CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 87/TT/2019

Coram:

Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member
Shri Arun Goyal, Member

Date of Order: 05.02.2021

In the matter of

Approval under Regulation-86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission tariff from COD to 31.3.2019 for Asset-1: 1 no. 500 MVA 400/220 kV Transformer along with associated bays at NP Kunta Sub-Station, Asset-2: 2 nos. 220 kV Line bays (Bay No. 210 & 212) at NP Kunta sub-station and Asset-3: 2 nos. 220 kV Line bays (Bay No. 209 & 211) at NP Kunta sub-station under "Transmission System for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh - Part C (Phase-III)" in Southern Region.

And in the matter of

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

Versus

1. Karnataka Power Transmission Corporation Ltd. (KPTCL),
   Kaveri Bhawan,
   Bangalore-560009

2. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO),
   Vidyut Soudha,
   Hyderabad-500082

3. Kerala State Electricity Board (KSEB)
   Vaidyuthi Bhavanam Pattom,
   Thiruvananthapuram-695 004

4. Tamil Nadu Electricity Board (TNEB)
   NPKRR Maaligai, 800, Anna Salai,
   Chennai-600 002

5. Electricity Department,
Government of Goa
Vidyuti Bhawan, Panaji,
Goa-403001

6. Electricity Department,
Government of Pondicherry,
Pondicherry-605 001

7. Eastern Power Distribution Company of Andhra Pradesh Ltd. (APEPDCL),
P&T Colony, Seethmmadhara,
Vishakhapatnam

8. Southern Power Distribution Company of Andhra Pradesh Ltd. (APSPDCL),
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501

9. Central Power Distribution Company of Andhra Pradesh Ltd. (APCPDCL),
Corporate Office, Mint Compound,
Hyderabad-500 063

10. Northern Power Distribution Company of Andhra Pradesh Ltd. (APNPDCL),
Opp. NIT Petrol Pump, Chaitanyapuri,
Kazipet, Warangal-506 004

11. Bangalore Electricity Supply Company Ltd. (BESCOM),
Corporate Office, K.R.Circle,
Bangalore-560 001, Karnataka

12. Gulbarga Electricity Supply Company Ltd. (GESCOM),
Station Main Road,
Gulbarga, Karnataka

13. Hubli Electricity Supply Company Ltd. (HESCOM),
Navanagar, PB Road,
Hubli, Karnataka

14. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001, Karnataka

15. Chamundeswari Electricity Supply Corporation Ltd. (CESC),
927, L J Avenue Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore-570 009, Karnataka

16. Transmission Corporation of Telangana Limited,
Vidhyut Soudha, Khairatabad,
Hyderabad-500082

17. Andhra Pradesh Solar Power Corporation Private Limited ,
6-3-856/A3, Neeraj Public School Lane, Opp. to Green Park Hotel,
Ameerpet, Hyderabad-500 016

18. Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO),
(Formerly Tamil Nadu Electricity Board -TNEB)
NPKRR Maaligai, 800, Anna Salai,

Chennai-600 002

19. Tamil Nadu Transmission Corporation Ltd. (TANTRANSCO),
(Formerly Tamil Nadu Electricity Board -TNEB)
5B Block 144, Anna Salai,
Chennai-600 002 **…Respondents**

Parties present:

For Petitioner: Shri S. S. Raju, PGCIL
Shri Zafrul Hasan, PGCIL
Shri A. K. Verma, PGCIL
Shri B. Dash, PGCIL
Shri V. P. Rastogi, PGCIL

For Respondent: Shri S. Vallinayagam, Advocate, TANGEDCO
Dr. R. Kathiravan, TANGEDCO

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the Petitioner”) for determination of transmission tariff from COD to 31.3.2019 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) in respect of the following assets of under “Transmission System for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh - Part C (Phase-III)” in Southern Region (hereinafter referred as “the Transmission Scheme”):

Asset-1: 1 no. 500 MVA 400/220 kV Transformer along with associated bays at NP Kunta Sub-Station;

Asset-2: 2 nos. 220 kV Line bays (Bay No. 210 & 212) at NP Kunta sub-station; and

Asset-3: 2 nos. 220 kV Line bays (Bay No. 209 & 211) at NP Kunta sub-station

2. The Petitioner has made the following prayers:

“1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition,.

2) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.

3) Tariff may be allowed on the estimated completion cost.

4) Allow the Petitioner to approach Hon'ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.

5) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulations 2014 and Tariff Regulations 2019.

6) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70(1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.

7) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70(3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

8) Allow the Petitioner for approval of COD under clause 4(3)(ii) for subject Asset-3.

9) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.

10) Allow the Petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt./Municipal Authorities shall be allowed to be recovered from the beneficiaries.

11) Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.

12) Allow the Petitioner to bill tariff from COD and also the Petitioner may be allowed to submit revised Certificate and tariff Forms (as per the relevant Regulation) based on actual COD, if any.

and pass such other relief as the Commission deems fit and appropriate under the circumstances of the case and in the interest of justice."

Background

3. Ministry of New and Renewable Energy (MNRE) vide its letter dated 2.12.2014 and Ministry of Power (MOP) vide its letter dated 8.1.2015 and 4.8.2015

has entrusted the implementation of work related to transmission system for evacuation of power from 9 solar parks including the instant solar park in Andhra Pradesh to the Petitioner and also conveyed the approval regarding the transmission system connecting solar parks to ISTS be declared as part of ISTS.

4. The Commission vide order dated 6.8.2015 in Petition No. 29/MP/2015 accorded the Regulatory approval for execution of the subject scheme.

5. Investment Approval (IA) for the Transmission Scheme was accorded by Board of Directors of the Petitioner Company in its 327th meeting held on 2.4.2016 (notified vide Memorandum Ref no. C/CP/Solarpark A.P.-C dated 8.4.2016) at an estimated cost of ₹4091 lakh including IDC of ₹181 lakh based on October, 2015 price level. The Transmission Scheme was to be completed within 19 months from date of IA i.e. by 2.11.2017.

6. The scope of the Transmission Scheme was discussed and agreed in the 38th meeting of Standing Committee on Power System Planning of Southern Region held on 7.3.2015. The scope of the Transmission Scheme was later discussed and agreed in the 27th SRPC meeting held on 12.5.2015 and 28th SRPC meeting held on 10.10.2015.

7. The scope of work covered under the Transmission Scheme as per IA is as follows:

Substation

(i) 400/220 kV NP Kunta Substation

400 kV

a) 500MVA, 400/220kV transformer : 1 no.
b) Transformer bay : 1 no.

<u>220 kV</u>

a) Line Bays : 4 nos.
b) Transformer bay : 1 no.

8. The entire scope of the Transmission Scheme is covered in the instant petition. The details of assets are as under:

Asset	Asset Name	COD	Remarks
Asset-1	1 no. 500 MVA 400/220 kV Transformer along with associated bays at NP Kunta Sub-Station	30.9.2018 (Actual)	Covered under instant petition
Asset-2	2 nos. 220 kV Line bays (Bay No 210 & 212) at NP Kunta sub-station and	3.7.2018 (Actual)	
Asset-3	2 nos. 220 kV Line bays (Bay No 209 & 211) at NP Kunta sub-station	3.7.2018*	

** COD claimed under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations.*

9. The details of the Annual Transmission Charges claimed by the Petitioner are as under:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
Depreciation	49.91	11.66	11.65
Interest on Loan	50.55	11.99	11.97
Return on Equity	55.61	12.99	12.97
Interest on Working Capital	6.16	4.33	4.33
O&M Expenses	58.73	71.63	71.63
Total	**220.96**	**112.60**	**112.55**

10. The details of interest on working capital claimed by the Petitioner are as under:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
Maintenance Spares	17.52	14.43	14.43
O&M Expenses	9.73	8.02	8.02
Receivables	73.25	25.20	25.19
Total	100.50	47.65	47.64
Rate of Interest	12.20%	12.20%	12.20%
Interest on working Capital	**6.16**	**4.33**	**4.33**

11. The Petitioner has served a copy of the petition upon the respondents and notice of this tariff application has been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Reply to the petition has been filed by TANGEDCO (Respondent no. 18), vide affidavit dated 8.4.2019 and the Petitioner vide its affidavit dated 10.2.2020 filed its rejoinder to the reply of TANGEDCO.

12. The matter was heard on 29.6.2020 and the Commission reserved the order in the matter.

13. This order has been issued after considering the main petition dated 21.1.2019, Petitioner's affidavits dated 25.3.2019, 10.2.2020, 5.5.2020, 16.7.2020 and Reply affidavit dated 8.4.2019 of TANGEDCO.

14. Having heard the representatives of the Petitioner present at the hearing and having perused the material on record, we proceed to dispose of the petition.

Date of Commercial Operation (COD)

15. The Petitioner has claimed COD for the instant assets, as per the following details:

Asset	Name of Asset	Claimed COD
Asset-1	1 no. 500 MVA 400/220 kV Transformer along with associated bays at NP Kunta Sub-Station	30.9.2018 (Actual)
Asset-2	2 nos. 220 kV Line bays (Bay No 210 & 212) at NP Kunta sub-station and	3.7.2018 (Actual)
Asset-3	2 nos. 220 kV Line bays (Bay No 209 & 211) at NP Kunta sub-station	3.7.2018* (Proposed)

**COD claimed under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations.*

16. The Commission vide RoP of hearing dated 11.2.2020 directed the Petitioner to clarify the position as regards actual COD of Asset-1 (claimed as 30.9.2018)

since as per RLDC Certificate, trial operation was conducted from 10.1.2018 to 11.1.2018.

17. In response, the Petitioner vide affidavit dated 5.5.2020 has submitted that as per the Investment Approval of the Transmission Scheme, the following elements associated with NP Kunta Phase-III generation project were envisaged to be commissioned by 7.11.2017:

a) 500MVA, 400/220kV ICT-IV along with bays and equipment at NP Kunta S/S
b) 4 Nos. of 220kV Line Bays (209, 210, 211, 212) at NP Kunta S/S

18. The Petitioner has submitted that in the spirit of regulatory approval of the Transmission Scheme vide order dated 6.8.2015 in Petition No. 29/MP/2015, it had taken up the implementation of above said elements matching with NP Kunta Phase-III generation project (500 MW) which was being done by APSPCL (Andhra Pradesh Solar Power Corporation Pvt Ltd). Coordination with APSPCL for status of generation project was done through JCC (joint coordination committee) meetings/ bilateral meetings to match the transmission system with associated generation. The erection and oil filling process for ICT-IV at NP Kunta i.e. Asset-1 was completed within the approved schedule as per investment approval and the Petitioner applied for CEA clearance in the month of November 2017 which it obtained vide letter dated 13.12.2017. However, due to non-availability of shutdown, the termination up to existing 220 kV bus connections got delayed, resulting into minor delay of 2 months in trial operation of Asset-1 i.e. 400/220kV transformer (ICT-IV) along with associated bays at NP Kunta. Further, during the JCC meetings/ bilateral meetings, it was observed that the commissioning of associated generation project was getting delayed. Therefore, though the transformer became ready and had completed its successful trial operation on 11.01.2018, COD for the same was declared w.e.f.

30.09.2018 matching with generation project i.e. Phase-III of generation project (500 MW) by APSPCL that was completed by 30.9.2018 except for 100 MW which became uncertain in view of cancellation of tenders by SECI/ MNRE. As further matching with balance uncertain generation would have additional cost implications considering contractual obligations, Asset-I i.e. 500 MVA, 400/220 kV ICT-IV was put under commercial operation w.e.f. 30.9.2018.

19. In response to another query of the Commission regarding the associated renewable generators not being impleaded, representative of the Petitioner submitted that the agreement of the Petitioner is with the solar park developer i.e. APSPCL and not directly with the generators. He submitted that the solar park developer has been impleaded and the liability of the cost of mismatch under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations may be imposed on the solar park till the commissioning of associated generation.

20. In support of COD of Asset-1 and Asset-2, the Petitioner has submitted CEA Energisation Certificates dated 13.12.2017 and 23.4.2018 respectively under Regulation 43 of CEA (measures relating to Safety and Electric Supply) Regulations, 2010; RLDC Certificates dated 19.1.2018 and 23.7.2018 respectively; and CMD Certificate as required under the Grid Code.

21. Taking into consideration the CEA Energisation Certificate, RLDC Certificate and CMD Certificate, COD for Asset-1 and Asset-2 is approved as 30.9.2018 and 3.7.2018 respectively.

22. The Petitioner has submitted that Asset-3 (i.e. 220 kV bay nos. 209 & 211 at NP Kunta sub-station) was idle charged on 19.6.2018. However, due to delay of associated generating system under the scope of APSPCL, Asset-3 could not be put

under regular service. Accordingly, the Petitioner has prayed for approval of COD of Asset-3 as 3.7.2018 under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations.

23. Regulation 4(3) of 2014 Tariff Regulations provides as under:

> *"(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:*
>
> *Provided that:*
>
> *(i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:*
>
> *(ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."*

24. Regulation 6.3A (4)(iv) of the Grid Code is as follows:

> *"6.3A Commercial operation of Central generating stations and inter-State Generating Stations*
>
> *4. Date of commercial operation in relation to an interstate Transmission System or an element thereof shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from the sending end to the receiving end:*
>
> *(iv) In case a transmission system or an element thereof is prevented from regular service on or before the Scheduled COD for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system of other transmission licensee, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."*

25. The Commission vide RoP of hearing dated 11.2.2020 directed APSPCL, Respondent No.17, to submit its reply especially on the Petitioner's prayer for approval of COD for Asset-3 under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations. However, the Respondent, APSPCL has not submitted any reply.

26. In support of COD of the Asset-3, the Petitioner has submitted self-declaration COD certificate, CEA Energisation Certificate, "No-load" RLDC charging certificate and CMD certificate as required under the Grid Code. Taking into consideration of the above, COD of the Asset-3 is approved as 3.7.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations.

Capital Cost

27. Clauses (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provide as follows:

> *"(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects"*
>
> *(2) The Capital Cost of a new project shall include the following:*
> *(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
> *(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
> *(c) Increase in cost in contract packages as approved by the Commission;*
> *(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*
> *(e) Capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;*
> *(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;*
> *(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and*
> *(h) Adjustment of any revenue earned by the transmission licensee by using the assets before COD."*

28. The Petitioner has submitted details of apportioned approved cost (FR), capital cost as on COD and estimated additional capital expenditure incurred or projected to be incurred during 2018-19 as claimed by the Petitioner along with Auditor's certificates for the instant assets as under:

(₹ in lakh)

Asset	Apportioned Approved Cost (FR)	Expenditure up to COD	Estimated Expenditure during 2018-19	Estimated Completion Cost
Asset- 1	3263.90	2425.93	25.39	2451.32
Asset- 2	413.90	274.92	43.48	318.40
Asset-3	413.90	274.92	42.62	317.54

Cost Over-run

29. The Petitioner has submitted that the estimated completion cost for the instant assets are within the approved cost. Hence, there is no cost over-run with respect to cost as per FR in respect of the instant assets.

30. We have considered the submissions of the Petitioner and noted that against the total apportioned approved cost as per FR in respect of instant asset, the estimated completion cost including additional capital expenditure is within the apportioned approved cost. Therefore, there is no cost over-run.

Time over-run

31. As per the Investment Approval dated 2.4.2016, the scheduled commissioning date of the instant assets was 19 months. Accordingly, the scheduled commercial operation date of the assets was 2.11.2017 against which the instant assets were put under commercial operation as under:

Assets	Scheduled Date of Completion (SCOD)	COD	Delay (in Days)
Asset-1	2.11.2017	30.9.2018	332
Asset-2		3.7.2018	243
Asset-3		3.7.2018	243

32. The delay reasons submitted by the Petitioner are dealt with in the following paragraphs.

Asset-1

33. The Petitioner has submitted that erection and oil filling process for ICT-IV at NP Kunta i.e. Asset-1 was completed well within the schedule. However, due to

non-availability of the shutdown, the termination of the asset upto existing 220 kV bus connections got delayed and the same resulted in minor delay of 2 months. Asset-1 was ready on 10.1.2018 and it completed trial operation on 11.1.2018. However, COD of Asset-I was declared on 30.9.2018 matching with the generation.

Asset-2 & 3

34. The Petitioner has submitted that delay in commissioning of Asset-2 and Asset-3 is on account of the delay in commissioning of associated renewable generation. With regard to generation, it has submitted that out of 500 MW of generation project under Phase-II, only 400 MW generation projects were ready. Accordingly, Asset-2 has been synchronized to solar generation on 16.6.2018 and 2.7.2018 (trial operation completion date) respectively, whereas Asset-3 is ready since 20.6.2018 (trial operation completion date).

(i) The Petitioner has submitted status of 220 kV incoming feeder as under:

a) Bay No. 210 along with associated equipment at 400/220 kV NP Kunta S/S, charged at 21:42 hrs of 11.6.2018. The line was synchronized at Galiveedu end at 22:04 hrs of 11.6.2018. The line connected to generation at 15:21 hrs of 15.6.2018.

b) Bay No. 212 along with associated equipment at 400/220kV NP Kunta S/S, charged at 18:11 hrs of 19.6.2018. The line was synchronized at 14:09 hrs of 29.6.2018. The line connected to generation at 15:51 hrs of 1.7.2018.

c) Bay No. 209 & 211 were charged on 19.6.2018 but are yet to be synchronized.

35. The Petitioner has claimed that in view of its readiness with Asset-2 and Asset-3, the delay in commissioning of the assets is on account of the delay in commissioning of the generation.

36. The Commission vide RoP of hearing dated 11.2.2020 directed the Petitioner to submit details of time over-run and chronology of activities along with documentary evidence as per the format. In response, the Petitioner vide affidavit dated 5.5.2020 has submitted the following details:

Asset-1 (ICT-4 at NP Kunta; COD: 30.9.2018; time overrun - 62 Days)

Activity	**Period of Activity**				**Time overrun (in days)**	**Reason(s) for time overrun**
	Planned		**Achieved**			
	From	**To**	**From**	**To**		
Land Acquisition	NA	-	-	-	-	-
Date of LOA	5.5.2016	-	11.5.2016	-	-	-
Supplies (Structure, Equipment, etc.)	29.8.2016	2.8.2017	18.8.2016	8.8.2017		Due to non-availability of the shutdown, the termination upto existing 220 kV bus connections got delayed
Civil works & Erection	4.7.2016	2.10.2017	30.6.2016	20.11.2017		
Shutdown	-	-	20.12.2017	22.12.2017		
Testing & Commissioning	3.10.2017	8.11.2017	20.11.2017	10.01.2018	62	

Asset-2 (Bays 210 & 212 at NP Kunta; COD: 3.7.2018; time overrun - 239 days)

Activity	**Period of Activity**				**Time overrun (in days)**	**Reason(s) for time overrun**
	Planned		**Achieved**			
	From	**To**	**From**	**To**		
Land Acquisition	NA	-	-	-	-	-
Date of LOA	5.5.2016	-	11.5.2016	-	-	-
Supplies (Structure, Equipment, etc.)	29.08.2016	02.08.2017	18.08.2016	08.08.2017		
Civil works & Erection	04.07.2016	02.10.2017	30.06.2016	11.12.2017	69	Water logging and repeated de-watering due to high water seepage in 220 kV line bays resulting in delay of 3 months
Delay in Commissioning of associated Renewable Generation				Bay 210-19.6.2018 Bay-212-29.6.2018		
Testing & Commissioning	3.10.2017	08.11.2017	Bay 210-29.12.2017 Bay 211-8.1.2018	210-19.06.2018 212 - 29.06.2018	170	The 220 kV bays were ready in Jan 2018. However,

Activity	Period of Activity				Time overrun (in days)	Reason(s) for time overrun
	Planned		Achieved			
	From	To	From	To		
						lines could be charged only in June 2018 as generating station & 220 kV lines were not ready.

Asset-3 (Bays 209& 211 at NP Kunta; COD: 3.7.2018; Time overrun- 239 days)

Activity	Period of Activity				Time overrun (in days)	Reason(s) for time overrun
	Planned		Achieved			
	From	To	From	To		
Land Acquisition	NA	-	-	-	-	-
Date of LOA	5.5.2016	-	11.5.2016	-	-	-
Supplies (Structure, Equipment, etc.)	29.8.2016	2.8.2017	18.8.2016	8.8.2017		
Civil works & Erection	4.07.2016	2.10.2017	30.6.2016	11.12.2017	69	Water logging and repeated de-watering due to high water seepage in 220 kV line bays resulting in a delay of 3 months
Delay in Commissioning of associated Renewable Generation			Bay 209-11.6.2018 Bay 211-19.6.2018			
Testing & Commissioning	3.10.2017	8.11.2017	Bay 209-29.12.2017 Bay 211-8.1.2018	Bay 209-19.6.2018 Bay 211 -29.6.2018	170	The 220 kV bays were ready in Jan 2018. However, lines could be charged only in June 2018 as generating station & 220 kV lines were not ready.

37. The Commission further directed the Petitioner to submit proof of co-ordination and correspondence made with APSPCL. In response, the Petitioner vide affidavit dated 5.5.2020 has submitted that APSPCL, a joint venture of SECI, APGENCO and NREDCAP is the Solar Power Park Developer and the LTA applicant for the 1500 MW NP Kunta Solar Park. With regard to submission made

regarding the details of generators commissioned, the Petitioner has submitted that out of 1500 MW (Phase-I: 250 MW, Phase-II: 750 MW, Phase-III: 500 MW), 250 MW of Phase-I is already commissioned and 400 MW from Phase-II and Phase-III has also been commissioned. The Petitioner has submitted details of generation likely to be commissioned as per the 27th, 28th and 29th JCC held on 25.6.2019, 26.9.2019 and 23.12.2019 respectively.

38. We have gone through the submissions of the Petitioner. The Petitioner has submitted the assets are delayed due to delay in obtaining shutdown, water logging in sub-station and on account of matching the assets with associated generation projects.

Asset-1:

39. There is a delay of 332 days in case of Asset-1. Out of the total time delay of 332 days, the time delay of 62 days (20.11.2017 to 10.1.2018) is due to delay in obtaining shutdown and from 11.1.2018 to 30.9 2018 is matching with the associated renewable generation.

40. As regards the obtaining shutdown clearance, the petitioner has not submitted any documentary evidence. In view of the non-submission of any documentary proof, the time over run from 20.11.2017 to 10.1.2018 due to shutdown clearance cannot be considered to be beyond control of the Petitioner and the same is not condoned.

41. The Petitioner has further submitted that the time over-run from 11.1.2018 to 30.9.2018 was due to matching with the generation system under the scope of APSPCL. In our view, matching with the associated generation project was the decision of the Petitioner. Therefore, time over-run from 11.1.2018 to 30.9.2018 is

attributable to the Petitioner and cannot be condoned. However, for the period from 11.1.2018 to 30.9.2018, the Petitioner is at liberty to claim compensation in terms of LDs, IDC or IEDC from APSPCL as per the arrangement/agreement entered into, if any.

Asset-2 and Asset-3:

42. There is a delay of 243 days each in case of Asset-2 and Asset-3. Out of the total time over-run of 243 days, the time over-run of about 69 days (30.6.2016 to 11.12.2017) is due to waterlogging and repeated dewatering due to high water seepage in 220 kV line bays which led to delay of civil works and erection and the time over-run of about 170 days (29.12.2017 to 8.1.2018 (Bay 209) and 11.6.2018 to 19.6.2018 (Bay 210) is due to delay in commissioning of the generating station and 220 kV lines were not ready.

43. It is observed from the chart of scheduled activities versus actual activities, as submitted by the Petitioner, that before scheduled COD i.e. 2.11.2017, the Petitioner had completed the work of LOA & supplies. It had started the civil & erection works on time. However, these assets could not be put into commercial operation on time due to water-logging and repeated requirement of de-watering due to high water seepage in 220 kV line bays and also due to delay in commissioning of associated renewable generation.

44. With regard to delay due to water-logging and repeated requirement of de-watering due to high water seepage in 220 kV line bays, the Petitioner has not submitted any documentary evidence in support of the same. Due to non-submission of any documentary evidence, the time over-run of about 69 days on

account of water logging and repeated requirement of de-watering due to high water seepage in 220 kV line bays is not condonable.

45. The petitioner has submitted that the 220 kV line bays were ready in Janaury, 2018 but it is observed from the CEA certificate and RLDC certificate that the Petitioner has submitted CEA energisation certificate dated 24.4.2018 and RLDC certificate dated 23.7.2018 has certified that the trail operation is completed on 16.6.2018 and 2.7.2018 respectively. Therefore, we are unable to agree with the submissions of the Petitioner that the Petitioner is ready in January, 2018. As regards time over-run due to matching with the generating station and the associated 220 kV line bays is concerned, in our view this was the decision of the Petitioner. The Petitioner had recourse to approach the Commission for approval of COD in case its asset cannot be put to use due to delay in commissioning of generating station or delay in COD of upstream/ downstream transmission system. Therefore, the time over-run on account of matching with the commissioning of generating station or commissioning of upstream/ downstream transmission system is not condoned.

46. In view of the above deliberations, the time over-run is not condoned in respect of Asset-1, Asset-2 and Asset-3 and the same is summarised as below:

S.N.	Asset	Total Time over-run (Days)	Time over-run condoned (Days)	Time over-run Not condoned (Days)
1	Asset-1	332	0	332
2	Asset-2	243	0	243
3	Asset-3	243	0	243

Interest During Construction (IDC)

47. The Petitioner has claimed Interest During Construction (IDC) for the instant assets and submitted the Auditor’s Certificates in support of the same. The

Petitioner has submitted computation of IDC along with the year-wise details of the IDC discharged which is summarized as under:

(₹ in lakh)

Asset	IDC as per Auditor's Certificate	IDC discharged up to COD	IDC undischarged up to COD	IDC discharged during 2018-19
Asset-1	76.96	45.78	31.18	31.18
Asset-2	0.84	0.77	0.07	0.07
Asset-3	0.84	0.77	0.07	0.07

48. The Petitioner has submitted IDC computation statement which consist of the name of the loan, drawl date, loan amount, interest rate and interest claimed. The IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Form 6 and Form 9C. While going through these documents, certain discrepancies have been observed such as mismatch in loan amount between IDC statement and in Form 6 & Form 9C. The allowable IDC has been worked out based on the available information and relying on loan amount as per Form 9C. However, the Petitioner is directed to submit the detailed IDC statement by rectifying the above-mentioned deviation, at the time of true up for tariff period 2014-19. Accordingly, details of IDC considered for tariff computation, subject to revision at the time of true up is as below:

(₹ in lakh)

Asset	IDC claimed as per Auditor's certificate	IDC Disallowed due to excess claim & time overrun not condoned, if any	IDC Allowed on accrual basis	IDC Allowed on cash basis as on COD
	1	2	3=(1-2)	4
Asset-1	76.96	48.38	28.58	28.58
Asset-2	0.84	0.84	0.00	0.00
Asset-3	0.84	0.84	0.00	0.00

Incidental Expenditure During Construction (IEDC)

49. Petitioner has claimed IEDC for the instant assets and submitted Auditor's Certificates in support of the same. The Petitioner has submitted that entire IEDC has been discharged up to COD. IEDC claimed is within the percentage of hard cost as indicated in the abstract cost estimate. IEDC allowed on COD is as under:

(₹ in lakh)

Asset	IEDC claimed as per Auditor's certificate	IEDC Disallowed due to Time over-run not condoned	IEDC Allowed on as on COD
	1	2	3
Asset-1	66.69	24.30	42.39
Asset-2	17.05	5.04	12.01
Asset-3	17.05	5.04	12.01

Initial Spares

50. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system.

51. The Petitioner has claimed initial spares corresponding to greenfield substation for Asset-1 and has submitted Auditor's Certificate in support of the same. The Petitioner has not claimed initial spares for Asset-2 and Asset-3. The Petitioner, vide affidavit dated 5.5.2020, has submitted that entire initial spares claimed has been discharged as on COD. The details of initial spares claimed by the Petitioner is as follows:

(₹ in lakh)

<table>
<tr><th>Asset-1</th><th rowspan="2">Capital Cost (Plant and machinery Cost excluding IDC, IEDC, Land cost and cost of Civil works) up to Cut-off date</th><th rowspan="2">Initial Spares Claimed</th><th rowspan="2">Expenditure up to COD</th><th rowspan="2">Additional Capital Expenditure in 2018-19</th></tr>
<tr><th rowspan="2">Element</th></tr>
<tr><th>(a)</th><th>(b)</th><th>(c)</th><th>(d)</th></tr>
<tr><td>Substation</td><td>2307.67</td><td>69.72</td><td>69.72</td><td>0.00</td></tr>
</table>

52. We have considered the submissions made by the Petitioner. The initial spares allowed for the purpose of tariff calculation after considering the Plant and

Machinery cost excluding IDC, IEDC and Land expenses up to 31.3.2019. Accordingly, the initial spares allowed is as under:

(₹ in lakh)

Element	Plant and Machinery Cost excluding IDC, IEDC and Land expenditure up to cut-off date (31.3.2019)	Initial spares claimed	Ceiling limit prescribed in 2014 Tariff Regulations	Initial spares allowed
Substation (Greenfield)	2307.67	69.72	4%	69.72

Central Finance Assistance (CFA)

53. The Petitioner has submitted that the Central Finance Assistance for development of Solar Park and external transmission system has been provided by the Ministry of New and Renewable Energy (MNRE). Ministry of New & Renewable Energy vide letter no. 30/26/2014-15/NSM dated 12.12.2014 has issued administrative guidelines for release of fund for implementation of Scheme for development of Solar Park and Ultra Mega Solar Power projects. The Petitioner has submitted the following in respect of CFA:

a) Amendment in guidelines have been also been issued by Ministry of New & Renewable Energy vide office Memorandum no. F. No. 30/26/2014-15/NSM dated 29.9.2016 as under:

> *"The CFA for development of solar park and for development of external transmission system will be apportioned in the ratio of 60:40 i.e. Rs 12 lakh per MW or 30% of the project cost, whichever is lower may be provided to the Solar Power Park Developers (SPPDs) towards development of solar parks and Rs. 8 lakh per MW or 30% of the project cost, whichever is lower will be provided to the CTU or STU towards development of external transmission system……..."*

b) Details for release of Central Finance Assistance by MNRE to the Petitioner vide letter dated 27.10.2016 and 28.12.2016 has been submitted.

c) MNRE vide its O.M. dated 28.02.2017 sanctioned CFA. The relevant extracts of the O.M. is reproduced below:

> *"2. I am also directed to convey approval for setting up external power evacuation system for Anathapuramu Solar Park, Andhra Pradesh by PGCIL for evacuation of 1500MW solar power from Anathapuramu Solar Park, Andhra Pradesh with total Central Finance Assistance (CFA) of Rs 120, 00, 00,000/- (Rupees One Hundred and Twenty Crore only).*

3. As per Administrative Guidelines 30/26/2014-15/NSM, dated 12.12.2014 and subsequent clarification vide OM no. 30/26/2014-15/NSM dated 29.09.2016, an amount of Rs 60, 26, 47,625/- (Rupees Sixty Crore Twenty Six Lakh Forty Seven Thousand Six Hundred and Twenty Five only) is due to SECI, New Delhi towards award of work for external power evacuation system of for Anathapuramu Solar Park. The amount of Rs 60, 26, 47,625/- (Rupees Sixty Crore Twenty Six Lakh Forty Seven Thousand Six Hundred and Twenty Five only) includes Rs 60,00,00,000/- (Rupees Sixty Crore only) towards development of external power evacuation system for Anathapuramu Solar Park, Andhra Pradesh and Rs 26,47,625/- (Rupees Twenty Six Lakh Forty Seven Thousand Six Hundred and Twenty Five only) towards fund handling charges to SECI.

4. Accordingly, sanction of the President of India is hereby conveyed for release of Rs. 26,74,10,125/- (Rupees Twenty Six Crore Seventy Four Lakh Ten Thousand and Twenty Five only) to Solar Energy Corporation of India (SECI), New Delhi after adjusting Rs 33,52,37,500/- (Rs Thirty Three Crore Fifty Two Lakh Thirty Seven Thousand and Five Hundred only) of excess amount of CFA released to Andhra Pradesh Solar Power Corporation Ltd. (APSPCL) for development of internal infrastructure of Anathapuramu Solar Park, Andhra Pradesh by this Ministry under the Solar Park scheme, APSPCL will release Rs 33,52,37,500/- (Rs Thirty Three Crore Fifty Two Lakh Thirty Seven Thousand and Five Hundred only) to PGCIL as CFA towards development of external power evacuation system of Anathapuramu Solar Park."

d) The Petitioner has received a grant of ₹60,00,00,000/- (Rupees Sixty Crore only) from SECI (₹26,47,62,500/- on 30.8.2017) and (₹33,52,37,500/- on 31.1.2018) during FY 2017-18 towards transmission system for Ultra Mega Solar Park in Anantpur (Phase-I, II & III). The total amount from CFA for Phase-I, II & III is yet to be disbursed. Out of this grant, an amount of ₹543.05 lakhs has been allocated to Asset-1 and the same has been adjusted in the capital cost for the purpose of tariff determination.

54. The Commission vide RoP for the hearing dated 11.2.2020 directed the Petitioner to submit details of the total grant claimed, sanctioned and received as well as its allocation to assets covered under various phases and details of the petitions under which the assets are covered.

55. In response, the Petitioner vide affidavit dated 5.5.2020 and 16.07.2020 has submitted that the Petitioner has received a grant of Rs. 109,55,54,100/- (Rs.26,47,62,500/- on 30.8.2017, Rs. 33,52,37,500/- on 31.1.2018 and Rs. 49,55,54,000/- on 16.10.2019) from SECI towards Transmission System for Ultra Mega Solar Park in Anantpur (Phase-I, II and III). The Petitioner has further

submitted that the balance CFA grant of Rs. 10,44,46,000/- is yet to be disbursed. The Petitioner has allocated Rs. 543.05 lakh of CFA grant to Asset-1 covered under the instant petition and no grant has been allocated to Assets-2 and 3. The Petitioner has further submitted that the balance grant received or yet to be received will be allocated to the assets on the project level and details of the same will be submitted at the time of true up. The Petitioner has prayed to take the above submission on record and allow the tariff as claimed in the instant petition.

56. From the information furnished by the Petitioner, it is noted that CFA of Rs. 49,55,54,000/- has been received on 16.10.2019, which is beyond the 2014-19 tariff period and, therefore, is required to be adjusted in 2019-24 tariff period. Therefore, the Petitioner is directed to file a combined petition at the time of truing up covering all the assets of the project Transmission System for Ultra Mega Solar Park in Anantpur (Phase-I, II and III) after adjusting the full amount of CFA received along with cost certificates and also to furnish methodology followed for allocation (with dates) of grant received to various assets covered in the scheme.

57. Proviso to clause (d) of Regulation 9(6) of the 2014 Tariff Regulations provides as under:

> *"Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation."*

58. Proviso (iii) of Regulation 19(1) of the 2014 Tariff Regulations provides as under:

> *"iii. Any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio."*

59. We have considered the submission of the Petitioner and noted that in line with the above provisions, funding through grant is not required to be considered for

debt-equity ratio. Therefore, funding sans any grant would form remaining capital structure for the purpose of debt-equity ratio as per Regulation 19 of the 2014 Tariff Regulations and the same has been considered in the relevant paragraph of this Order.

Capital cost as on COD

60. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is summarized as under:

(₹ in lakh)

Asset	Capital Cost as on COD as per Auditor Certificate	Less: Grant Received and adjusted upto COD	Less: IDC disallowed as on COD	Less: IEDC disallowed as on COD	Capital Cost as on COD considered for tariff calculation
	1	2	3	4	5=1-2-3-4
Asset-1	2425.93	543.05	48.38	24.30	1810.20
Asset-2	274.92	0.00	0.84	5.04	269.04
Asset-3	274.92	0.00	0.84	5.04	269.04

Additional Capital Expenditure (ACE)

61. As per Clause (13) of Regulation 3 of the 2014 Tariff Regulations, the cut-off date for the instant assets is 31.3.2021. The Petitioner has claimed additional capital expenditure for instant assets and submitted Auditor's Certificates in support of the same as under:

(₹ in lakh)

Asset	Additional Capital Expenditure claimed in 2018-19
Asset-1	25.39
Asset-2	43.48
Asset-3	42.62

62. The Petitioner has claimed ACE for the year 2018-19 under Regulation 14(1)(i) under balance and retention payment which is within cut-off date. Accordingly, the allowed Additional Capital Expenditure is summarized below which is subject to true up:

(₹ in lakh)

Particulars	Regulation	Asset-1	Asset-2	Asset-3
		2018-19	2018-19	2018-19
ACE to the extent of Balance & Retention Payment	14 (1)(i)	25.39	43.48	42.62

Capital cost for the tariff period 2014-19

63. Accordingly, the capital cost considered for the tariff period 2014-19, subject to truing up, is as follows:

(₹ in lakh)

Asset	Capital Cost allowed as on COD	ACE allowed in 2018-19	Capital cost allowed as on 31.3.2019
Asset-1	1810.20	25.39	1835.59
Asset-2	269.04	43.48	312.52
Asset-3	269.04	42.62	311.66

Debt-Equity Ratio

64. Debt-Equity Ratio is considered as per Regulation 19 of the 2014 tariff Regulations. The financial package up to COD as submitted in form 6 has been considered to determine the debt-equity Ratio. Accordingly, the capital cost allowed as on the date of commercial operation have been considered in the debt-equity ratio of 70:30. The debt-equity ratio as on dates of commercial operation and 31.3.2019 considered on normative basis are as under:

Asset-1	As on COD		As on 31.03.2019	
	Amount (₹ in lakh)	Percentage	Amount (₹ in lakh)	Percentage
Debt	1267.14	70.00%	1284.91	70.00%
Equity	543.06	30.00%	550.68	30.00%
Total	**1810.20**	**100.00%**	**1835.59**	**100.00%**

Asset-2	As on COD		As on 31.03.2019	
	Amount (₹ in lakh)	Percentage	Amount (₹ in lakh)	Percentage
Debt	188.33	70.00%	218.76	70.00%
Equity	80.71	30.00%	93.76	30.00%
Total	**269.04**	**100.00%**	**312.52**	**100.00%**

Asset-3	As on COD		As on 31.03.2019	
	Amount (₹ in lakh)	**Percentage**	**Amount (₹ in lakh)**	**Percentage**
Debt	188.33	70.00%	218.16	70.00%
Equity	80.71	30.00%	93.50	30.00%
Total	**269.04**	**100.00%**	**311.66**	**100.00%**

Return on Equity (ROE)

65. The Petitioner has submitted that ROE has been calculated at the rate of 19.61% after grossing up ROE with MAT rate of 20.961% as per provisions of Regulations 24 and 25 of the 2014 Tariff Regulations and submitted Form-8. The Petitioner has further submitted that the grossed up ROE is subject to truing up based on the effective tax rate of respective financial year applicable to the Petitioner Company.

66. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. Accordingly, the MAT rate of 21.5488%, applicable during 2018-19 has been considered for the purpose of return on equity, in accordance with Regulation 25(3) of the 2014 Tariff Regulations.

67. Accordingly, ROE allowed is as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
Opening Equity	543.06	80.71	80.71
Addition due to Additional Capitalization	7.62	13.04	12.79
Closing Equity	550.68	93.76	93.50
Average Equity	546.87	87.23	87.10
Return on Equity (Base Rate)	15.50%	15.50%	15.50%

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
MAT rate for the Financial year 2018-19	21.5488%	21.5488%	21.5488%
Rate of Return on Equity (Pre-tax)	19.758%	19.758%	19.758%
Return on Equity (Pre-tax)	**54.17**	**12.84**	**12.83**

Interest on Loan (IOL)

68. Regulation 26 of the 2014 Tariff Regulations are provides as under:

"(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of decapitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest."

69. The Petitioner has submitted that IOL has been claimed on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the tariff block 2014-19. We have calculated IOL on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up. IOL is allowed considering all

the loans submitted in Form-9C. The Petitioner is directed to reconcile the total Gross Loan for the calculation of weighted average Rate of Interest and for the calculation of IDC, which would be reviewed at the time of truing-up.

70. IOL has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:

(i) Gross amount of loan, repayment of instalments and rate of interest on actual loans have been considered as per petition including additional information.

(ii) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year.

(iii) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

71. The details of IOL calculated are as follows:

(₹ in lakh)

Particulars	**Asset-1**	**Asset-2**	**Asset-3**
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
Gross Normative Loan	1267.14	188.33	188.33
Cumulative Repayment upto previous Year	0.00	0.00	0.00
Net Loan-Opening	1267.14	188.33	188.33
Addition due to Additional Capitalization	17.78	30.44	29.83
Repayment during the year	48.26	11.44	11.42
Net Loan-Closing	1236.66	207.32	206.74
Average Loan	1251.90	197.83	197.53
Weighted Average Rate of Interest on Loan	7.7871%	7.9799%	7.9800%
Interest on Loan	**48.88**	**11.76**	**11.75**

Depreciation

72. Depreciation has been dealt in line with Regulation 27 of 2014 Tariff Regulations. The Gross Block during 2018-19 has been depreciated at weighted average rate of depreciation (WAROD) (as placed in Annexure-1(a), 1(b) and 1(c) for Assets-1, 2 and 3, respectively). WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during the 2018-19 is as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	2018-19 (Pro-rata) (272 days)	2018-19 (Pro-rata) (272 days)
Opening Gross Block	1810.20	269.04	269.04
Additional Capitalisation	25.39	43.48	42.62
Closing Gross Block	1835.59	312.52	311.66
Average Gross Block	1822.89	290.78	290.35
Weighted Average Rate of Depreciation (WAROD)	5.2800%	5.2800%	5.2800%
Balance useful life of the asset at the beginning of the year	25	25	25
Aggregated Depreciable Value	1640.60	261.70	261.31
Combined Depreciation during the Year	**48.26**	**11.44**	**11.42**

Operation and Maintenance Expenses (O&M Expenses)

73. The Petitioner has claimed the O&M expenses for instant assets as per following details:

(₹ in lakh)

Asset	Asset details	2018-19 (pro-rata)
Asset-1	1 no. 500 MVA 400/220 kV Transformer along with associated bays at NP Kunta Sub-Station	58.73
Asset-2	2 nos. 220 kV Line bays (Bay No 210 & 212) at NP Kunta substation	71.63
Asset-3	2 nos. 220 kV Line bays (Bay No 209 & 211) at NP Kunta substation	71.63

74. The Petitioner in the instant petition has submitted that O&M expense rates for the tariff period 2014-19 had been arrived on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The Petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The Petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

75. Norms for O&M expenditure for Transmission System have been specified under section 29(4) of the 2014 Tariff Regulations as follows:

Element	2018-19
Sub-Station: 220 kV bay (₹ in lakh per bay)	48.10
Sub-Station: 400 kV bay (₹ in lakh per bay)	68.71

76. We have considered the submissions of Petitioner. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards the impact of wage revision, any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The Petitioner has computed normative O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations. Accordingly, the allowed O&M Expenses is given below:

(₹ in lakh)

Asset-1	**Element**	**2018-19 (pro-rata) (183 days)**
1 no. 500 MVA 400/220 kV Transformer along with associated bays at NP Kunta Substation	1 no. 220 kV bay for ICT	24.12
	1 no. 400 kV bay for ICT	34.45
Total O&M Expenses Allowed		**58.57**

Asset-2	**Element**	**2018-19 (pro-rata) (272 days)**
2 nos. 220 kV Line bays (Bay No 210 & 212) at NP Kunta substation	2 nos. 220 kV bays for downstream feeder	71.69
Total O&M Expenses Allowed		**71.69**

Asset-3	**Element**	**2018-19 (pro-rata) (272 days)**
2 nos. 220 kV Line bays (Bay No 209 & 211) at NP Kunta substation	2 nos. 220 kV bays for downstream feeder	71.69
Total O&M Expenses Allowed		**71.69**

<u>Interest on Working Capital (IWC)</u>

77. As per the 2014 Tariff Regulations, the components of the working capital and the interest thereon are discussed hereinafter:

a) **Maintenance spares**:

Maintenance spares @ 15% Operation and maintenance expenses specified in Regulation 29.

b) **O & M expenses:**

Operation and maintenance expenses have been considered for one month of the O&M expenses.

c) **Receivables:**

The receivables have been worked out on the basis of 2 months of annual fixed cost as worked out above.

d) **Rate of interest on working capital:**

As per Clause 28 (3) of the 2014 Tariff Regulations, SBI Base Rate as on 1.4.2018 (8.70%) plus 350 bps i.e. 12.20% has been considered as the rate of interest on working capital.

78. Accordingly, the interest on working capital is summarized as under:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
Maintenance Spares	17.52	14.43	14.43
O&M Expenses	9.73	8.02	8.02
Receivables	71.78	25.06	25.05
Total	**99.04**	**47.51**	**47.50**
Rate of Interest	12.20%	12.20%	12.20%
Interest on working Capital	**6.06**	**4.32**	**4.32**

Annual Transmission charges

79. Accordingly, the annual transmission charges being allowed for the instant assets are as under:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3
	2018-19 (Pro-rata) (183 days)	**2018-19 (Pro-rata) (272 days)**	**2018-19 (Pro-rata) (272 days)**
Depreciation	48.26	11.44	11.42
Interest on Loan	48.88	11.76	11.75
Return on Equity	54.17	12.84	12.83
Interest on Working Capital	6.06	4.32	4.32
O&M Expenses	58.57	71.69	71.69
Total	**215.93**	**112.06**	**112.00**

Filing fee and the publication expenses

80. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses in terms of Regulation 52 of the 2014 Tariff Regulations. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

License fee and RLDC Fees and Charges

81. The Petitioner has prayed to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that the Petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) of Regulation 52 in the 2014 Tariff Regulations.

Goods and Services Tax

82. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

Sharing of Transmission Charges

83. The Petitioner has submitted that the billing, collection and disbursement of Transmission Charges should be governed by provision of CERC (sharing of interstate Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as 'the 2010 Sharing Regulations') as per Regulation 43 of 2014 Tariff Regulations.

84. The Respondent, TANGEDCO vide affidavit dated 8.4.2019 has submitted the following:

(a) Andhra Pradesh Solar Power Corporation Pvt. Ltd. (APSPCL), a Joint venture of SECI, APGENCO and NREDCAP is the Solar Power Park Developer (SPPD) of the NP Kunta Solar Park. The status of 500 MW solar project in Phase-III at NP Kunta as described by the Petitioner as on 26.6.2018 is as below:

a. SECI has signed PPA on 16.9.2016 with the firms as detailed below:

1. FRV Solar : 100 MW
2. ACME Solar : 150 MW
3. TATA Power : 100 MW
4. Azure Power : 50 MW

b. SECI has signed PSA with Discoms of the State of Andhra Pradesh for supply of 500 MW on 27.10.2016. The Petitioner has submitted the date of commercial operation (COD) of the solar generation Projects as below:

1. FRV Solar : 50 MW on 14.6.2018 and 50 MW likely on 15.8.2018
2. ACME Solar : 100 MW on 14.6.2018 and 50 MW likely on 29.6.2018
3. TATA Power : 100 MW on 14.6.2018
4. Azure Power : 50 MW on 30.4.2018

(b) The 5th amendment to Regulation 7 of the 2010 Sharing Regulations states as below:

"No transmission charges and losses for the use of ISTS network shall be payable for the capacity of the generation projects based on solar resources for a period of 25 years from the date of commercial operation of the such generation projects if they fulfill the following conditions:

1. Such generation capacity has been awarded through competitive bidding; and

2. Such generation capacity has been declared under commercial operation between 1.7.2017 and 31.12.2019; and

3. *Power Purchase Agreement(s) have been executed for sale of power from such generation capacity to the Distribution Companies for compliance of their renewable purchase obligation".*

(c) The Petitioner has not stated in the Petition which of the generators are fulfilling the above criteria so as to make them eligible for waiver of transmission charges. The Petitioner may be directed to submit all relevant details. If the generators which are ready for scheduling are not eligible for waiver, the same may be billed on such generators from the COD of the transmission assets.

(d) If the generators are eligible for waiver of transmission charges and if there is delay in commissioning by the generators, the transmission charges may be billed on the generators from COD of the transmission assets till the date of commissioning of the generating station.

(e) SECI has cancelled tenders for balance 100 MW, as all VGF (Viability Gap Funding) schemes are under review by MNRE. In the Petition No. 29/MP/2015, filed by the Petitioner, the Commission in order dated 6.8.2015 had held as follows:

> *"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."*

(f) In view of the above, the Commission may give clear directions to the Petitioner to raise the bill on APSPCL bilaterally in respect of 100 MW of generation for which generator has not been firmed up.

85. In response, the Petitioner, vide affidavit dated 10.2.2020, in its rejoinder has submitted as follows:

(a) APSPCL is the LTA applicant for the 1500 MW NP Kunta Solar Park.

(b) Out of total 1500 MW (Phase-I: 250 MW, Phase-II: 750 MW, Phase-III: 500 MW), 250 MW of Phase-I has already commissioned and 400 MW from Phase-II and Phase-III has also been commissioned from June 2018 to January 2019.

(c) As per the amendment dated 27.3.2019 to Regulation 7 of the 2010 Sharing Regulations, the waiver has been extended to 31.3.2022.

(d) As regards the eligibility of the generators for waiver of transmission charges and losses, APSPCL has stated as under:

(i) All the generators are awarded through Competitive bidding.

(ii) Power Purchase Agreement(s) have been executed with SECI for 400 MW for compliance of their Renewable Power Obligations (RPO).

86. The Commission vide RoP of hearing dated 11.2.2020 directed the Petitioner to submit date of signing the LTA Agreement and furnishing of BG by the Applicant and Implementation Agreement signed with APSPCL, if any. In response, the Petitioner vide affidavit dated 5.5.2020 has submitted that the LTA Agreement was signed on 17.12.2015. APSPCL has submitted construction phase Bank Guarantee to the Petitioner on 16.4.2016 for an amount of Rs. 75 crore (@Rs 5 lakh/MW).

87. In response to the query of the Commission regarding the details of commissioning of solar generators of solar park, the Petitioner vide affidavit dated 5.5.2020 has submitted as under:

Name of Generators identified	**Capacity (MW)**	**Actual COD**
FRV Andhra Pradesh Solar Farm I Private Limited	50	22.7.2018
FRV India Solar Park II Private Limited	50	31.1.2019
Tata Power Renewable Energy Limited	100	22.7.2018
ACME Karnal Solar Power Private Limited	50	21.7.2018

ACME Hisar Solar Power Private Limited	50	21.7.2018
ACME Bhiwadi Solar Power Private Limited	50	4.8.2016
Azure Power Thirty-Six Private Limited	50	4.6.2016
NTPC	100	30.4.2016
	50	30.5.2016
	50	7.6.2016
	50	10.8.2016

88. We have considered the submissions of the Petitioner and TANGEDCO. The instant assets are part of transmission system associated with NP Kunta Phase-III generation project. The SPPD i.e. APSPCL has applied for LTA for 1500 MW which is to be implemented in three phases i.e. Phase-I for 250 MW, Phase-II for 750 MW and Phase-III for 500 MW. In the instant case, the transmission system is associated with the Phase-III generation project and out of the 500 MW capacity under Phase-III, 400 MW have been commissioned and the remaining 100 MW capacity is on hold due to the cancellation of tenders by SECI/MNRE due to which the associated generators for 100 MW are not yet finalised.

89. As regards TANGEDCO's submission that the Petitioner has not submitted whether the solar generators are eligible for waiver for transmission charges, it is observed that all the solar generators under NP Kunta Solar Park are awarded through competitive bidding and the generation capacity of 400 MW was declared under commercial operation within the timeframe specified in the 2010 Sharing Regulations, i.e. progressively from June 2018 to January, 2019 and PPAs have been executed with SECI for 400 MW for compliance of their Renewable Power Obligations (RPO). Therefore, the solar generators under Phase-III are eligible for waiver of transmission charges.

90. TANGEDCO has contended that as APSPCL is yet to firm up the generators for the balance quantum of 100 MW (for which SECI has cancelled tenders), the Petitioner should be directed to bill the transmission charges for the 100 MW on the

APSPCL. The Commission in order dated 6.8.2015 in Petition No. 29/MP/2015 while granting regulatory approval for execution of the transmission system for Ultra Mega Solar Power Park (UMSPP) at NP Kunta observed that the transmission charges for delay in commissioning of solar power generators are required to be paid by the defaulting solar generators/SPPD. In the instant case, no generator has been identified for 100 MW and as such, liability of transmission charges for 100 MW cannot be imposed on any generator.

91. TANGEDCO has also contended that the Petitioner should raise bilateral bill on the solar generator, from COD of the transmission asset to the date of commissioning of the generating plant if the generating station is not commissioned. It is observed that 400 MW of solar generation has been commissioned and Asset-I and Asset-II are in use. Therefore, the transmission charges for Asset-I and Asset-II shall be recovered through PoC mechanism as provided in the 2010 Sharing Regulations. As regards Asset-III, the Petitioner has claimed its COD as 3.7.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the associated generating system under the scope of APSPCL is not ready. Therefore, the transmission charges of Asset-III from 3.7.2018 to COD of the associated upstream generating system under the scope of APSPCL shall be borne by APSPCL. Thereafter, billing, collection and disbursement of the transmission charges approved for the instant asset shall be governed by the provisions of the 2010 Sharing Regulations, as provided in Regulation 43 of the 2014 Tariff Regulations, subject to the outcome of the Appeal filed by TANGEDCO before APTEL.

92. This order disposes of Petition No.87/TT/2019.

Sd/-	Sd/-	Sd/-
(Arun Goyal)	**(I. S. Jha)**	**(P. K. Pujari)**
Member	**Member**	**Chairperson**

ANNEXURE-1(a)

DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION (WAROD) FOR THE 2014-19 TARIFF PERIOD

Asset-1

Asset-1	Capital Cost as on COD	Projected Additional Capitalisation during tariff period 2014-19	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations
Capital Expenditure					**2018-19**
Land-Freehold	0.00	0.00	0.00	0.00%	0.00
Land-Lease hold	0.00	0.00	0.00	3.34%	0.00
Building, Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00
Transmission Line	0.00	0.00	0.00	5.28%	0.00
Substation	1810.20	25.39	1835.59	5.28%	96.25
PLCC	0.00	0.00	0.00	6.33%	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00
Total	**1810.20**	**25.39**	**1835.59**		**96.25**
Average Gross Block (₹ in lakh)					1822.89
Weighted Average Rate of Depreciation (WAROD)					5.28%

ANNEXURE-1(b)

DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION (WAROD) FOR THE 2014-19 TARIFF PERIOD

Asset-2

Asset-2 (2014-19)	Capital Cost as on COD	Projected Additional Capitalisation during tariff period 2014-19	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations
Capital Expenditure					**2018-19**
Land-Freehold	0.00	0.00	0.00	0.00%	0.00
Land-Lease hold	0.00	0.00	0.00	3.34%	0.00
Building, Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00
Transmission Line	0.00	0.00	0.00	5.28%	0.00
Substation	269.04	43.48	312.52	5.28%	15.35
PLCC	0.00	0.00	0.00	6.33%	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00
Total	**269.04**	**43.48**	**312.52**	**Total**	**15.35**
Average Gross Block (₹ in lakh)					290.78
Weighted Average Rate of Depreciation (WAROD)					

ANNEXURE-1(c)

DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION (WAROD) FOR THE 2014-19 TARIFF PERIOD

Asset-3

Asset-3 (2014-19)	Capital Cost as on COD	Projected Additional Capitalisation during tariff period 2014-19	Capital Cost as on COD	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations
Capital Expenditure					**2018-19**
Land-Freehold	0.00	0.00	0.00	0.00%	0.00
Land-Lease hold	0.00	0.00	0.00	3.34%	0.00
Building, Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00
Transmission Line	0.00	0.00	0.00	5.28%	0.00
Substation	269.04	42.62	311.66	5.28%	15.33
PLCC	0.00	0.00	0.00	6.33%	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00
Total	**269.04**	**42.62**	**311.66**	**Total**	**15.33**
Average Gross Block (₹ in lakh)					290.35
Weighted Average Rate of Depreciation (WAROD)					5.28%