submitted on 30.12.2016. Vide Communication dated 10.2.2017, BPC has been advised by CTU to keep the commissioning schedule of the Transmission system matching with the commissioning schedule of December, 2018, of the Solar Park.

7. Reply to the Petition has been filed by the respondent, AREPRL vide affidavit dated 27.2.2017 and it has submitted that the scope of work as mentioned by PGCIL in the petition is different from the agreed scope of work under the MoM dated 8.6.2016 and the following scope of work was never agreed to during the said meeting:

> *(i) Space for future 220 kV (6 nos.), 400 kV (6 nos.) and 765 kV (4 nos.) line bays along with line reactors at Fatehgarh pooling station*
>
> *(ii) Space for future 220/400 kV transformers (2 nos.), 400/765 kV transformers (2 nos.) along with associated transformer bays at each level;*
>
> *(iii) Space for future 765 kV bus reactor along with associated bays*

Accordingly, there is deviation in the scope of work issued pursuant to 38th Standing Conference and the scope of work mentioned in the Petition.

8. AREPRL has further submitted that the land is being allotted to AREPRL for Solar park by Govt. of Rajasthan on long term lease basis, at district level Committee rate and letter dated 21.11.2016 has been issued to AREPRL by the Revenue Department. AREPRL has stated that it would transfer/ sub-lease the land further to the successful bidder subject to the terms and conditions of allotment letter to be issued by the Govt. of Rajasthan. It has also submitted that the land cost and lease rent would be as per revenue rules of Rajasthan and the same would be paid / borne by successful bidder. AREPRL has added that the land cost and lease rent shall be subject to revision by the Govt. of Rajasthan and the successful bidder would also be responsible for payment of all other taxes and duties, service tax, duties, cess and other Govt. levies applicable from time to time for the land. AREPRL has also stated that initially, AREPRL was required to provide land for 765/400 kV pooling station adjacent to the proposed solar park. However, as there is always a provision of expansion of grid sub-station, the same could not have been ascertained at the time of 38th Standing Committee meeting. AREPRL has stated that it had already identified

land for future expansion of Fatehgarh Solar park which is in the vicinity of the park and would facilitate for additional land required for expansion of 765/ 400 kV Pooling station, if required and the same would be provided as per the allotment letter of the land which is to be issued by the Govt of Rajasthan.

9. During the hearing of the matter on 27.4.2017, the Petitioner submitted that there is deviation in the scope and accordingly, PGCIL has requested CEA to take up the additional scope for future provision under Fatehgarh UMSPP transmission scheme for discussion in the Standing Committee Meeting on Power System Planning of the Northern Region scheduled on 15.5.2017. The Commission after directing the Petitioner to file the minutes of the said SCM, reserved its order in the Petition.

10. In compliance with the above directions, the Petitioner vide affidavit dated 6.6.2017 has stated that the 39th Standing Committee Meeting of Northern Region was held on 29th – 30th May, 2017. Thereafter, by affidavit dated 22.8.2017, the Petitioner has enclosed the Copy of the minutes of the said Standing Committee Meeting and has submitted the following:

a) Based on the subsequent developments of receipt of connectivity application for various renewable energy project developers at Fatehgarh as well as ratification of complete scheme, scope in the Standing Committee meeting, the scheme was again discussed in the 39th Standing Committee Meeting on Power System Planning of Northern Region held on 29th – 30th May, 2017. In the meeting, it was decided that CEA would convene a separate meeting for finalization of scope in the light of new connectivity applications and implementation issues in the up gradation of Fatehgarh Pooling station to 765 kV level

b) Based on the above, a meeting was taken by the Chief Engineer (PSPA-I), CEA on 27.6.2017 regarding transmission system for UMSPP in Fatehgarh. In the said meeting, the following transmission scheme was agreed:

i) Establishment of 400k V pooling Station at Fatehgarh;

ii) Provision of 220k level at 400k v pooling Station at Fatehgarh;

iii) Fatehgarh pooling station-Bhadla (PG) 765kV D/C line (to be operated at 400kV).

iv) 2Nos. if 400kV line bays at Fatehgarh Pooling station.

*v) 1×500MVA, 400/220kV transformer along with associated transformer bays and Bus Coupler and Transfer Bus bay to be provided at 220kV level**;*

vi) 1×125 NVAR Bus reactor at 400kV Fatehgarh Pooling station along with associated bay.

*vii) 2 nos 400 Kv line bays at Bhadla (PG)**

viii) Space for future 220kV (12Nos.) line bays.

ix) Space for future 400kV (8Nos.) line bays along with line reactors at Fatehgarh Pooling station.

x) Space for future 220/400kv transformer (04 Nos.) along with associated transformer bays at each level.

xi) Space for future 400kVbus reactor (2Nos.) along with associated bays.

Note: Transmission system mentioned at i, iii, iv and vi are for 1000 MW LTA to AREPRL. Transmission system mentioned at i, ii, iii and v shall be the common transmission scheme for grant of connectivity at Fatehgarh (subject to submission of construction bank guarantee by connectivity applicants in line with CERC Regulations)

** Under POWERGRID scope*

*** Transmission element mentioned (ii) & (v) to be included in the implementation scope (TBCB) only after submission of construction bank guarantee by connectivity applicant(s)*

Following points were also agreed in the meeting dated above:

(i) Park developer to construct 400 kV D/C line from M/s AREPL solar park to Fatehgarh along with 400 kV line bays at Fatehgarh and along with 1 x 125 MVAR bus reactor at generation switchyard.

(ii) Solar park developer (M/s AREPL) to provide adequate land for 400 kV & 220 kV pooling stations adjacent to the proposed solar power park for which transmission licensee shall coordinate with M/s AREPL including commercial aspects for transfer of lands.

(iii) 220 kV line bays at Fatehgarh pooling substation for other connectivity lines shall be under the scope of respective developer.

(iv) Solar Park Developer (M/s AREPL) to provide 2 nos 400 kV line bays at Fatehgarh pooling substation for termination of 400 kV D/C line from M/s AREPL solar park to 400 kV Fatehgarh pooling substation.

f) CEA advised CTU to furnish revised RfP inputs except for (ii) & (v) BPC so that the bidding process for the scheme may continue. After receipt of BG from connectivity applicants, say within stipulated time, (ii) & (v) would be included in the scope along with requisite RfP inputs"

11. Accordingly, the Petitioner, in terms of the Regulatory Approval Regulations, has enclosed the revised Project Inception Report and has prayed for grant of regulatory approval of the above transmission scheme for implementation.

Analysis and Decision

12. We have considered the submissions of the Petitioner and AREPRL. Regulation 3 of the said Regulatory Approval Regulations provides as under:

> *".....3. Scope and applicability*
>
> *(1) These regulations shall apply to :*
>
> *(a) an ISTS Scheme proposed by Central Transmission Utility, for which generators have sought long-term access as per the Central Electricity Order in Petition No. 228/MP/2015 Page 7 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."*

13. In terms of the above regulations, the pre-requisites for the grant of regulatory approval of the transmission system are as under:-

(a) *the Central Government authorized Solar Power Park Developer shall have sought long term access;*

(b) *there should be a consultation with CEA and beneficiaries wherever identified for setting up ISTS scheme;*

(c) *after consultation as above, the CTU shall proposed ISTS scheme;*

(d) *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*.

14. Government of India has taken the initiative for development of Solar Power Parks in various parts of the Country. As part of the initiative, Solar Power Parks are being developed by various developers near Bhadla and Jaisalmer in the State of Rajasthan. 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 and directed PGCIL to seek regulatory approval from the Commission to construct the transmission lines as ISTS lines.

15. As per the provisions of 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, 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 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."*

16. Accordingly, Ministry of New and Renewable Energy, GOI vide its letter dated 4.2.2016 has authorized AREPRL to apply to CTU for grant of connectivity and Long Term Access in ISTS. Relevant portion of the letter dated 4.2.2016 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 for Connectivity and Long Term Access in Inter-State Transmission System, the Ministry of New and Renewable Energy hereby declares M/s Adani Renewable Energy Park Rajasthan Limited (AREPRL); a JVC of Government of Rajasthan and Adani Renewable Energy Park Limited as the Solar Power Park Developer (SPPD) for Fatehgarh Phase 1B solar park of capacity 1500 at villages- Duwada and Rasla, Tehsil-Fatehgarh and village-Nedan, Tehsil- Pokran, District-Jaisalmer, Rajasthan. However, central grants will be provided only for 321 MW as the capacity left is only 321 MW out of 20,000 MW approved under the solar park scheme. The SPPD shall undertake infrastructural activities including arrangement of connectivity on behalf of solar power generator in the stated Parks."*

17. AREPRL has made application to CTU for grant of connectivity and LTA in ISTS and based on the same CTU had granted connectivity and LTA on 9.8.2016.

18. The issue of implementation of the Transmission system for Ultra Mega Solar Park in Fatehgarh, Rajasthan was discussed in the 38th Standing Committee Meeting on Power System Planning of Northern Region, on 30.5.2016, the relevant portion of which is extracted as under:

> *"15.2 He further stated that M/s Adani Renewable Energy Park Rajasthan (AREPL) Ltd. has applied for connectivity (1000 MW) and Long Term Access (250 MW) in ISTS with commissioning schedule of Jun'17 for its Ultra Mega Solar Power Park at Fatehgarh, distt. Jaisalmer, Rajasthan with target region as NR. Subsequently, M/s Adani Renewable Energy Park Rajasthan (AREPL) Ltd. applied for additional LTA for 750 MW (application is under processing as of now) for its above Fatehgarh UMSPP. As per the combined LTA application, 1000 MW Power from Fatehgarh UMSPP is envisaged to be transferred to be beneficiaries of Northern region by June, 2017. Thus, to evacuate power from the Fatehgarh UMSPP (1000 MW), it is proposed that the earlier agreed 3x500 MVA, 400/220 kV Pooling Station at Fatehgarh (with a provision to upgrade at 765 kV level) along with 765 kV Fatehgarh Pool-Bhadla (PG) D/C line (initially to be operated at 400 kV) may be implemented.*
>
> *xxxxxxx*
>
> *15.5 During the discussion, it was brought that around 3000 MW of solar generation would be coming up in the Fatehgarh district of Rajasthan and would be evacuated through Fatehgarh pooling sub-station. Accordingly, it was decided that the following transmission system may be taken up for implementation under ISTS through TBCB route.*
>
> - *765 kV Fatehgarh Pooling sub-station-Bhadla (PG) D/C line (initially to be operated at 400 kV)*
> - *Establishment of 400 kV Pooling Station at Fatehgarh (with a provision to upgrade at 765 kV level)*
> - *2 nos. of 400 kV line bays at Fatehgarh Pooling substation*
> - *1x125 MVAR Bus reactor at 400 kV Fatehgarh Pooling sub-station*
>
> ***Note**: Park Developer to construct 400 kV line from M/s AREPL solar park along with 1x125 MVAr bus reactor at generation switchyard.*
>
> *15.6 ED (SG), Powergrid stated that the solar park developer would provide adequate land for 765/400 kV Pooling sub-station adjacent to the proposed solar park.*
>
> *15.7 It was decided that while implementing the transmission system, adequate care should be taken such that the transmission system does not remain idle."*

19. Thereafter, based on the comments from PGCIL and RRVPNL, the minutes of the 38th Standing Committee Meeting on 30.5.2016 was modified and Corrigendum

was issued on 19.10.2016, wherein, the scope of the said transmission scheme to be implemented was revised as under:

> *"15.0 Transmission system for Ultra Mega Solar Park in Fatehgarh, dist. Jaisalmer, Rajasthan*
>
> *Power grid has made the observation that 400 kV line bays at Bhadla (PG) for termination of 765 kV Fatehgarh PS-Bhadla (PG) D/c line (initially to be op at 400 kV) has been missed out from the transmission scheme's scope mentioned in Para15.5 of the 38th SCM minutes. Accordingly, the scope of the scheme 'Transmission system for Ultra Mega Solar Park in Fatehgarh, distt. Jaisalmer, Rajasthan' to be taken up for implementation under ISTS through TBCB route is as follows:*
>
> - *765 kV Fatehgarh Pooling S/s- Bhadla (PG) D/C line (initially to be operated at 400 kV)*
> - *Establishment of 400 kV Pooling Station at Fatehgarh (with a provision to upgrade at 765 kV level)*
> - *2 nos of 400 kV line bays at Fatehgarh Pooling substation*
> - *1 x 125 MVAR Bus reactor at 400 kV Fatehgarh Pooling substation*
>
> ***Note:** (i) Park developer to construct 400 kV line from M/s AREPL solar park along with 1 x 125 MVAR bus reactor at generation switchyard.(ii) Power grid to provide two number of line bays at Bhadla (PG)"*

20. The transmission scheme was further discussed in the 36th Empowered Committee on Transmission held on 26.7.2016 and the scheme was approved for implementation through TBCB route with an estimated cost of ₹536 crore. Relevant portion of the minutes of the meeting is as under:

> ***"**12.2 Name of the Scheme: Transmission system for Ultra Mega Solar Park in Fatehgarh, distt. Jaisalmer Rajasthan*
>
> *Chief Engineer (PSP&PA-I), CEA stated that the transmission scheme has been approved in the 38th Standing Committee on Power System Planning of Northern Region held on 30th May, 2016. The scope of the transmission scheme is as under:-*

Scope of the Transmission Scheme	***Capacity (MVA/km)***	***Estimated Cost (₹ in Crore)***
(i) Establishment of 400 kV Pooling Station at Fatehgarh (with a provision to upgrade at 765 kV level)		*84*
(ii) 765 kV Fatehgarh Pooling sub-station-Bhadla (PG) D/C line (initially to be operated at 400 kV)	*110*	*424*
(iii) 2 nos. of 400 kV line bays at Fatehgarh Pooling substation		*20*
(iv) 1x125 MVAR Bus reactor at 400 kV Fatehgarh Pooling sub-station *(v) Space for 2 nos. of 400 kV bays for termination of 400 kV*		*8*

D/C line from AREPL Solar Park *(vi) Space for future 400 kV and 765 kV bays at Fatehgarh Pooling Station*		
Total Estimated Cost		***536***

Note:

a. *The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.*
b. *Park Developer to construct 400 kV from M/s AREPL solar park along with 1x125 MVAr bus reactor at generation switchyard.*
c. *Powergrid to provide two nos. of 400 kV line bays at Bhadla PS*
d. *The solar park developer (M/s AREPL) would provide adequate land for 765/400 kV Pooling sub-station adjacent to the proposed solar park for which transmission licensee shall coordinate with M/s AREPL*
e. *Solar park developer (M/s AREPL) to provide 2 nos. of 400 kV line bays at Fatehgarh Pooling Station for termination of 400 kV D/C line from AREPL solar park to 400 kV Fatehgarh Pooling station"*

21. Thereafter, the above scope of the transmission system was modified based on the suggestions of Powergrid and Corrigendum to the minutes of the 36th Empowered Committee on Transmission held on 26.7.2016, was issued on 18.10.2016. The relevant portion of the minutes is extracted as under:

"Item 12.2 Transmission system for Ultra Mega Solar Park in Fatehgarh, dist. Jaisalmer Rajasthan

The scope of above mentioned transmission scheme after incorporating the modifications suggested by Powergrid is as under:

Scope of the Transmission Scheme	**Capacity (MVA/km)**	**Estimated Cost** ***(₹ In crore)***
(i) Establishment of 400 kV Pooling Station at Fatehgarh (with a provision to upgrade at 765 kV level)		84
(ii) 765 kV Fatehgarh Pooling sub-station-Bhadla (PG) D/C line (initially to be operated at 400 kV)	*110*	*424*
(iii) 2 nos. of 400 kV line bays at Fatehgarh Pooling substation		*20*
(iv) 1x125 MVAR Bus reactor at 400 kV Fatehgarh Pooling sub-station *(vi) Space for future 220 kV (6 Nos), 400 kV (6 Nos) and 765 kV (4 nos) line bays along with line reactors at Fatehgarh Pooling station* *(vi) Space for future 220/400 kV transformers (2 nos.), 400/765 kV transformers (2 nos) along with associated transformer bays at each level* *(vi) Space for future 765 kV bus reactor along with associated bays*		*8*
Total Estimated Cost		***536***

Note:

a. *The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.*
b. *Park Developer to construct 400 kV from M/s AREPL solar park along with 1x125 MVAr bus reactor at generation switchyard.*
c. *Powergrid to provide 2 nos. of 400 kV line bays at Bhadla (PG) for Fatehgarh Pooling Station-Bhadla D/C line (initially to be operated at 400 kV)*
d. *The solar park developer (M/s AREPL) to provide adequate land for 765/400 kV Pooling sub-station adjacent to the proposed solar park for which transmission licensee shall coordinate with M/s AREPL including commercial aspects for transfer of land.*
e. *Solar park developer (M/s AREPL) to provide 2 nos. of 400 kV line bays at Fatehgarh Pooling Station for termination of 400 kV D/C line from AREPL solar park to 400 kV Fatehgarh Pooling station"*

22. Thus, the transmission scheme for Fatehgarh UMSPP recommended by the 36th Empower Committee for implementation through TBCB contained the following scope of works:

(i) Establishment of 400 kV pooling station at Fatehgarh with a provision to upgrade at 765 kV level.

(ii) 765 kV pooling sub-station- Bhadla (PG) D/c line

(iii) 2 nos. 400 kV line bays at Fatehgarh pooling station

(iv) 1 x 125 MVAR Bus reactor at 400 kV Fatehgarh pooling sub-station

(v) Space for future 220 kV (6 nos.), 400 kV (6 nos.) and 765 kV (4 nos.) line bays along with line reactors at Fatehgarh pooling station

(vi) Space for future 220/400 kV transformers (2 nos.), 400/765 kV transformers (2 nos.) along with associated transformer bays at each level;

(vii) Space for future 765 kV bus reactor along with associated bays

Note:

a) Park Developer to construct 400 kV D/C line from M/s AREPL solar park to fatehgarh along with 400kV line bays at Fatehgarh and along with 1x 125 MVAr bus reactor at generation switchyard.

b) POWERGRID to provide 2 nos. of 400 kV line bays at Bhadla (PG) for termination of 765 kV Fatehgarh PS-Bhadla (PG) D/c line (initially to be operated at 400kV) at Bhadla end.

c) The Solar park developer (M/s AREPL) to provide adequate land for 400kV and 220 kV pooling station adjacent to the proposed solar park for which, transmission licensee shall coordinate

d) Solar park developer (M/s AREPL) to provide 2 nos. of 400kV line bays at Fatehgarh Pooling Station for termination of 400kV D/C line from AREPL solar park to 400kV Fatehgarh Pooling station.

23. Thus, the space provisions for line bays/ transformers and Bus reactors along with associated bays [(as in para 18 (v), (vi) and (vii) above)] as recommended by the 36th Empowered Committee did not form part of the scope of the project as agreed by the 38th Standing Committee on 30.5.2016. It is however observed that the 39th Standing Committee in its meeting held on 29th-30th May, 2017, decided that CEA would convene a separate meeting for finalization of the scope of transmission system in the light of new connectivity applications from renewable energy project developers namely (a) M/s Suzlon Power Infrastructure Ltd for 900 MW (Wind-Solar hybrid) and M/s Green Infra Wind Energy Ltd for 450 MW Wind & 450 MW Solar Generation and implementation issues in the up-gradation of Fatehgarh Pooling Station to 765 kV level. Relevant portion from the 39th SCM is extracted as under:

"14.3CTU informed that they have received no. of applications for connectivity from various renewable energy project developers at Fatehgarh viz.

***a)** M/s Suzlon Power Infrastructure Limited for*
i) 900 MW (Wind-Solar Hybrid) ii) 300 MW (Wind Generation) and

b) M/s Green Infra Wind Energy Limited for
450 MW Wind and 450 MW Solar Generation.

The connectivities to these generators are proposed to be given at 220 kV. Therefore, there is a need to add 400/220 kV ICT at Fatehgarh. He also mentioned that all new applications received for interconnection at Fatehgarh Pooling station are for connectivity only. When these generators would apply for LTA, Fatehgarh Pooling S/s-Bhadla (PG) 765 kV D/C line (initially to be operated at 400 kV) may required to be upgraded at 765 kV level.

14.4 Chief Engineer PSPA-I, CEA stated that the scheme "Transmission System for Ultra Mega Solar Park in Fatehgarh, Jaisalmer" is being implemented through TBCB route and presently under bidding process. The RfQ has been issued and for RfP the complete scope of the scheme needs to be intimated to the prospective developer. However, for granting connectivity to new applicants, 220 kV level needs to be created with addition of 1x500 MVA, 400/220 kV transformer at Fatehgarh S/s. The upgradation of Fatehgarh sub-station to 765 kV level would be required as and when new RE project developers apply for LTA to CTU. Further, as per the tariff policy in vogue, the upgradation work would be carried out through TBCB by new TSP, which involve lot of implementation issues such as sharing of common facilities, control room etc.

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14.6 After deliberations, it was decided that CEA would call a separate meeting to decide the scope of works for the scheme "Transmission system for Ultra Mega Solar Park in Fatehgarh, Jaisalmer" in view of new applications received by CTU for grant of

connectivity at Fatehgarh and implementation issues in upgradation of Fatehgarh sub-station to 765 kV level."

24. Accordingly, the transmission scheme was discussed by the Chief Engineer (PSPA-I), CEA in its meeting held on 27.6.2017, the relevant portion of which is extracted as under:

"5 Chief Engineer (PSPA-I) CEA opined that adding one 400/220 kV ICT in similar time frame through separate TSP may result into lot of coordination and implementation issues and suggested that the 400/220 kV ICT may be included in the present RFP scope and accordingly, RFP shall be modified. Looking into the renewable potential in this area, requirement of 765 kV level may come up in a very short time also, however at present there is no need of keeping the provision of charging the Fatehgarh-Bhadla 400 kV D/C line at 765 kV level, as there is LTA application for 1000 MW only at Fatehgarh. Further ownership of 400 kV & 765 kV level by two different TSPs in the same S/s may lead to many operational and coordination problems between the two TSPs in Future at Fatehgarh.

6. The issue was deliberated and it was opined that considering the number of connectivity/LTA applications, in future another pooling station may be planned, near Fatehgarh, where LILO of Fatehgarh-Bhadla 765 kV D/c line (initially charged at 400 kV) may be carried out and line section from New Pooling station to Bhadla may be charged at 765 kV level, in case of its requirement. In this case, both the TSPs for Fatehgarh and new pooling station near Fatehgarh shall have their independent operational areas and of LTA can be accommodated at these two pooling stations.

7. Considering the above, it was agreed to delete the future scope for creation of 765 kV level at Fatehgarh. It was also agreed to add the scope of 1x500 MVA, 400/220 kV ICT in the present RFP scope of the transmission scheme.

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9. CTU stated that as M/s AREPRL has been granted Long Term Access for 1000 MW on the basis of target beneficiaries therefore, transmission system shall be implemented for M/s AREPRL as a Long Term Customer, M/s AREPRL is liable to pay the transmission charges till the COD of its Solar generation project and also till the signing of PPA…….

Hence, as on date M/s AREPRL is liable to sign TSA for this Transmission scheme and pay transmission charges till the signing of PPA. However, there are other generators for which Connectivity is proposed to be granted at Fatehgarh. Accordingly, the earlier list of DICs provided along with the inputs for preparation of RFP document on 10/02/2017, may have to be modified and the same shall be forwarded later by CTU along with revised RFP details after the grant of connectivity/submission of requisite BG.

10. In view of above, it was agreed that the following may be included in the RFP document for the scheme "Transmission system for Ultra Mega Solar Park in Fatehgarh, Distt Jaisalmer Rajasthan" to be implemented through TBCB:

- *Provision of 220 kV level at 400 kV Pooling Station at Fatehgarh*
- *1x500 MVA, 400/220 kV Transformer at Fatehgarh PS as a part of Common Transmission system required for grant of connectivity to the applicants (subject to the submission of Construction Bank Guarantee by the applicants in line with the CERC regulations).*

- *Deletion of provision of charging the Fatehgarh-Bhadla 765 kV D/c line (initially charged at 400 kV level) as well as Fatehgarh substation at 765 kV level from the scope of the scheme and accordingly, RFP need to be revised."*

25. Thus, the scope of works for the transmission system agreed in the meeting of the CEA dated 27.6.2017 is as under:

(i) Establishment of 400k V pooling Station at Fatehgarh;

(ii) Provision of 220k level at 400k v pooling Station at Fatehgarh;

(iii) Fatehgarh pooling station-Bhadla (PG) 765kV D/C line (to be operated at 400kV).

(iv) 2Nos. if 400kV line bays at Fatehgarh Pooling station.

*(v) 1×500MVA, 400/220kV transformer along with associated transformer bays and Bus Coupler and Transfer Bus bay to be provided at 220kV level**;*

(vi) 1×125 NVAR Bus reactor at 400kV Fatehgarh Pooling station along with associated bay.

*(vii) 2 nos 400 Kv line bays at Bhadla (PG)**

(viii) Space for future 220kV (12Nos.) line bays.

(ix) Space for future 400kV (8Nos.) line bays along with line reactors at Fatehgarh Pooling station.

(x) Space for future 220/400kv transformer (04 Nos.) along with associated transformer bays at each level.

xi) Space for future 400kVbus reactor (2Nos.) along with associated bays.

Note: Transmission system mentioned at i, iii, iv and vi are for 1000 MW LTA to AREPRL. Transmission system mentioned at i, ii, iii and v shall be the common transmission scheme for grant of connectivity at Fatehgarh (subject to submission of construction bank guarantee by connectivity applicants in line with CERC Regulations)

** Under POWERGRID scope*

*** Transmission element mentioned (ii) & (v) to be included in the implementation scope (TBCB) only after submission of construction bank guarantee by connectivity applicant(s)*

(i) Park developer to construct 400 kV D/C line from M/s AREPL solar park to Fatehgarh along with 400 kV line bays at Fatehgarh and along with 1 x 125 MVAR bus reactor at generation switchyard.

(ii) Solar park developer (M/s AREPL) to provide adequate land for 400 kV & 220 kV pooling stations adjacent to the proposed solar power park for which transmission licensee shall coordinate with M/s AREPL including commercial aspects for transfer of lands.

(vii) 220 kV line bays at Fatehgarh pooling substation for other connectivity lines shall be under the scope of respective developer.

(viii) Solar Park Developer (M/s AREPL) to provide 2 nos 400 kV line bays at Fatehgarh pooling substation for termination of 400 kV D/C line from M/s AREPL solar park to 400 kV Fatehgarh pooling substation.

f) CEA advised CTU to furnish revised RfP inputs except for (ii) & (v) BPC so that the bidding process for the scheme may continue. After receipt of BG from connectivity applicants, say within stipulated time, (ii) & (v) would be included in the scope along with requisite RfP inputs"

26. AREPRL vide letters dated 23.8.2016 and 24.8.2016 has furnished the undertaking that they will bear all liabilities related to LTA and connectivity in accordance with the Regulations/orders issued by the Commission on behalf of the Solar Power Generators to be set up in the Solar Park. Also, the Commissioning schedule of the Solar Power Projects which was December, 2017 was revised by APERPL to December, 2018, in the meeting held on 11.11.2016.

27. In the present case, the scope of work of the transmission scheme for Fatehgarh UMSPP as agreed in the 38th SCM held on 30.5.2016 had undergone modification vide Corrigendum dated 19.10.2016. Thereafter, with the introduction of space provisions for line bays/ transformers and Bus reactors along with associated bays, the scope of work was further revised by the 36th Empowered Committee held on 26.7.2016 and later vide corrigendum dated 18.10.2016. It is further noticed that the 39th SCM held on 29-30th May, 2017 had directed CEA to finalize the scope of works for the transmission scheme in view of the receipt of new connectivity applications from renewable project energy developers and implementation issues in up-gradation of Fatehgarh sub-station to 765 kV level. This is evident from the revised Project Inception Report a portion of which is extracted hereunder:

"Further, in view of the receipt of number of applications for connectivity from various RE developers near Fatehgarh, in the meeting held on 27.6.2017 in CEA, it was decide that for granting connectivity to new applicants, 220 kV level needs to be created with the addition of 1 x 500 MVA, 400/220 kV transformer at Fatehgarh s/s. Accordingly, provision for 1 x 500 MVA, 400/220 kV transformer at Fatehgarh, as part of the common

transmission required for grant of connectivity to the respective applicants, is kept in the scope. However, its implementation shall be taken up only after the submission of construction bank guarantee by the connectivity applicants in line with the CERC regulations.

28. Based on this, the CEA vide its meeting dated 27.6.2017 has decided the scope of the transmission scheme, as stated in para 25 above, with an estimated cost of ₹594 crore, for which the Petitioner has prayed for grant of regulatory approval.

29. The Petitioner has placed on record the revised Project Inception Report containing the cost benefit analysis including the long term economic advantage. As noted, the scope of works of the transmission system as decided in the 38th SCM had undergone revision. Moreover, the scope of works for the transmission system as finalized in the CEA meeting dated 27.6.2017 had not been placed before the Standing Committee for approval. In this background, there is reason for us not to grant regulatory approval of the transmission scheme as prayed for by the Petitioner. However, considering the fact that the scheduled commissioning of the Solar Power Projects is December, 2018, there is a necessity to implement the transmission system to match the time schedule of generation from the Solar Power Projects, so that it does not get stranded for lack of evacuation system. In this background, we accord regulatory approval under Regulation 3 of the Regulatory Approval Regulations for execution of the transmission scheme as decided by the CEA in its meeting dated 27.6.2017 (as stated in para 22 above) and prayed for by the Petitioner in the Petition. The regulatory approval granted to CTU for the above said transmission system is subject to the following;

(a) The scope of works of the transmission scheme as decided by the CEA in meeting dated 27.6.2017 shall be placed before the Standing Committee Meeting on Power System Planning in Northern Region, for approval, within one month from the date of this order.

(b) In case there is any material variation /deviation in the scope of transmission scheme decided by the CEA and those approved in the SCM, then the CTU shall approach the Commission and seek fresh approval for the variation in the scope of work.

(c) CTU shall sign Long Term Agreement (LTA) with Solar Power Park Developer (SPPD) and take construction Bank Guarantee (BG) from SPPD as per the provisions of Connectivity Regulations as amended from time to time.

(d) Execution of the transmission system should be made matching with the progress of the generating station and through discussion in the Joint Coordination Committee Meetings.

30. 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.

31. 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."

32. Therefore, the transmission charges for delay in commissioning of solar power generators shall 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.

33. The petition along with IA is disposed of with the above.

Sd/-	***Sd/-***	***Sd/-***	***Sd/-***
(Dr. M. K. Iyer) **Member**	**(A. S. Bakshi)** **Member**	**(A. K. Singhal)** **Member**	**(Gireesh B. Pradhan)** **Chairperson**

Annexure - I

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).