

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 171/TT/2019

Coram:

**Shri I.S. Jha, Member
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order: 18.07.2022

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for determination of transmission tariff from the date of commercial operation (COD) to 31.3.2019 in respect of **Asset-1:** Loop in Portion of LILO of Kadapa-Hindupur 400 kV Double Circuit (D/C) line (both circuits) at NP Kunta Sub-station along with associated bays, **Asset-2:** Loop out Portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station along with associated bays, **Asset-3:** 2 numbers of 220 kV line bays (Bay No. 217 & 218) at NP Kunta Sub-station and **Asset-4:** 4 Numbers of 220 kV line bays (Bay No. 213, 214, 219 & 220) at NP Kunta Sub-station under "Transmission System for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh - Part B (Phase-II).

And in the matter of:

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

....Petitioner

Vs

1. Karnataka Power Transmission Corporation Limited,
Kaveri Bhavan, Bangalore – 560009.
2. Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha, Near Axis Bank, Eluru Road,
Gunadala, Vijayawada, Hyderabad– 520004.
3. Kerala State Electricity Board Limited,
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram – 695004.



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4. Tamil Nadu Electricity Board Limited,
NPKRR Maaligai,
800, Anna Salai, Chennai – 600002.
5. Electricity Department,
Government of Goa, Vidyuti Bhawan, Panaji,
Goa - 403001.
6. Electricity Department,
Government of Pondicherry,
Pondicherry – 605001.
7. Eastern Power Distribution Company of Andhra Pradesh Limited
(APEPDCL),
P&T Colony, Seethmmadhara,
Vishakhapatnam, Andhra Pradesh.
8. Southern Power Distribution Company of Andhra Pradesh Limited
(APSPDCL), Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta, Tirupati-517501,
Chittoor District, Andhra Pradesh.
9. Southern Power Distribution Company of Telangana Limited (TSSPDCL),
6-1-50, Corporate Office, Mint Compound,
Hyderabad-500063, Telangana.
10. Northern Power Distribution Company of Telangana Limited (APNDCL),
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal-506004.
11. Bangalore Electricity Supply Company Limited,
Corporate Office, K.R. Circle,
Bangalore – 560001, Karnataka.
12. Gulbarga Electricity Supply Company Limited,
Station Main Road, Gulbarga,
Karnataka.
13. Hubli Electricity Supply Company Limited,
Navanagar, PB Road,
Hubli, Karnataka.
14. Mangalore Electricity Supply Company Limited,
Corporate Office, Paradigm Plaza, AB Shetty Circle,
Mangalore - 575001, Karnataka.
15. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, Ground Floor, New Kantharaj Urs Road



Saraswatipuram, Mysore – 570009, Karnataka.

16. Transmission Corporation of Telangana Limited (TSTRANSCO),
Vidhyut Sudha, 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 - 500016.
18. Tamil Nadu Transmission Corporation Limited,
(Formerly-TNEB), 5B Block 144, Anna Salai,
Chennai – 600002.

...Respondents

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri A.K. Verma, PGCIL

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO
Dr. R. Kathiravan, TANGEDCO
Shri R. Ramalakshmi, TANGEDCO
Shri R. Srinivasan, TANGEDCO

ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for determination of transmission tariff from the date of commercial operation (COD) to 31.3.2019 under 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 transmission assets under “Transmission System for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh-Part B (Phase-II)” in Southern Region (hereinafter referred to as “the transmission project”):

Asset-1: Loop in portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station along with associated bays;



Asset-2: Loop out portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station along with associated bays;

Asset-3: 2 Numbers of 220 kV line bays (Bay Numbers 217 and 218) at NP Kunta Sub-station; and

Asset-4: 4 Numbers of 220 kV line bays (Bay Numbers 213, 214, 219 & 220) at NP Kunta Sub-station.

2. The Petitioner has made the following prayers in this petition:

“1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per para –9.2 above.

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 under clause 25 of the Tariff regulations 2014.

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 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, 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 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

8) Allow the petitioner for approval of COD under clause 4(3)(ii) for subject Asset-2, Asset-3 and Asset-4.

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 2014-19 period, if any, from the respondents.

10) Allow the Petitioner to bill and recover GST on Transmission Charges



separately from the respondents, if at any time GST on transmission is withdrawn from 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 actual/Proposed DOCO and also the petitioner may be allowed to submit revised Certificate and tariff Forms (as per the Relevant Regulation) based on approved DOCO.

and pass such other relief as Hon'ble Commission deems fit and under the circumstances of the case and in the interest of justice"

Backdrop of the case

3. The brief facts of the case are as follows:

a) The Investment Approval and expenditure sanction to the transmission project was accorded by the Board of Directors of the Petitioner in 324th meeting held on 12.1.2016 at an estimated cost of ₹9909.00 lakh including IDC of ₹523.00 lakh based on August, 2015 price level.

b) The scope of work covered under transmission project is as follows:

Transmission Lines:

(i) LILO of Cuddapah-Hindupur 400 kV D/C (Quad) line (both circuits)
at 400 kV NP Kunta Sub-station

Sub-stations:

(i) 400/200 kV NP Kunta Sub-station

400 kV

- Line bays: 4 Numbers

220 kV

- Line bays: 6 numbers

c) The Commission vide order dated 6.8.2015 in Petition No. 29/MP/2015 granted Regulatory approval for execution of the transmission assets for Ultra Mega Solar Power Park (UMSPP) having capacity of 1000 MW in Anantpur district, Andhra Pradesh for the following transmission schemes:



Phase-I Scheme (250 MW)

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

Phase-II Scheme (750 MW)

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

Phase-III Scheme (500 MW)

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

d) The present petition covers the transmission assets of the transmission system covered under Phase-II Scheme (750 MW).

e) Phase-II of NP Kunta Solar Park, part of the transmission project, is covered in the instant petition and details of assets under the transmission project are as follows:

S. N.	Name of Asset	Covered under Petition
1.	Loop in portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station along with associated bays	Current Petition
2.	Loop out portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station along with associated bays	
3.	2 numbers of 220 kV line bays (Bay Numbers 217 and 218) at NP Kunta Sub-station	
4.	4 Numbers of 220 kV line bays (Bay No. 213,214, 219 & 220) at NP Kunta Sub-station	



f) Loop-in portion of the transmission asset was scheduled to be executed within 16 months and loop out portion of the transmission assets were to be executed within 30 months from the date of IA i.e. 12.1.2016. Accordingly, the execution schedule works out to be 12.7.2018 for loop out portion and 12.5.2017 for loop in portion.

g) The details of scheduled commercial operation date (SCOD), date of commercial operation (COD) and time over-run are as follows:

Particulars	SCOD	COD	Time over-run
Asset-1	12.5.2017	4.8.2018	449 days
Asset-2	12.7.2018	12.10.2018 (Proposed)	92 days
Asset-3	12.5.2017	26.4.2017 (Proposed)	No delay
Asset-4	12.5.2017	3.8.2018 (Proposed)	448 days

h) In the course of hearing the matter on 29.6.2020, the Commission directed the Petitioner to serve the petition along with documents on APTRANSCO and file revised 'Memo of Parties'.

i) In response, the Petitioner *vide* affidavit dated 28.9.2020 filed revised Memo of Parties in the present petition wherein APTRANSCO has been impleaded as Respondent No. 2.

4. The Respondents are distribution licensees, power departments and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Southern Region.

5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the 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 aforesaid notices published in the newspapers by the Petitioner. Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), Respondent No. 4, has filed reply to the petition *vide*



affidavit dated 27.6.2019 and has raised issues of APSPCPL's liability to bear transmission charges and waiver of transmission charges.

6. In response, the Petitioner vide affidavit dated 19.5.2020 has filed rejoinder to the reply of TANGEDCO.

7. The hearing in this matter was held on 25.11.2021 and the Commission reserved the order in the matter. However, the order could not be issued before Shri P.K. Pujari, former Chairperson, demitted the office. Therefore, the matter was heard again on 23.6.2022.

8. During the hearing on 23.6.2022. The representative of the Petitioner submitted that all the information required for determination of tariff has been submitted and the same may be considered for determination of transmission tariff. He further submitted that no reply has been filed by APSPCL. Learned counsel for TANGEDCO submitted that the submissions made by TANGEDCO on 25.11.2021 may be taken into account while entertaining the claims of the Petitioner. After hearing the parties, the Commission reserved the order in the matter.

9. Having heard the representative of the Petitioner, learned counsel for TANGEDCO and having perused the material on record, we proceed to dispose of the petition.

10. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 18.3.2019, 24.5.2019, 20.3.2020, 22.7.2020, 28.9.2020 and 11.10.2021, reply filed by TANGEDCO vide affidavit dated 27.6.2019 and the Petitioner's rejoinder affidavit dated 19.5.2020.



DETERMINATION OF ANNUAL FIXED CHARGES FROM COD TO 31.3.2019

11. The details of the transmission charges claimed by the Petitioner in respect of the transmission assets from COD to 31.3.2019 are as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)
Depreciation	72.02	60.61	3.45	8.41	1.20
Interest on Loan	74.97	60.18	3.18	7.58	1.25
Return on Equity	80.03	67.34	3.84	9.37	1.34
O&M Expenses	95.37	68.28	86.63	96.20	127.23
Interest on Working Capital	9.46	7.31	4.68	5.50	6.42s
Total	331.85	263.72	101.78	127.06	137.44

12. The details of the Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)
O&M Expenses	12.07	12.10	7.76	8.02	16.03
Maintenance Spares	21.72	21.77	13.96	14.43	28.86
Receivables	83.98	93.43	18.23	21.18	34.64
Total Working Capital	117.77	127.30	39.95	43.63	79.53
Rate of Interest (in %)	12.20	12.20	12.60	12.60	12.20
Interest on Working Capital	9.46	7.31	4.68	5.50	6.42

Date of Commercial Operation (COD)

13. The Petitioner has claimed actual COD in respect of Asset-1 as 4.8.2018 and in support of the same, the Petitioner has submitted CEA Energisation Certificate dated 23.4.2018, RLDC Charging Certificate dated 13.8.2018 and COD



declaration letter dated 17.8.2018. However, the Petitioner did not submit CMD Certificate as required under the Grid Code. Taking into consideration the CEA Energisation Certificate and RLDC Charging Certificate, COD of Asset-1 is provisionally approved as 4.8.2018 subject to submission of CMD Certificate as required under the Grid Code by the Petitioner at the time of truing up of 2014-19 tariff period.

14. The Petitioner has claimed COD of Asset-2, Asset-3 and Asset-4 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as these transmission assets have not been put to use due to delay in the associated renewable generation under Southern Power Distribution Company of Andhra Pradesh Limited (APSPCL), Respondent No.8. Details with respect to Asset-2, Asset-3 and Asset-4 whose COD is claimed under proviso (ii) of Regulation 4 (3) of the 2014 Tariff Regulations are as follows:

Assets	Name of Asset	Scheduled Commissioning as per IA	COD Claimed under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations
Asset-2	Loop out portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station along with associated bays	12.7.2018	12.10.2018 (Proposed)
Asset-3	2 number of 220 kV line bays (Bay No. 217 & 218) at NP Kunta Sub-station	12.5.2017	26.4.2017 (Proposed)
Asset-4	4 number of 220 kV line bays (Bay No. 213, 214, 219 and 220) at NP Kunta Sub-station	12.5.2017	3.8.2018 (Proposed)

15. We have considered the submissions of the Petitioner. The Petitioner has claimed COD in respect of Asset-2, Asset-3 and Asset-4 as 12.10.2018, 26.4.2017 and 3.8.2018 respectively under proviso (ii) of Regulation 4(3) of the 2014 Tariff



Regulations as the Petitioner was not able to put the aforesaid transmission assets into regular service due to non-commissioning of the associated renewable generation of NP Kunta Phase II.

16. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:

“4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx

(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 Sub-station 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.”

17. In support of COD of Asset-2, Asset-3 and Asset-4, the Petitioner vide affidavit dated 11.10.2021 has submitted the following:

Asset-2

(a) Central Electricity Authority (CEA) Certificate dated 22.6.2018 under Regulation 43 of CEA (Measures relating to safety and electric supply) Regulations, 2010 and Southern Region Load Despatch Centre Certificate (SRLDC) (idle charging certificate) dated 13.8.2018 certifying that transmission asset was idle charged from 2.8.2018 to 3.8.2018.

Asset-3

(b) SRLDC Certificate (idle charging certificate) dated 9.10.2018 certifying that transmission asset was idle charged from 24.4.2017 to 25.4.2017.



Asset-4

(c) CEA Certificate dated 23.4.2018 under Regulation 43 of CEA (Measures relating to safety and electric supply) Regulations, 2010 and SRLDC Certificate (idle charging certificate) dated 13.8.2018 certifying that transmission asset was idle charged from 1.8.2018 to 2.8.2018.

18. Taking into consideration CEA Energisation Certificates of Asset-2 and Asset-4 and RLDC Energisation Certificates of Asset-2, Asset-3 and Asset-4, COD of Asset-2, Asset-3 and Asset- 4 is provisionally approved as 12.10.2018, 26.4.2017 and 3.8.2018, respectively, under proviso (ii) to Regulation 4(3) of the Tariff Regulations, 2014. Since CMD Certificates in respect of Asset-2, Asset-3 and Asset-4 as required under the Grid Code and CEA Certificate for Asset-3 have not been furnished by the Petitioner at present, the same shall be submitted by the Petitioner at the time of truing up of tariff of 2014-19 period. Issue of liability of payment of transmission charges with respect to Asset-2, Asset-3 and Asset-4 has been discussed in the subsequent relevant paragraph of the order.

Capital Cost

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

“Capital Cost: (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;

(bi) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period shall form part of the capital cost.

(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.”

20. The capital cost of the transmission assets claimed by the Petitioner in the instant petition is as follows:

Asset	Approved Cost	Capital cost as on COD	ACE		Capital cost as on 31.3.2019
			2017-18	2018-19	
Asset-1	4567.14	3511.12	-	300.43	3811.55
Asset-2	3865.56	3421.55	-	140.97	3562.52
Asset-3	492.18	159.82	140.43	37.82	338.07
Asset-4	984.37	858.86	-	68.99	927.85
Total	9909.25	7951.35	140.43	548.21	8639.99

Cost Over-Run

21. The Petitioner has claimed capital cost of ₹3511.12 lakh, ₹3421.55 lakh, ₹159.82 lakh, and ₹858.86 lakh for Asset-1, Asset-2, Asset-3 and Asset-4, respectively, as on COD. The total completion cost including Additional Capital Expenditure (ACE) in respect of transmission assets is ₹8639.99 lakh against the approved FR cost of ₹9909.00 lakh. The completion cost of the transmission assets



is within the approved FR cost and, therefore, there is no cost over-run with regard to the transmission assets.

Time Over-run

22. As per the IA, transmission assets were scheduled to be put under commercial operation within 30 months from the date of IA for loop out portion and 16 months for loop in portion i.e., 12.7.2018 and 12.5.2017 respectively. The scheduled date of commercial operation (SCOD) of the transmission assets and actual COD of the transmission assets are as follows:

Particulars	SCOD	COD	Time over-run
Asset-1	12.5.2017	4.8.2018	449 days
Asset-2	12.7.2018	12.10.2018	92 days
Asset-3	12.5.2017	26.4.2017	No delay
Asset-4	12.5.2017	3.8.2018	448 days

23. It is observed that the Petitioner in the petition initially claimed SCOD of Asset-1, Asset-2, Asset-3 and Asset-4 as 12.5.2017, 12.7.2018, 12.5.2017 and 12.5.2017, respectively. However, the Petitioner vide affidavit dated 20.3.2020 revised the SCOD of Asset-1 as 14.5.2017 and Asset-2, Asset-3 and Asset-4 as 14.7.2018. The Petitioner is directed to clarify the reasons for revising the SCOD of Asset-2 Asset-3 and Asset-4 at the time of truing up of tariff for 2014-19 period. We have provisionally considered SCOD of Asset-1, Asset-2, Asset-3 and Asset-4 as 12.5.2017, 12.7.2018, 12.5.2017 and 12.5.2017, respectively.

24. There is time over-run of 449 days, 92 days and 448 days in case of Asset-1, Asset-2 and Asset-4 respectively. The COD of Asset-3 is 26.4.2017 as against the provisional SCOD of 14.5.2017. Therefore, there is no time over-run in case of Asset-3.



25. TANGEDCO has submitted that as per Regulation 12(2) of the 2014 Tariff Regulations if generating station is not commissioned on SCOD of the associated transmission system, the generating company shall bear IDC or the transmission charges in case transmission system is declared under commercial operation under proviso (ii) of Regulation 4(3) of the 2014 tariff Regulations.

26. The Petitioner in response to Record of Proceedings dated 22.7.2020, has filed additional affidavit dated 11.10.2021 and submitted the following reasons for time over-run in the case of Asset-1, Asset-2, and Asset-4:

Asset-1 and Asset-2

27. The execution of Asset-1 and Asset-2, namely, loop in and loop out portions of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station were dependent upon execution of 400 kV D/C Kadapa-Hindupur line covered under a separate Project “System Strengthening-XXIV in Southern Region (SRSS-XXIV)”. The Petitioner filed Petition No. 257/TT/2018 for determination of transmission charges of 400 kV D/C Kadapa-Hindupur line whose details are as follows:

Name of the Asset under SRSS XXIV	Actual/Proposed COD
Asset-B: 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipment at Cuddapah GIS	4.8.2018 (Actual)
Asset-C: 400 kV D/C line from LILO point of NP Kunta to Hindupur Sub-station alongwith 2 numbers of 400 kV bays.	12.10.2018 (Proposed)

28. The Commission *vide* order dated 29.7.2019 in Petition No. 257/TT/2018 condoned delay in respect of both the transmission assets and also approved the



COD of Asset-C (loop out of SRSS XXIV) as 12.10.2018 under proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations.

29. Asset-1 and Asset-2 of the present petition could not have been executed without execution of the transmission assets under SRSS-XXIV which were delayed due to delay in getting forest clearance, right of way problems etc. during implementation of the project and non-readiness of Hindupur Sub-station of APTRANSCO. The Petitioner has further submitted that approval of COD of Asset-2 has been prayed w.e.f. 12.10.2018 under proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations, dependent upon/along with 400 kV D/C Cuddapah-Hindupur line from LILO point to Hindupur portion (covered under SRSS-XXIV). Power flow in the case of Asset-2 started w.e.f. 22.1.2019 and 23.1.2019 for circuits Hindupur-1 and 2, respectively, with the execution of 400 kV D/C Hindupur-Uravakonda line I and II of APTRANSCO. Delay from 12.10.2018 to 21.1.2019 was due to non-readiness of Hindupur Sub-station of APTRANSCO.

Asset-4

30. The subject asset consists of 220 kV bays for evacuation of power from NP Kunta Phase-II (750 MW) generation. In view of delay in NP Kunta Phase-II generation, the Petitioner tried to re-schedule the construction activities. However, due to contractual constraints and to avoid any additional liability towards the asset, the bays were made ready on 3.8.2018. CEA clearance letter dated 23.4.2018 for readiness has already been submitted along with the main petition.

31. We have considered the submissions of the Petitioner and TANGEDCO. It was approved in the 39th SCM of SR that part of Cuddapah-Hindupur 400 kV D/C



line from Cuddapah end to LILO point be planned for completion matching with N. P. Kunta Solar Park Part-B. The relevant portion of the minutes of the 39th SCM of SR is as follows:

“17.0 Evacuation of Power from N. P. Kunta Solar Park(Part-B):

17.1 Director, CEA said that POWERGRID has proposed that part of Cuddapah – Hindupur 400kV D/c line from Cuddapah end to LILO point be planned for completion matching with N. P. Kunta Solar Park Part-B by December 2016 and this shall be joined with the LILO portion of the planned evacuation system of power from N. P. Kunta Solar Park(Part-B). The balance line portion of Cuddapah – Hindupur line shall be completed later in about 28 months of time frame. PGCIL also proposed to prepone the associated 2 nos. of 400kV bays at 400kV GIS S/s at Cuddapah in December 2016.

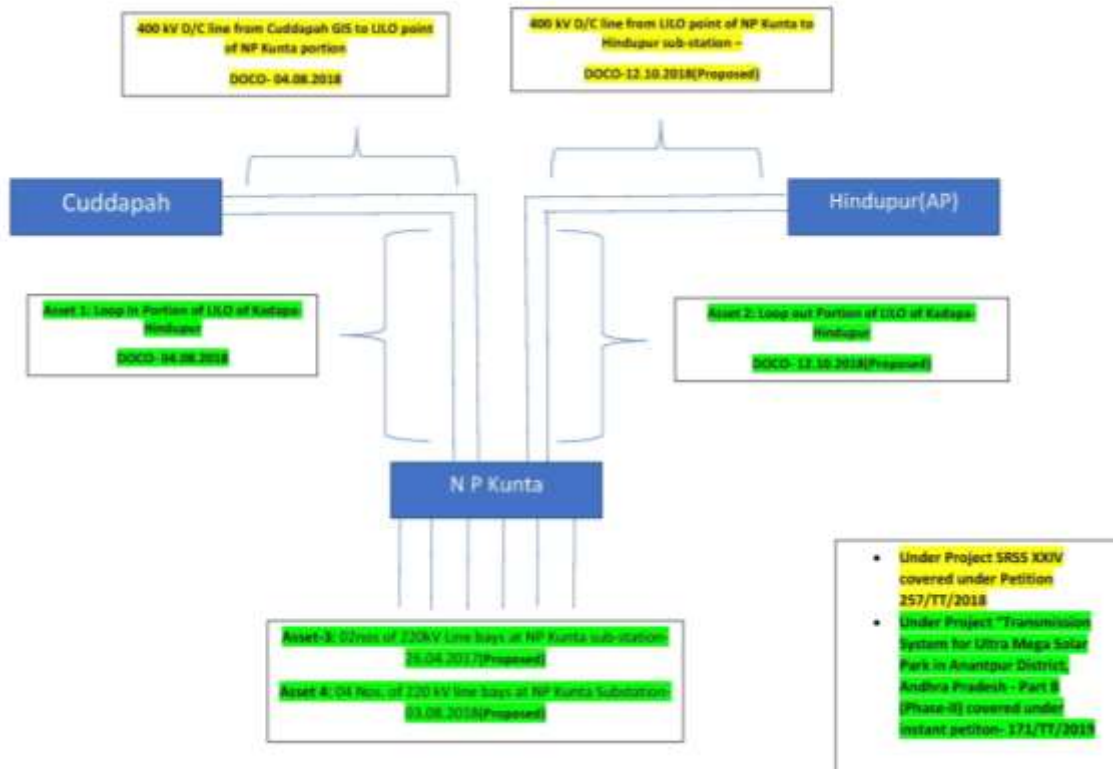
17.2 COO(CTU-Plg), PGCIL said that the above proposal is regarding taking up some portion of the two schemes on priority and implementing the remaining portion subsequently, as such, it does not result in any change in the final network topology. In view of this, CEA has given ‘no objection’ for PGCIL to take up the above proposal i.e. implementing a part of Cuddapah – Hindupur line (i.e. from Cuddapah to LILO point for N.P.Kunta) and a part of LILO of both circuits of Cuddapah –Hindupur at N.P.Kunta (i.e. only one D/C out of the 2xD/c lines required for LILO at N. P. Kunta) initially, and the remaining parts of the two schemes as per their compressed time schedules.

17.3 She further said that construction of Cuddapah – Hindupur line shall take about 28 months (October 2017), whereas LILO of the same line is to be completed by December 2016.

17.4 AGM (CTU-Plg), PGCIL informed that NP Kunta Part A is expected in December 2016, Part B would be coming in April 2017 and Part C in Sept 2017. 17.5 Members agreed to the above.

32. It is observed from the above minutes of the 39th SCM of SR held on 18.2.2016 that it was agreed that part of Cuddapah-Hindupur 400 kV D/C line from Cuddapah end to LILO Point to match with the NP Kunta Solar park Part-B which shall be further joined with the LILO portion of planned evacuation system of power from N.P.Kunta Solar Park (part B). The relevant single line diagram is as follows:





33. Instant Asset-1 and Asset-2 are LILOs of the main 400 kV D/C Cuddapah-Hindupur line at NP Kunta Sub-station. Evidently, the LILo portions (i.e., Asset-1 and Asset-2) could not have been executed prior to execution of main 400 kV D/C Cuddapah-Hindupur line which was delayed due to delay in getting forest clearance, right of way problems etc. during implementation of the project and non-readiness of Hindupur Sub-station of APTRANSCO. The main line has been executed in two stages (one between Cuddapah Sub-station to LILo point of NP Kunta Sub-station associated with Asset-1 of the present petition and the other between LILo point of NP Kunta Sub-station to Hindupur Sub-station which is associated with Asset-2 of the instant petition). The relevant extracts of the order dated 29.7.2019 in the Petition No. 257/TT/2018 are as follows:

“44. We have considered the submissions of the Petitioner and perused the documents on record. There is a time overrun of 106 days, 24 days and 93 days in commissioning of Asset-A, Asset-B and Asset-C respectively.”



Order in Petition No. 171/TT/2019

Therefore, we are of the view that the Petitioner should have factored these 10 months while arriving at the timeline of 30 months for the instant project. These 10 months are reduced from the total time overrun for the assets covered in the instant petition. Accordingly, as the actual time overrun of 106 days, 24 days and 93 days in commissioning of Asset-A, Asset-B and Asset-C is beyond the control of the Petitioner and the same has been condoned.”

34. The Commission condoned time over-run of 24 days and 93 days in case of 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipment at Cuddapah GIS; and 400 kV D/C line from LILO point of NP Kunta to Hindupur Sub-station along with 2 numbers of 400 kV bays and 2x80 MVAR switchable line reactor and 2 numbers of 400 kV line bays at Hindupur Sub-station.

35. In view of above discussion, we condone time over-run of 24 days in case of Asset-1 of the instant petition in line with the time over-run condoned in respect of 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipment at Cuddapah GIS *vide* order dated 29.7.2019 in Petition No. 257/TT/2018. We further condone time over-run of 93 days in execution of present Asset-2 in line with 400 kV D/C line from LILO point of NP Kunta to Hindupur Sub-station along with 2 number of 400 kV bays and 2x80 MVAR switchable line reactor and 2 numbers of 400 kV line bays at Hindupur Sub-station *vide* order dated 29.7.2019 in Petition No. 257/TT/2018.

36. The Petitioner has submitted that the time over-run in case of Asset-4 is on account of delay in execution of renewable generation under the scope of work of APSPCL.



37. The COD of Asset-4 has been approved as 3.8.2018 as against the SCOD of 12.5.2017. There is delay of 448 days in execution of Asset-4. The Petitioner has submitted that Asset-4 consists of 4 numbers of 220 kV bays for evacuation of power from NP Kunta Phase-II (750 MW) generation. In view of delay in NP Kunta Phase-II generation, the Petitioner tried to re-schedule the construction activities. However, due to contractual constraints and to avoid any additional liability towards asset, the bays were made ready as per proposed COD of 3.8.2018. The Petitioner has submitted CEA clearance letter dated 23.4.2018 in support of readiness of Asset-4. It is observed from the above CEA clearance letter dated 23.4.2018 that the present Asset-4 was not ready before the SCOD of 12.5.2017 and proposed COD of 3.8.2018. Therefore, time over-run of 448 days is not condoned.

38. Accordingly, the decision with regard to time over-run in respect of transmission assets covered in the present petition is as follows:

Assets	SCOD	COD	Time over-run	Time over-run condoned	Time over-run not condoned
Asset-1	12.5.2017	4.8.2018	449 days	24 days	425 days
Asset-2	12.7.2018	12.10.2018	92 days	92 days	-
Asset-3	12.5.2017	26.4.2017	No delay	-	-
Asset-4	12.5.2017	3.8.2018	448 days	-	448 days

Central Finance Assistance (CFA)

39. In respect of Central Finance Assistance (CFA), the Petitioner has made the following submissions:

- (a) Central Finance Assistance for development of Solar Park and external transmission system has been accorded by the Ministry of New and Renewable Energy. Ministry of New & Renewable Energy (NSM Coord. Group) issued Administrative Guidelines for release of fund for



implementation of scheme for development of Solar Park and Ultra Mega Solar Power Projects vide order ref: 30/26/2014-15/NSM, dated 12.12.2014. Further, amendment in guidelines have been issued by Ministry of New & Renewable Energy vide office Memorandum No F. No. 30/26/2014-15/NSM dated 29.9.2016. The relevant extract of the same is as follows:

“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) Accordingly, the Petitioner submitted the details for release of CFA by MNRE to Powergrid vide letters dated: 27.10.2016 and 28.12.2016.

(c) Ministry of New & Renewable Energy sanctioned the CFA grant vide office Memorandum No. F.No.30/52/2014-15/NSM dated 28.2.2017. The relevant extracts of order are hereby reproduced as follows:

“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 ₹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 ₹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 ₹60, 26, 47,625/- (Rupees Sixty Crore Twenty-Six Lakh Forty-Seven Thousand Six Hundred and Twenty-Five only) includes ₹60,00,00,000/- (Rupees Sixty Crore only) towards development of external power evacuation system for Anathapuramu Solar Park, Andhra Pradesh and ₹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 ₹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 ₹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 ₹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) Further, 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 2017-18 towards Transmission System for Ultra Mega Solar Park in Anantpur (Phase-I, Phase-II & Phase-III). The total amount from CFA for Phase-I, Phase-II and Phase-III is yet to be disbursed.

(e) The details of total grant received and adjustment of the same in the capital cost of projects are as follows:

(₹ in lakh)

Total CFA Grant	CFA grant received (30.8.2017)	CFA grant received (31.1.2018)	Total grant received	Balance grant to be received
12000.00	2647.625	3352.375	6000.00	6000.00

(f) The details of total grant allocated in respect of the transmission assets covered in the present transmission project (i.e. Phase-II) are as follows:

(₹ in lakh)

Asset	COD	Till COD	2018-19	Total
Asset-1	4.8.2018	1583.67	-	1583.67
Asset-2	12.10.2018	1025.22	-	1025.22
Asset-3	26.4.2017	159.82	-	159.82
Asset-4	3.8.2018	857.53	1.33	858.86
Total		3626.24	1.33	3627.57

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

“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.”

41. Proviso (iii) to Regulation 19(1) of the 2014 Tariff Regulations provides as follows:

“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.”



42. We have considered the submissions of the Petitioner with respect to Central Finance Assistance (CFA). The total grant is about ₹12000.00 lakh, out of which the Petitioner has received an amount of ₹6000.00 lakh. Out of ₹6000.00 lakh granted, received an amount of ₹3627.57 lakh allocated to the transmission assets associated with Phase-II of NP Kunta.

43. As per the above provisions, funding through grant is not required to be considered for the purpose of debt-equity ratio.

Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

44. The Petitioner has claimed Interest During Construction (IDC) for Asset-1 and Asset-2 and in support of the same has submitted Auditor's Certificate for Asset-1 dated 27.11.2018 and Management Certificate for Asset-2 dated 12.12.2018. The Petitioner has submitted computation of IDC along with year-wise details of the IDC discharged.

45. The allowable IDC has been worked out considering the information submitted by the Petitioner for Asset-1 and Asset-2, separately, on cash basis. The loan details submitted in Form-9C for 2014-19 tariff period and IDC computation sheet have been considered for the purpose of IDC calculation on cash and on accrued basis. The undischarged IDC as on COD has been considered as ACE during the year in which it has been discharged.

46. Accordingly, based on the information filed by the Petitioner, IDC considered in respect of Asset-1 and Asset-2 is as follows:



(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC Admissible	IDC discharge as on COD	IDC disallowed due to time over-run	IDC undischarged as on COD	IDC discharged during	
	A	B	C	D	E=B-C	2018-19	2019-20
Asset-1	156.18	36.74	36.74	119.44	0.00	-	-
Asset-2	166.18	165.46	105.56	0.72	59.91	52.62	7.28

47. The Petitioner has claimed IEDC for the transmission assets and has submitted Auditors' Certificate and Management Certificate in support of the same. The claimed IEDC is within the percentage of hard cost of 10.75% as indicated in FR abstract cost estimate. Accordingly, IEDC is allowed as claimed subject to adjustment of condonation of time over-run. The details of claimed and allowed IEDC in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	IEDC claimed as per Auditor's Certificate	IEDC disallowed due to time over-run	IEDC allowed as on COD
	1	2	3= (1-2)
Asset-1	188.45	85.66	102.79
Asset-2	198.53	0.00	198.53
Asset-3	11.27	0.00	11.27
Asset-4	53.15	25.49	27.66

Initial Spares

48. Initial Spares are provided in Regulation 13(d) of the 2014 Tariff Regulations subject to the following ceiling norms:

- “(d) Transmission system
 (i) Transmission line – 1.00%
 (ii) Transmission Sub-station (Green Field) – 4.00%
 (iii) Transmission Sub-station (Brown Field) – 6.00%
 (iv) Series Compensation devices and HVDC Station – 4.00%
 (v) Gas Insulated Sub-station (GIS) – 5.00%
 (vi) Communication system – 3.5%



49. The Petitioner has claimed the Initial Spares in respect of the Asset-1, Asset-2 and Asset-4. The Petitioner has not claimed any Initial Spares for Asset-3. The details of Initial Spares claimed are as follows:

(₹ in lakh)				
Assets	Particulars	Plant & Machinery cost (excluding IDC/IEDC, land cost and cost of civil works)	Initial Spares Claimed	Initial spare as % of Capital cost
Asset – 1	Sub-station	1335.52	29.25	2.19
Asset – 2		1335.52	29.25	2.19
Asset – 3		-	-	-
Asset – 4		874.70	21.28	2.43

50. We have considered the submissions of the Petitioner. The Initial Spares claimed are within the norms specified in the 2014 Tariff Regulations. Initial Spares are allowed for Asset-1, Asset-2 and Asset-4 for the purpose of tariff calculation after considering the Plant and Machinery cost excluding IDC, IEDC and land expenses up to 31.3.2019, subject to true-up and the same are as follows:

Sub-station

(₹ in lakh)						
Assets	P&M cost considered as on cut-off date (A)	Initial Spares claimed (B)	Norms as per 2014 Tariff Regulations (in %) (C)	Initial Spares allowable as per 2014 Tariff Regulations $D = [(A-B) * C / (100-C)]$	Initial Spares allowed	Discharge of Initial Spares (As on COD)
Asset-1	1335.52	29.25	4.00	54.43	29.25	29.25
Asset-2	1335.52	29.25	4.00	54.43	29.25	29.25
Asset-4	874.72	21.28	4.00	35.56	21.28	21.28



Capital cost as on COD

51. Accordingly, capital allowed as on COD cost in respect of the transmission assets is as follows:

(₹ in lakh)

Assets	Capital cost as on 1.4.2014 or COD whichever is later as per Auditors' Certificate	Less: IDC as on COD due to		Less: IEDC disallowed as on COD	Excess Initial Spares as on COD	Less: Grant received and adjusted up to COD	Capital cost considered as on 1.4.2014
		Time over-run/ Computational difference	Un-discharged				
Asset-1	3511.12	119.44	0.00	85.66	0.00	1583.67	1722.35
Asset-2	3421.55	0.72	59.91	0.00	0.00	1025.22	2335.71
Asset-3	159.82	0.00	0.00	0.00	0.00	159.82	0.00
Asset-4	858.86	0.00	0.00	25.49	0.00	833.37	0.00

Additional Capital Expenditure (ACE)

52. The Petitioner has claimed the following ACE in respect of the transmission assets and submitted Auditor's Certificate and Management Certificates in support of its claim:

(₹ in lakh)

Particulars	Additional Capital Expenditure	
	2017-18	2018-19
Asset-1	0.00	300.43
Asset-2	0.00	140.97
Asset-3	140.43	37.82
Asset-4	0.00	68.99

53. Thus, ACE claimed includes the accrued IDC discharged during 2014-19 tariff period. It is observed that total estimated completion cost including ACE for 2014-19 period is within the approved cost as per FR.

54. We have considered the submissions of the petitioner. ACE claimed by the Petitioner is allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014



Tariff Regulations as it is towards balance and retention payments and works deferred for execution. The undischarged IDC as on COD has been allowed as ACE. The details of ACE allowed in respect of the transmission assets are as follows:

(₹ in lakh)

Particulars	ACE				
	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
ACE to the extent of balance & retention payments	300.43	140.97	140.43	37.82	68.99
Work deferred for execution/ACE to the extent of unexecuted work	0.00	0.00	0.00	0.00	0.00
IDC discharged	0.00	52.62	0.00	0.00	0.00
Less: Excess Initial Spares	0.00	0.00	0.00	0.00	0.00
Less: Grant received adjusted	0.00	0.00	0.00	0.00	25.49
Total ACE allowed	300.43	193.59	140.43	37.82	43.50

Capital Cost for 2014-19 tariff period

55. Accordingly, capital cost of the transmission assets considered for 2014-19 tariff period is as follows:

(₹ in lakh)

Assets	Approved Capital Cost	Capital Cost as on COD on cash basis	Additional Capital Expenditure (ACE)		Total Capital Cost as on 31.3.2019
			2017-18	2018-19	
Asset-1	4567.14	1722.35	0.00	300.43	2022.78
Asset-2	3865.56	2335.71	0.00	193.59	2529.30
Asset-3	492.18	0.00	140.43	37.82	178.25
Asset-4	984.37	0.00	0.00	43.50	43.50

Debt-Equity Ratio

56. Regulation 19(1) of the 2014 Tariff Regulations provides as follows:

“Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:



Provided that:

(i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

(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.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.”

57. The Petitioner has considered debt-equity ratio of 70:30 as on COD and for ACE post COD. The debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during 2014-19 period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on the date of commercial operation and as on 31.3.2019 are as follows:

Asset-1	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1205.64	70.00	1415.95	70.00
Equity	516.70	30.00	606.83	30.00
Total	1722.35	100.00	2022.78	100.00
Asset-2	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1634.99	70.00	1770.51	70.00
Equity	700.71	30.00	758.79	30.00
Total	2335.71	100.00	2529.30	100.00
Asset-3	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	0.00	70.00	124.78	70.00
Equity	0.00	30.00	53.48	30.00



Total	0.00	100.00	178.25	100.00
Asset-4	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	0.00	70.00	30.45	70.00
Equity	0.00	30.00	13.05	30.00
Total	0.00	100.00	43.50	100.00

Depreciation

58. Regulation 27 of the 2014 Tariff Regulations provides as follows:

“Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable.



(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) alongwith justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”

59. Regulation 3(67) of 2014 Tariff Regulations defines useful life as follows:

(67) ‘Useful life’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

(a) Coal/Lignite based thermal generating station: 25 years

(b) Gas/Liquid fuel based thermal generating station: 25 years

(c) AC and DC sub-station: 25 years

(d) Gas Insulated Sub-station (GIS): 25 years

(d) Hydro generating station including pumped storage hydro generating stations: 35 years

(e) Transmission line (including HVAC & HVDC) : 35 years

(f) Communication system : 15 years

Provided that the useful life for AC and DC Sub-stations and GIS for which Notice Inviting Tender is floated on or after 01.04.2014 shall be considered as 35 years.

Provided further that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission.”

60. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during 2014-19 tariff period. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) and working of WAROD is given at Annexure-I, Annexure-II, Annexure-III and Annexure-IV. Depreciation for 2014-



19 period is allowed for the transmission assets as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations and the same is as follows:

		(₹ in lakh)				
Particulars		Asset-1	Asset-2	Asset-3		Asset-4
		2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)
Depreciation						
A	Opening Gross Block	1722.35	2335.71	0.00	140.43	0.00
B	ACE	300.43	193.59	140.43	37.82	43.50
C	Closing Gross Block (A+B)	2022.78	2529.30	140.43	178.25	43.50
D	Average Gross Block (A+C)/2	1872.56	2432.50	70.22	159.34	21.75
E	Average Gross Block (90% depreciable assets)	1872.56	2432.50	70.22	159.34	21.75
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	1685.31	2189.25	63.19	143.41	19.58
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1685.31	2189.25	63.19	143.41	19.58
J	Weighted Average Rate of Depreciation (WAROD) (in %)	5.29	5.30	5.28	5.28	5.28
K	Elapsed useful life at the beginning of the year (Year)	0	0	0	0	0
L	Balance useful life at the beginning of the year (Year)	33	31	25	25	25
M	Depreciation during the year (D*J)	65.19	60.34	3.45	8.41	0.76
N	Aggregate Cumulative Depreciation at the end of the year	65.19	60.34	3.45	11.87	0.76
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	1620.12	2128.91	59.74	131.54	18.82



61. The details of depreciation claimed by the Petitioner and allowed in respect of the transmission assets are as follows:

(₹ in lakh)			
Asset	Particulars	2017-18	2018-19
Asset-1	As claimed by the Petitioner	-	72.02
	Approved in the present order	-	65.19
Asset-2	As claimed by the Petitioner	-	60.61
	Approved in the present order	-	60.34
Asset-3	As claimed by the Petitioner	3.45	8.41
	Approved in the present order	3.45	8.41
Asset-4	As claimed by the Petitioner	-	1.20
	Approved in the present order	-	0.76

Interest on Loan (IoL)

62. The Petitioner has claimed IoL in accordance with Regulation 26(5) and Regulation 26(6) of 2014 Tariff Regulations and the same is as follows:

“Interest on loan capital:

(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.”

63. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed in respect of the transmission assets are as follows:



(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4	
	2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)	
A	Gross Normative Loan	1205.64	1634.99	0.00	98.30	0.00
B	Cumulative Repayments upto Previous Year	0.00	0.00	0.00	3.45	0.00
C	Net Loan-Opening (A-B)	1205.64	1634.99	0.00	94.85	0.00
D	Addition due to Additional Capitalization	210.30	135.51	98.30	26.47	30.45
E	Repayment during the year	65.19	60.34	3.45	8.41	0.76
F	Net Loan-Closing (C+D-E)	1350.76	1710.17	94.85	112.91	29.69
G	Average Loan (A+F)/2	1278.20	1672.58	47.42	103.88	14.85
H	Weighted Average Rate of Interest on Loan (in %)	8.074	7.647	7.200	7.301	8.050
I	Interest on Loan (GxH)	67.86	59.92	3.18	7.58	0.79

64. The details of IoL claimed by the Petitioner in respect of the present petition and allowed in the instant order are as follows:

(₹ in lakh)

Asset	Particulars	2017-18	2018-19
Asset-1	As claimed by the Petitioner	-	74.97
	Approved in this order	-	67.86
Asset-2	As claimed by the Petitioner	-	60.18
	Approved in this order	-	59.92
Asset-3	As claimed by the Petitioner	3.18	7.58
	Approved in this order	3.18	7.58
Asset-4	As claimed by the Petitioner	-	1.25
	Approved in this order	-	0.79

Return on Equity (RoE)

65. The Petitioner has claimed RoE for the transmission assets in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has



submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

66. The Commission, *vide* order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table below. The same MAT rates are considered for the purpose of grossing up of the rate of RoE of tariff of 2014-19 period in terms of the provisions of the 2014 Tariff Regulations.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

67. The Petitioner has claimed RoE for 2014-19 period after grossing up the RoE of 15.50% with effective tax rates (based on MAT rates) each year. RoE on the basis of MAT rate applicable in the respective years is considered for the transmission assets and the same is follows:

		(₹ in lakh)				
Particulars		Asset-1	Asset-2	Asset-3		Asset-4
		2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)
A	Opening Equity	516.70	700.71	0.00	42.13	0.00
B	Additions	90.13	58.08	42.13	11.35	13.05



C	Closing Equity (A-B)	606.83	758.79	42.13	53.48	13.05
D	Average Equity (A+B)/2	561.77	729.75	21.06	47.80	6.53
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.549	21.549	21.342	21.549	21.549
G	Rate of Return on Equity	19.758	19.758	19.705	19.758	19.758
H	Return on Equity (DxG)	72.98	67.55	3.87	9.44	0.85

68. The details of RoE claimed by the Petitioner in respect of the transmission assets and allowed in the instant order are as follows:

(₹ in lakh)			
Asset	Particulars	2017-18	2018-19
Asset-1	As claimed by the Petitioner	-	80.03
	Approved in this order	-	72.98
Asset-2	As claimed by the Petitioner	-	67.34
	Approved in this order	-	67.55
Asset-3	As claimed by the Petitioner	3.84	9.37
	Approved in this order	3.87	9.44
Asset-4	As claimed by the Petitioner	-	1.34
	Approved in this order	-	0.85

Operation & Maintenance Expenses (O&M Expenses)

69. The O&M Expenses as claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)						
Asset – 1						
Transmission lines						
Sl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length Km		
1	LILO of Cudapah Hindupur	Double Circuit	2	9.160		
Sl. No.	400 kV Sub-station bay					
1	Line Bay I					
2	Line Bay II					
O&M Expenses						
		2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station						



Sl. No.	400 kV Sub-station bay				
400 kV					
Number of bays	-	-	-	-	2
Transmission lines					
D/C Twin/Triple Conductor (km)	-	-	-	-	9.160
Total O&M Expense (₹ in lakh)	-	-	-	-	95.21

(₹ in lakh)

Asset – 2					
Transmission lines					
Sl. No.	Name of Line	Single Circuit / Double Circuit	No of Sub-Conductors	Line Length km	
1	LILO of Kadappa Hindupur	Double Circuit	2	9.590	
Sl. No.	400 kV Sub-station bay				
1	Line Bay I				
2	Line Bay II				
O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
400 kV					
Number of bays	-	-	-	-	2
Transmission lines					
D/C Twin/Triple Conductor (km)	-	-	-	-	9.590
Total O&M Expense (₹ in lakh)	-	-	-	-	68.00

(₹ in lakh)

Asset – 3					
Srl. No.	220 kV Sub-station bay				
1	Line Bay I				
2	Line Bay II				
O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
220 kV					
Number of bays	-	-	-	2	2
Total O&M Expense (₹ in lakh)	-	-	-	86.72	96.20



(₹ in lakh)

Asset – 4					
Srl. No.	220 kV Sub-station bay				
1	Line Bay I				
2	Line Bay II				
3	Line Bay III				
4	Line Bay IV				
O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
220 kV					
Number of bays	-	-	-	-	4
Total O&M Expense (₹ in lakh)	-	-	-	-	127.04

70. Regulation 29(3) of the 2014 Tariff Regulations specifies norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission assets are as follows:

Asset – 1						
Element	UoM	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
400 kV Sub-station	₹ lakh/bay	60.30	62.30	64.37	66.51	68.71
D/C Twin/Triple Conductor	₹ lakh/km	0.707	0.731	0.755	0.780	0.806

Asset – 2						
Element	UoM	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
400 kV Sub-station	₹ lakh/bay	60.30	62.30	64.37	66.51	68.71
D/C Twin/Triple Conductor	₹ lakh/km	0.707	0.731	0.755	0.780	0.806

Asset – 3						
Element	UoM	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
220 kV Sub-station	₹ lakh/bay	42.21	43.61	45.06	46.55	48.10



Asset – 4						
Element	UoM	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
220 kV Sub-station	₹ lakh/bay	42.21	43.61	45.06	46.55	48.10

71. We have considered the submissions of the Petitioner. The O&M Expenses approved in respect of the transmission assets under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)

Asset – 1	2018-19 (Pro-rata for 240 days)
2 Numbers of 400 kV Sub-station bays	137.42
9.160 km D/C Twin/Triple Conductor transmission line	7.38
Total O&M Expenses	144.80
Pro-rata O&M Expense	95.21

(₹ in lakh)

Asset – 2	2018-19 (Pro-rata for 171 days)
2 Number of 400 kV Sub-station bays	137.42
9.590 km D/C Twin/Triple Conductor transmission line	7.73
Total O&M Expenses	145.15
Pro-rata O&M Expense	68.00

(₹ in lakh)

Asset – 3	2017-18 (Pro-rata for 340 days)	2018-19
2 Number of 220 kV Sub-station bays	93.10	96.20
Total O&M Expenses	93.10	96.20
Pro-rata O&M Expense	86.72	96.20

(₹ in lakh)

Asset – 4	2018-19 (Pro-rata for 241 days)
4 Number of 220 kV Sub-station bays	192.40
Total O&M Expenses	192.40
Pro-rata O&M Expense	127.04

72. The details of O&M Expenses claimed by the Petitioner in respect of the transmission assets and allowed in the instant order are as follows:



(₹ in lakh)			
Asset	Particulars	2017-18	2018-19
Asset-1	As claimed by the Petitioner	-	95.37
	Approved in this order	-	95.21
Asset-2	As claimed by the Petitioner	-	68.28
	Approved in this order	-	68.00
Asset-3	As claimed by the Petitioner	86.63	96.20
	Approved in this order	86.72	96.20
Asset-4	As claimed by the Petitioner	-	127.23
	Approved in this order	-	127.04

Interest on Working Capital (IWC)

73. The Petitioner is entitled to claim Interest on Working Capital as per Regulation 28(1)(c) of the 2014 Tariff Regulations as follows:

i. Maintenance spares:

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses specified in Regulation 29.

ii. O & M Expenses:

O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. Receivables:

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

iv. Rate of interest on working capital:

Rate of IWC is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

74. The IWC allowed for the transmission assets is as follows:

(₹ in lakh)						
Particulars	Asset-1	Asset-2	Asset-3		Asset-4	
	2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)	
A Working Capital for O&M	12.07	12.10	7.76	8.02	16.03	



	Expenses (1 month of O&M Expenses)					
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	21.72	21.77	13.97	14.43	28.86
C	Working Capital for receivables (receivable equivalent to 2 months of fixed cost)	78.64	93.60	18.23	21.19	34.28
D	Total Working Capital (A+B+C)	112.43	127.47	39.96	43.64	79.18
E	Rate of Interest (in %)	12.20	12.20	12.60	12.60	12.20
F	Interest on Working Capital (DxE)	9.02	7.29	4.69	5.50	6.38

75. The details of IWC claimed by the Petitioner in respect of the transmission assets and allowed in this order are as follows:

		(₹ in lakh)	
Asset	Particulars	2017-18	2018-19
Asset-1	As claimed by the Petitioner	-	9.46
	Approved in this order	-	9.02
Asset-2	As claimed by the Petitioner	-	7.31
	Approved in this order	-	7.29
Asset-3	As claimed by the Petitioner	4.68	5.50
	Approved in this order	4.69	5.50
Asset-4	As claimed by the Petitioner	-	6.42
	Approved in this order	-	6.38

Approved Annual Fixed Charges for the 2014-19 Tariff Period

76. Accordingly, annual fixed charges allowed in respect of the transmission assets for 2014-19 tariff period are as follows:

		(₹ in lakh)			
Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)
Depreciation	65.19	60.34	3.45	8.41	0.76
Interest on Loan	67.86	59.92	3.18	7.58	0.79
Return on Equity	72.98	67.55	3.87	9.44	0.85
O&M Expenses	95.21	68.00	86.72	96.20	127.04



Interest on Working Capital	9.02	7.29	4.69	5.50	6.38
Total	310.26	263.10	101.91	127.14	135.81

77. The details of Annual Fixed Charges claimed by the Petitioner in respect of the transmission assets and allowed in this order are as follows:

(₹ in lakh)			
Asset	Particulars	2017-18	2018-19
Asset-1	As claimed by the Petitioner	-	331.85
	Approved in this order	-	310.26
Asset-2	As claimed by the Petitioner	-	263.72
	Approved in this order	-	263.10
Asset-3	As claimed by the Petitioner	101.78	127.06
	Approved in this order	101.91	127.14
Asset-4	As claimed by the Petitioner	-	137.44
	Approved in this order	-	135.81

Filing Fee and Publication Expenses

78. The Petitioner shall be entitled to recover the application filing fee and publication expenses directly from the beneficiaries or the long term transmission customers/DICs in accordance with Regulation 52(1) of the 2014 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

79. The Petitioner has requested to allow the Petitioner to bill and recover license fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a), respectively of Regulation 52 of the 2014 Tariff Regulations.



Good and Service Tax

80. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondents to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

81. We have considered the submissions of the Petitioner. Since GST is not levied on transmission service at present, we are of the view that Petitioner's prayer is pre-mature.

Sharing of Transmission Charges

82. TANGEDCO has submitted that as per Regulation 12(2) of the 2014 Tariff Regulations generating station which is not commissioned on the SCOD of the associated transmission system shall bear the IDC or transmission charges provided transmission system is declared under commercial operation by the Commission under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. Therefore, on declaration of COD under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations by the Commission, the transmission charges are required to be paid by APSPDCL till commissioning of the generating stations. On the issue of payment of transmission charges owing to delay in commissioning of solar generation, TANGEDCO has adverted to Commission's order dated 6.8.2015 in Petition No. 29/MP/2015, wherein the Commission by referring to Statement of



Reasons to Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission and related matters) Regulations, 2015 (5th Amendment) and Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) (First Amendment) Regulations, 2015 came to the conclusion that transmission charges for delay in execution of solar power generators are required to be paid by such solar generators/SPPD and this was premised on the same lines as the liability for payment by the thermal and hydro generating stations in accordance with the Commission's 2014 Tariff Regulations.

83. According to TANGEDCO, the Petitioner has stated that as per Minutes of the Meeting of 24th JCC of generation projects granted LTA in SR, LTA was made effective for 750 MW from 4.8.2018. The Petitioner has also stated that 650 MW generation has been commissioned till date. TANGEDCO has submitted that as agreed in 42nd SCPSPSR meeting held on 27.4.2018, the subject assets may be considered as part of NP Kunta Phase III for 500 MW generation. TANGEDCO has submitted that as per the Petitioner COD of Asset-1 is 4.8.2018 and for the remaining assets, deemed/ proposed COD has been claimed. TANGEDCO has submitted that 650 MW generation has been commissioned till date and the Commission should give directions to the Petitioner to raise the bill on APSPDCL bilaterally till commissioning of solar power generation of 750 MW.



84. In response, the Petitioner has submitted that the as per IA dated 15.1.2016, the commissioning schedule for loop out portion is 14.7.2018 and for loop in portion it is 14.5.2017. The Petitioner has further submitted that the transmission assets were envisaged/approved matching with generation under NP Kunta Phase-II. After Investment Approval, the status of Generation Project was inquired regularly through Joint Coordination Meetings and as per JCCs, the commissioning of NP Kunta Part-B is uncertain. It has further been submitted that as part of evacuation system for NP Kunta Phase-I (250 MW) generation, LILO of 400 kV S/C Kadapa- Kolar line at NP Kunta was implemented. The Petitioner has submitted that as envisaged earlier, NP Kunta Phase-II (750 MW) generation was expected to be commissioned before NP Kunta Phase-III (500 MW) generation due to which only 1 number of 500 MVA ICT & 4 numbers of 220 kV bays were agreed with NP Kunta Phase-III (500 MW) generation. Therefore, in view of delay in NP Kunta Phase-II generation and commissioning of NP Kunta Phase-III generation before NP Kunta Phase-II, it was agreed in 42nd SCPSPSR meeting held on 27.4.2018 that the transmission element associated with NP Kunta Phase-II scheme i.e. LILO of Kadapa-Hindupur 400 kV D/C (Quad) line (both circuits) at 400 kV NP Kunta Sub-station is required with NP Kunta Phase-III (500 MW) generation for evacuation of power with reliability and security and hence may be considered as part of NP Kunta Phase-III (500 MW) generation.

85. The Petitioner has submitted that Andhra Pradesh Solar Power Corporation Private Limited (APSPCL), a joint venture of SECI, APGENCO and NREDCAP is the Solar Plant Developer (SPD) and LTA applicant for the 1500 MW NP Kunta Solar Park. As agreed in the 42nd SCPSPSR meeting held on 27.4.2018, the assets



herein mentioned may be considered as part of NP Kunta Phase-III generation. With regard to submission made regarding the details of generators commissioned, it is submitted that that out of 500 MW of Phase-III generation, 400 MW generations have commissioned till date. Further, the balance 100 MW is yet to be commissioned. Amendment 5 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:

- (i) Such generation capacity has been awarded through competitive bidding; and*
- (ii) Such generation capacity has been declared under commercial operation between 1.7.2017 and 31.12.2019; and*
- (iii) 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”.*

86. Further, as per amendment dated 27.3.2019 to Regulation 7 of the 2010 Sharing Regulations, the said waiver timeline for RE generation projects has been extended till 31.3.2022. Further, as per the declaration given by Andhra Pradesh Solar Power Corporation Pvt. Limited (APSPCL) pertaining to eligibility of the generators for waiver of transmission charges and losses, APSPCL has stated as follows:

- a) All the generators are awarded through competitive bidding.
- b) Generation capacity of 400 MW was declared under commercial operation progressively from June, 2018 to January, 2019 and balance is yet to be commissioned.
- c) Power Purchase Agreement (s) have been executed with SECI for 400 MW for compliance of their Renewable Power Obligations (RPO).

87. Though the Petitioner has provided status of Solar Power Projects for Phase-I, Phase-II and Phase-III in the instant petition, we are concerned only with



Part-A (Phase-II) of the transmission system for the purpose of sharing of transmission charges. Accordingly, we have extracted the details and status of the generators covered in Phase-II which are as follows:

Phase	Total Capacity	Commissioned Capacity	Date of Commissioning
Transmission System for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh - Part B (Phase-II)	750 MW	750 MW	237.5 MW- 20.12.2019 12.5 MW- 11.03.2020 50 MW- 14.10.2020 100 MW- 21.12.2020 54 MW- 11.11.2020 98 MW- 09.01.2021 100 MW- 08.03.2021 76.5 MW- 20.04.2021 21.5 MW- 04.06.2021

88. The Petitioner has submitted that APSPCPL is being billed for the period of mismatch between the transmission assets and the solar generators within the Solar Park.

89. We have considered the submissions of the Petitioner and TANGEDCO. The transmission assets i.e. Asset-1, Asset-2, Asset-3 and Asset-4 were envisaged to be put into commercial operation for evacuation of 750 MW of power commissioned under Phase-II of the Solar Park.

90. The Petitioner has submitted that in the 42nd SCPSPSR meeting held on 27.4.2018, it was agreed that the transmission assets may be considered as part of NP Kunta Phase-III generation. The relevant extracts of the said meeting are as follows:

*“24.0 Transmission scheme for NP Kunta Ultra Mega Solar Power park (1500 MW) in Andhra Pradesh
24.1 Representative of CTU stated that following transmission scheme for NP Kunta solar power park is under implementation as per the approval in the 38th standing*



committee meeting of SR held on 07.03.15 matching with the generation (Ph-I: 250MW by Dec'15, Ph-II: 750MW by Sep'16 & Ph-III: 500MW by Dec'16).

Phase-I (250 MW)

- Establishment of 3x500 MVA, 400/220KV Substation at NP Kunta Pooling station
- LILO of 400KV Kadapa (Cuddapah) - Kolar S/c line at NP Kunta Pooling station • 2 nos. 220kV line bays at NP Kunta Pooling Station
- 1x125 MVAR Bus Reactor at NP Kunta Pooling station • ±100 MVAR STATCOM at 400kV NP Kunta Pooling station

24.2 CTU informed that transmission scheme for NP Kunta Ph-I generation is already commissioned in Apr'16 matching with generation schedule. Subsequently, APSPCL postponed schedule of NP Kunta Ph-II (750 MW) & Ph-III (500 MW) Generation to Aug'19 & April'18 respectively. As envisaged earlier, NP Kunta Ph-II generation (750 MW) was expected to commission before NP Kunta Phase-III (500 MW) generation. However due to delay in award of Ph-II generation, NP Kunta Phase-III generation is commissioning before NP Kunta Ph-II generation and transmission element associated with NP Kunta Ph-II scheme i.e. LILO of 400 kV Cuddapah -Hindupur D/c line (Quad) at NP Kunta PS is required with the Phase-III generation for evacuation of power with reliability and security.

24.3 After deliberations, it was agreed that LILO of both circuit of existing Hindupur-Kadapa (Cuddapah) 400 kV D/c (quad) line at NP Kunta PS, transmission element of NP Kunta Phase-II scheme, may be considered as part of NP Kunta Phase-III generation.”

91. The relevant extracts of the regulatory approval of order dated 6.8.2015 in Petition No. 29/MP/2015 are 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.

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.”

92. The Petitioner has submitted that as per the approval in 42nd SCPSPSR meeting held on 27.4.2018, the transmission assets may be considered as part of NP Kunta Phase-III generation. Both the 42nd SCPSPSR and the Petitioner are silent about treatment of mismatch in commissioning of transmission assets and payment of transmission charges. The Commission vide order dated 18.2.2022 in Petition No.360/TT/2020 and vide order dated 5.2.2021 in Petition No 87/TT/2019 has addressed the issue of sharing of transmission charges of Phase-I and Phase-III of NP Kunta Solar Generation and held that APSPCL is liable to pay transmission charges for the period of delay.

93. The loop in portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station alongwith associated bays (Asset-1) was commissioned on 4.8.2018 and approximately 400 MW generation under Phase-III was commissioned from 21.7.2018 to 30.01.2019. LILO of 400 kV Cuddapah - Hindupur D/C line (Quad) at NP Kunta PS is put to use along with the commissioning of Phase-III generation which has enhanced reliability and security of transmission system. Therefore, transmission charges of Asset-1 shall be included in PoC pool.



94. The loop out portion of LILO of Kadapa-Hindupur 400 kV D/C line (both circuits) at NP Kunta Sub-station alongwith associated bays (Asset-2) and COD of Asset-2 is approved as 12.10.2018 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as Asset-2 is not put to use due to delay in associated transmission system under the scope of the APTRANSCO. The power flow in Asset-2 started with effect from 22.1.2019 and 23.1.2019 for Circuits Hindupur-1 and 2 respectively with COD of 400 kV D/C Hindupur-Uravakonda line I and II of APTRANSCO. Hence, the transmission charges for Asset-2 with effect from 12.10.2018 to 21.1.2019 shall be borne by APTRANSCO and thereafter the transmission charges shall be included in PoC Pool.

95. Asset-3 and Asset-4 consist of 2 number of 220 kV line bays and 04 number of 220 kV line bays at NP Kunta Sub-station and the COD of Asset-3 and Asset-4 is approved under proviso (ii) of Regulation 4 (3) of the 2014 Tariff Regulations as these assets are not put to use due to delay of associated renewable generation under the control of APSPCL. The Commission in various orders is held that the if COD is approved under proviso (ii) of Regulation 4 (3) of the 2014 Tariff Regulations, the defaulting party is liable to pay transmission charges. In the instant case, APSPCPL is not commissioned the generation and is liable to pay transmission charges. As the solar generation of 750 MW under Phase-II of Solar Park has achieved COD on different dates, the only issue which arises for our consideration in this petition is what proportion of transmission charges will be included in the common pool and what proportion of transmission charges is to be paid by the Solar Power Park Developer (APSPCPL). APSPCPL is liable to pay the transmission charges as per the details given below



COD of the transmission assets	Solar generation capacity (MW) commissioned	Date of commissioning of solar generation capacity	Liability of transmission charges
Asset-3: 26.4.2017*	750 MW (Phase-II)		
	Nil	-----	From: 26.4.2017 to 19.12.2019 Transmission charges of Asset-3 for 750 MW shall be borne by APSPCPL
	237.5	20.12.2019	From 20.12.2019 to 10.3.2020: Transmission charges of Asset-3 proportionate to 237.5 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL
	12.5	11.03.2020	From 11.3.2020 to 13.10.2020: Transmission charges of Asset-3 proportionate to 250 MW shall be included in the common pool while transmission charges for 500 MW shall be borne by APSPCPL
	50	14.10.2020	From 14.10.2020 to 10.11.2020: Transmission charges of Asset-3 proportionate to 300 MW shall be included in the common pool while transmission charges for 450 MW shall be borne by APSPCPL
	54	11.11.2020	From 11.11.2020: to 20.12.2020: Transmission charges of Asset-3 proportionate to 354 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL



	100	21.12.2020	From 21.12.2020 to 8.1.2021: Transmission charges of Asset-3 proportionate to 454 MW shall be included in the common pool while transmission charges for 350 MW shall be borne by APSPCPL
	98	9.1.2021	From 9.1.2021 to 7.3.2021: Transmission charges of Asset-3 proportionate to 552 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL
	100	8.3.2021	From 8.3.2021 to 19.4.2021: Transmission charges of Asset-3 proportionate to 652 MW shall be included in the common pool while transmission charges for 250 MW shall be borne by APSPCPL
	76.5	20.4.2021	From 20.4.2021 to 3.6.2021: Transmission charges of Asset-3 proportionate to 728.5 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL
	21.5	4.6.2021	From 4.6.2021 Transmission charges of Asset-3 proportionate to 750 MW shall be included in the common pool.
Asset-4: 3.08.2018 *	750 MW (Phase-II)		



	Nil	-----	From: 3.8.2018 to 19.12.2019 Transmission charges of Asset-4 for 750 MW shall be borne by APSPCPL
	237.5	20.12.2019	From 20.12.2019 to 10.3.2020: Transmission charges of Asset-4 proportionate to 237.5 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL
	12.5	11.3.2020	From 11.3.2020 to 13.10.2020: Transmission charges of Asset-4 proportionate to 250 MW shall be included in the common pool while transmission charges for 500 MW shall be borne by APSPCPL
	50	14.10.2020	From 14.10.2020 to 10.11.2020: Transmission charges of Asset-4 proportionate to 300 MW shall be included in the common pool while transmission charges for 450 MW shall be borne by APSPCPL.
	54	11.11.2020	From 11.11.2020: to 20.12.2020: Transmission charges of Asset-4 proportionate to 354 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL.



	100	21.12.2020	From 21.12.2020 to 8.1.2021: Transmission charges of Asset-4 proportionate to 454 MW shall be included in the common pool while transmission charges for 350 MW shall be borne by APSPCPL.
	98	9.1.2021	From 9.1.2021 to 7.3.2021: Transmission charges of Asset-4 proportionate to 552 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL
	100	8.3.2021	From 8.3.2021 to 19.4.2021: Transmission charges of Asset-4 proportionate to 652 MW shall be included in the common pool while transmission charges for 250 MW shall be borne by APSPCPL
	76.5	20.4.2021	From 20.4.2021 to 3.6.2021: Transmission charges of Asset-4 proportionate to 728.50 MW shall be included in the common pool while transmission charges for 512.50 MW shall be borne by APSPCPL
	21.5	4.6.2021	From 4.6.2021 Transmission charges of Asset-4 proportionate to 750 MW shall be included in the common pool.
* COD approved under 4(3)(ii) of the 2014 Tariff Regulations.			

96. To summarise:

- a) The AFC allowed in respect of the transmission assets for 2014-19 tariff period are as follows:



(₹ in lakh)					
	Asset-1	Asset-2	Asset-3		Asset-4
Particulars	2018-19 (Pro-rata for 240 days)	2018-19 (Pro-rata for 171 days)	2017-18 (Pro-rata for 340 days)	2018-19	2018-19 (Pro-rata for 241 days)
AFC	310.26	263.10	101.91	127.14	135.81

97. The Annexure-I, Annexure-II, Annexure-III and Annexure-IV given hereinafter form part of the order.

98. This order disposes of Petition No.171/TT/2019 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member



Petition No.:	171/TT/2019
Period	2014-19 Tariff

Annexure-I

Asset-1

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Transmission Line	1339.85	110.27	1450.12	5.28	73.66
Sub-station	359.35	185.41	544.76	5.28	23.87
PLCC	23.15	4.75	27.90	6.33	1.62
Total	1722.35	300.43	2022.78		99.14
Average Gross Block (₹ in lakh)					1872.56
Weighted Average Rate of Depreciation (in %)					5.29



Petition No.:	171/TT/2019
Period	2014-19 Tariff

Annexure-II

Asset-2

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (2014-19)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Transmission Line	1451.68	118.25	1569.94	5.28	79.77
Sub-station	852.37	68.44	920.81	5.28	46.81
PLCC	31.66	6.90	38.56	6.33	2.22
Total	2335.71	193.59	2529.30		128.80
Average Gross Block (₹ in lakh)					2432.50
Weighted Average Rate of Depreciation (in %)					5.29



Petition No.:	
Period	2014-19 Tariff

Annexure-III

Asset-3

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (2014-19)		Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)	
		2017-18	2018-19			2017-18	2018-19
Sub-station	0.00	140.43	37.82	178.25	5.28	3.71	8.41
Total	0.00	140.43	37.82	178.25		3.71	8.41
Average Gross Block (₹ in lakh)						70.22	159.34
Weighted Average Rate of Depreciation (in %)						5.28	5.28



Petition No.:	171/TT/2019
Period	2014-19 Tariff

Annexure – IV

Asset-4

Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (2014-19)	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Sub-station	0.00	43.50	43.50	5.28	1.15
Total	0.00	43.50	43.50		1.15
Average Gross Block (₹ in lakh)					21.75
Weighted Average Rate of Depreciation (in %)					5.28

