CHHATTISGARH STATE ELECTRICITY REGULATORY COMMISSION
RAIPUR

Chhattisgarh State Power Generation Co. Ltd.	......	P. No. 02/2019 (T)
Chhattisgarh State Power Transmission Co. Ltd	......	P. No. 03/2019 (T)
Chhattisgarh State Load Despatch Centre	......	P. No. 04/2019 (T)
Chhattisgarh State Power Distribution Co. Ltd.	......	P. No. 05/2019 (T)

Present: D.S. Misra, Chairman

Arun Kumar Sharma, Member

Vinod Deshmukh, Member (Judicial)

In the matter of –

1. Chhattisgarh State Power Generation Company Ltd. (CSPGCL) Petition final true-up for FY 2016-17 and provisional true up for FY 2017-18.

2. Chhattisgarh State Power Transmission Company Ltd. (CSPTCL) Petition for final true-up for FY 2016-17 and provisional true up for FY 2017-18;

3. Chhattisgarh State Load Dispatch Centre (CSLDC) Petition for final true-up for FY 2016-17 and provisional true up for FY 2017-18;

4. Chhattisgarh State Power Distribution Company Ltd. (CSPDCL) Petition for final true-up for FY 2016-17, provisional true up for FY 2017-18 and determination of Tariff for FY 2019-20;

ORDER

(Passed on February 28, 2019)

1. As per provisions of the Electricity Act, 2003 (hereinafter referred as 'the Act') and the Tariff Policy, the Commission has notified the Chhattisgarh State Electricity Regulatory Commission (Terms and Conditions for determination of tariff according to Multi-Year Tariff principles and Methodology and Procedure for determination of Expected revenue from Tariff and Charges) Regulations, 2015 (hereinafter referred as 'CSERC MYT Regulations, 2015') for determination of tariff for the Generating Company, Licensees, and Chhattisgarh State Load Despatch Centre (CSLDC).

2. This Order is passed in respect of the Petitions filed by the (i) Chhattisgarh State Power Generation Company Ltd. (CSPGCL) for approval of final true-up for FY 2016-17 and provisional true up for FY 2017-18, (ii) Chhattisgarh State Power Transmission Company Ltd. (CSPTCL) for approval of final true-up for FY 2016-17 and provisional true up for FY 2017-18, (iii) Chhattisgarh State Load Dispatch Centre (CSLDC) for approval of final true-up for FY 2016-17 and provisional true up for FY 2017-18, and (iv) Chhattisgarh State Power Distribution Company Ltd. (CSPDCL) for approval of final true-up for FY 2016-17, provisional true up for FY 2017-18, and determination of tariff for FY 2019-20 .

3. This Order is passed under the provisions of Section 32(3), Section 45, and Section 62 read with Section 86(1) of the Act. The Commission, before passing the combined Order on the separate Petitions filed by CSPDCL, CSPTCL, CSLDC and CSPGCL, has considered the documents filed along with the Petitions, supplementary information obtained after Technical Validation, suggestions emerging from the applicant Companies, the consumers, their representatives and other stakeholders during the Public Hearing.

4. The Petitions were made available on the Commission's website as well as the Petitioners' website. The Petitions were also available at the offices of the Petitioners. A public notice along with the gist of the Petitions was also published in the newspapers. Suggestions/objections were invited as per the procedure laid down in the Regulations. Further, the Commission conducted hearings on the Petitions at Office of the Commission at Raipur on February 25, 2019 and February 26, 2019. The

Commission also held a meeting with Members of the State Advisory Committee on February 23, 2019 for seeking their valuable suggestions and comments. The Commission has finalised its views, considering the suggestions/objections and after performing necessary due diligence on each of the issues.

5. The Commission has undertaken final true-up for FY 2016-17 for CSPDCL, CSPTCL, CSLDC and CSPGCL, based on the audited accounts submitted by utilities and in accordance with the provisions of the CSERC MYT Regulations, 2015. Further, the Commission has undertaken provisional true up for FY 2017-18 for CSPDCL, CSPTCL, CSLDC, and CSPGCL, based on the provisional accounts submitted by the Utilities and in accordance with the provisions of the CSERC MYT Regulations, 2015. The final True-up for FY 2017-18 shall be undertaken after filing of true-up petitions by utilities based on audited annual accounts for FY 2017-18, subject to prudence check.

6. In the Multi-Year Tariff (MYT) Order, passed on March 31, 2016, the Commission had approved the ARR and Tariff for the Control Period from FY 2016-17 to FY 2020-21 for the utilities, in accordance with the provisions of the CSERC MYT Regulations, 2015. Further, the Commission passed the Tariff Order for FY 2017-18 for CSPDCL on March 31, 2017.

7. The Revenue Gap/(Surplus) of CSPGCL, CSPTCL and CSLDC arising out of final true-up for FY 2016-17 and provisional True-up for FY 2017-18, along with corresponding carrying/holding cost, have been considered while computing the cumulative Revenue Gap/(Surplus) to be allowed for CSPDCL for FY 2019-20.

8. Applying the carrying cost on Revenue Gap of CSPGCL for FY 2016-17 and FY 2017-18, the total Revenue Gap up to FY 2019-20 has been approved as Rs. 348.76 crore.

9. Also, applying the holding cost on the Revenue Surplus of CSPTCL for FY 2016-17 and FY 2017-18, the total Revenue Surplus up to FY 2019-20 has been approved as Rs. 182.61 crore. Similarly, applying the carrying cost on Revenue Gap of CSLDC for FY 2016-17 and FY 2017-18, the total Revenue Gap up to FY 2019-20 has been approved as Rs. 5.33 crore.

10. Further, applying the carrying cost on Revenue Gap of CSPDCL for FY 2016-17 and FY 2017-18, the total Revenue Gap up to FY 2019-20 has been approved as Rs. 2,075.93 crore. The combined Revenue Gap/Surplus of CSPDCL, CSPTCL, CSPGCL, and CSLDC for FY 2016-17 and FY 2017-18 along with carrying/holding cost amounting to Rs. 2,247 crore has been considered in the ARR of CSPDCL for FY 2019-20.

11. The Commission, in MYT Order dated March 31, 2016, has approved Contribution to Pension and Gratuity of Rs. 622.44 crore for FY 2019-20, which includes amount of Rs. 387.47 crore for CSPDCL, Rs. 63.75 crore for CSPTCL, Rs. 1.56 crore for CSLDC and Rs. 169.66 crore for CSPGCL. At the time of MYT Order, the amount of Rs. 622. 44 crore was computed, assuming a 9.05% annual escalation over pay out of Rs. 480 crore for FY 2016-17, determined on the basis of actuarial analysis. However, the Commission, in the present Order, has considered the estimated outgo for FY 2019-20 as submitted by CSPDCL and; notes that the estimated pay out towards Pension and Gratuity for FY 2019-20 would be Rs. 863.88 crore for all the utilities. Considering the aforesaid, the Commission is of view that part of the requirement i.e., Rs. 421.97 crore, shall be met from interest accrual from Pension fund available with Pension Trust and the balance amount, from recovery through Tariff. Accordingly, the Commission approves Contribution to Pension and Gratuity for FY 2019-20 as Rs. 441.91 crore, which includes amount of Rs. 275.09 crore for CSPDCL, Rs. 45.26 crore for CSPTCL, Rs. 1.11 crore for CSLDC and Rs. 120.45 crore for CSPGCL.

12. The Commission, in MYT Order dated March 31, 2016, had approved O&M Expenses for all Utilities by considering CPI increase of 9.05% and WPI increase of 6.77%, based on average of five years increase from FY 2010-11 to FY 2014-15. The Commission notes that actual indices in respect of CPI and WPI are much less in subsequent years. While approving true-up for FY 2016-17 and provisional true-up for FY 2017-18, the Commission has considered the actual indices of CPI and WPI for those years. Therefore, the Commission is of the view that, in the interest of consumers, it would be prudent to adopt the latest indices for computing normative O&M Expenses. The Commission, after exercising its inherent powers under the Electricity Act, 2003 and CSERC MYT Regulations, 2015, decides to revise the normative O&M Expenses based on the actual indices available now. It is also noted that, as per First amendment in CSERC MYT Regulations, 2015 dated June 16, 2017,

no sharing of gains and losses is considered for Employee Expenses and is allowed on actual basis, after prudence check. Hence, the Commission has revised R&M expenses and A&G Expenses for FY 2019-20 by applying WPI Index of 4.41% on approved expenses for FY 2017-18 after provisional truing up in the present Order.

CSPGCL: Tariff for FY 2019-20

13. The Commission, in its Tariff Order for FY 2017-18 dated March 31, 2017, had revised the Energy Charge Rate(s) (ECR) for CSPGCL's Generating Stations for FY 2017-18 keeping in view unusual hike in fuel prices. Therefore, the same ECRs are proposed to be continued for FY 2019-20 as well. The Annual Fixed Cost (AFC) and Energy Charge Rate for CSPGCL stations, approved by the Commission for FY 2019-20, are as under:

Thermal Power Stations

Sl.	Particulars	Units	FY 2019-20				
			KTPS	HTPS	DSPM	KWTPP	Marwa
1	Annual Fixed Cost	Rs. crore	264.54	524.06	415.86	629.05	1,599.32
2	Energy Charge Rate (ex-bus power plant basis)	Rs./kWh	1.927	1.487	1.545	1.264	1.393
3	Contribution to P&G	Rs. crore	42.71	44.22	7.26	7.16	16.15

Hydro Power Station (Hasdeo Bango)

Sl. No.	Particulars	Units	FY 2019-20
1	Approved Annual Fixed Cost	Rs. crore	26.52
2	Approved Net Generation	MU	271.26
3	Approved Tariff	Rs./kWh	0.978
4	Contribution to P&G	Rs. crore	2.95

CSPTCL: Tariff for FY 2019-20

14. For CSPTCL, the Transmission Charge for FY 2019-20 shall be as under:

Sl.	Particulars	Units	FY 2019-20
A	ARR for CSPTCL (including contribution to pension and gratuity)	Rs. crore	999.45

Sl.	Particulars	Units	FY 2019-20
B	*Less*: past year cumulative revenue surplus	Rs. crore	182.61
C	Net Approved ARR (A-B)	Rs. crore	816.84
D	Monthly Transmission Charges for Medium-term and Long-term Open Access Consumers (C/12)	Rs. crore/month	68.07
5	Short-term Open Access Charges	Rs./kWh	0.296

Further, Transmission Losses of 3% for the energy scheduled for transmission at the point or points of injection shall be recoverable from Open Access customers.

CSLDC: Tariff for FY 2019-20

15. For CSLDC, the Commission has revised ARR to Rs. 15.01 crore for FY 2019-20. Accordingly, System Operation Charges are approved as Rs. 12.01 crore and Intra-State Market Operation Charges as Rs. 3.00 crore for FY 2019-20.

CSPDCL: Tariff for FY 2019-20

16. CSPDCL has filed revised ARR for FY 2019-20 of Rs. 12,507.66 crore. The Commission, after prudence check and due scrutiny, has approved the ARR at Rs. 11,047.53 crore for FY 2019-20. The State Government subsidy has not been taken into account while approving the ARR of CSPDCL for FY 2019-20.

17. CSPDCL, in its Petition for FY 2019-20, has sought approval for cumulative Revenue Gap of Rs. 2,947.35 crore pertaining to previous years. As against this, the Commission, after prudence check and due scrutiny has arrived at a cumulative Revenue Gap of Rs. 2,075.93 crore for FY 2019-20.

18. After adjusting the cumulative Revenue Gap of Rs. 171.48 crore combined for CSPGCL, CSPTCL, and CSLDC, arising out of true-up for FY 2016-17 and provisional true-up for FY 2017-18, the Commission has arrived at cumulative Revenue Gap of Rs. 2,247.41 crore for CSPDCL for FY 2019-20.

19. The Commission approves net revenue surplus of Rs. 539.92 crore, after adjusting cumulative revenue gap of Rs. 2,247.41 crore with standalone revenue surplus for FY 2019-20 as Rs. 2,787.33 crore.

20. The Net ARR for recovery through Tariff for FY 2019-20 has been approved as Rs. 13,294.94 crore for CSPDCL. Average Cost of Supply has been approved as Rs. 6.07/kWh.

21. Based on the above, the Commission has approved the revised Tariff Schedule. The Commission has made the following changes in this Order as compared to the Tariff and Tariff categories approved in the previous Tariff Order:

a) The tariff for most of the consumer categories has been reduced, considering the Revenue Surplus arising after adjustment of all past revenue gaps/(surplus) of the utilities.

b) The tariffs for all consumer categories have been approved in such a manner that the cross-subsidies are reduced gradually, and the tariffs for most of the consumer categories is within the band of +20% of Average Cost of Supply, as stipulated in the Tariff Policy notified by the Government of India.

LV 1: Domestic

c) Presently, there is a separate slab for BPL consumers, i.e., 0–40 kWh as Government of Chhattisgarh has been traditionally reimbursing the billed amount to CSPDCL. However, keeping in view the fact that BPL consumers are defined as BPL card holders only, the existing slab of *up to 40 kWh* is merged with *0–100 units* slab.

d) Further, the existing structure has a consumption slab of *201 to 600 Units*. The Commission is of view that it would be prudent to bifurcate this slab further into *201 - 400 units*, and *401 - 600 units*.

e) Fixed Charges and Energy Charges has been reduced for all consumption slabs especially for the low-income groups, so as to reduce overall tariff for this Category.

LV 2: Non-Domestic

f) The existing sub-categories have been restructured on the basis of Single Phase and Three phase connection. Accordingly, two Sub-categories have been created under this Category as *LV 2.1 Single Phase Non-Domestic* and *LV 2.2 Three Phase Non-Domestic*.

g) For *LV 2.1 Single Phase Non-Domestic*, the existing consumption slabs, along with tariff, has been rationalised. Fixed Charges have been reduced from existing Rs. 70/kW to Rs. 50/kW. Energy Charges have also been reduced.

h) For *LV 2.2 Three Phase Non-Domestic*, the demand-based tariff has been made applicable instead of prevailing contracted load based fixed charges. Energy Charges are reduced from the existing level.

i) In order to promote Women's Empowerment, commercial and industrial activities being run exclusively by registered Women self-help groups shall be entitled for 10% rebate on energy charges.

j) In order to promote and incentivize telecom connectivity in the remote left-wing extremism affected districts, new mobile towers, to be set up in these areas after April 1, 2019, shall be eligible for 50% rebate in energy charges.

LV 3: Agriculture and LV 4: Agriculture Allied Activities

k) For LV 3 Agriculture, the energy charges are reduced to Rs. 4.40/kWh from the present level of Rs. 4.70/kWh. Also, power factor surcharge of 35 paise per kWh has been done away with.

l) For LV 4 Agriculture Allied Activities, the tariff for load upto 25 HP has been equated with the applicable tariff for LV 3 category. For other load slabs, the energy charges are reduced by 40 paise per kWh.

LV 5: Industry

m) Demand based tariff has been made applicable for all sub-categories.

n) For LV 5.1 sub-category, the load limit has been extended upto 25 HP so as to accommodate expansion of small-scale units.

o) To facilitate expansion in existing capacity of LT Industries, following changes have been made in tariff structure:

   i. The existing sub-category *LV 5.2.3Above 100 HP upto 150 HP* has been merged with *LV 5.2.2 Above 25 HP upto 100 HP* sub-category.

   ii. The tariff for new sub-category *LV 5.2.2 Above 25 HP upto 150 HP* has been rationalised accordingly.

HT Categories

p) For HV 3: Other Industrial and General Purpose Non-Industrial category, the Demand Charges are reduced to Rs. 350/kVA/month form the existing level of Rs. 375/kVA/month. The energy charges are accordingly increase to adjust the revenue at category level.

q) For HV-4 Steel Industries, the existing scheme of Load Factor Incentive starting from 65% to 79% has been restructured to 63% to 77% to enable relatively small units to achieve load factor incentive.

r) For HV-4 Steel Industries, the limit of Load Factor for 33 kV supply and 11 kV supply sub-categories has been increased from the existing level of 25% to 35%, for exclusive Rolling Mills consumers.

s) In order to incentivize sustainable eco-friendly transport system, flat rate Single part tariff of Rs. 5/kWh for charging stations for Electric vehicles has been introduced.

t) Presently, Cross-subsidy Surcharge is payable at 50% of Cross-subsidy Surcharge determined by the Commission for Renewable Energy transactions. In order to promote Solar Energy transactions, no Cross-subsidy Surcharge shall be payable in case of consumer receiving power from Solar Power Plants through Open Access.

u) The following key directives are issued to CSPDCL:

   i. Consumer bills, including bills issued through Spot Billing Machine, should also indicate the applicable tariff for that respective consumer category.

   ii. If the bills are not issued consecutively for six months or more for any LT Consumer, billing on accumulated meter reading shall not be raised without approval of Divisional Engineer of CSPDCL.

iii. For a farmer requiring temporary agriculture pump connection more than once within a period of one year from the date of disconnection of the previous connection, no fresh paper formalities would be required.

22. For ready reference, the Tariff Schedule applicable in reference to this Order is appended herewith as **Schedule**.

23. The Order will be applicable from 1st April, 2019 and will remain in force till March 31, 2020 or till the issue of next Tariff Order, whichever is later.

24. The Commission directs the Companies to take appropriate steps to implement the Tariff Order.

Sd/-	**Sd/-**	**Sd/-**
(VINOD DESHMUKH)	**(ARUN KUMAR SHARMA)**	**(D.S. MISRA)**
MEMBER	**MEMBER**	**CHAIRMAN**

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Present: **D.S. Misra, Chairman**
Arun Kumar Sharma, Member
Vinod Deshmukh, Member (Judicial)

In the matter of –

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4. Chhattisgarh State Power Distribution Company Ltd. (CSPDCL) Petition for final true-up for FY 2016-17, provisional true up for FY 2017-18 and determination of Tariff for FY 2019-20;

CORRIGENDUM ORDER

(Passed on March 2, 2019)

The following corrections are made in Order in the above petitions issued by the Commission on February 28, 2019:

1. In Order, an inadvertent typographical error has been noticed in para 12 regarding Annual Fixed Cost of DSPM Thermal Generating Stations of CSPGCL. The Annual Fixed Cost of DSPM Thermal Generating Stations shall be read as Rs. 480.77 Crore instead of Rs. 415.86 Crore.

2. The word "*food processing units*" mentioned in applicability of LV 4: L.V. Agriculture Allied Activities stands deleted. Accordingly, the applicability of LV-4 shall be read as under:
   "LV- 4: L.V. Agriculture Allied Activities

   Applicability

   This tariff is applicable to pump/tube well connections, other equipment and light and fan for tree plantation, fisheries, hatcheries, poultry farms, dairy, cattle breeding farms, sericulture, tissue culture, aquaculture laboratories and milk chilling plant."

3. The modalities of Power Factor Incentive and Surcharge for LV categories, in Sl. No. 1 of para 1.1.10 of Tariff Schedule, is stipulated as under:

   "*Consumers, falling under tariff categories LV-4: LV Agriculture Allied Activities; LV 5- LV Industry; LV 6: Public Utilities and LV-7: Information Technology Industries shall arrange to install suitable low tension capacitors of appropriate capacity at their cost. The consumer also shall ensure that the capacitors installed by them properly match with the actual requirement of the load so as to ensure average monthly Power Factor of 0.85 or above. A consumer who fails to do so shall be liable to pay Power Factor surcharge @ 35 paise per kWh on the entire consumption of the month."*

   The above para shall be read as under:

   "All LV industrial, agriculture allied, public water works, sewage treatment plants and sewage pumping installations' consumers shall arrange to install suitable low tension capacitors of appropriate capacity at their cost. The consumer also shall ensure that the capacitors installed by them properly match with the actual

requirement of the load so as to ensure average monthly Power Factor of 0.85 or above. A consumer who fails to do so shall be liable to pay Power Factor surcharge @ 35 paise per kWh on the entire consumption of the month."

4. The modalities of Variable Cost Adjustment (VCA) Charge for LV categories, in Sl. No. 8 of para 1.1.11 of Tariff Schedule, is stipulated as under:

   "8. Variable Cost Adjustment (VCA) Charge
   VCA charge on consumption ***from April 1, 2018*** *as per the formula and conditions specified in the CSERC MYT Regulations, 2015 shall be levied in addition to energy charge on all the LV categories including temporary supply. However, from the date of applicability of this Order, the base values for computation of VCA for succeeding period shall be revised in accordance to this Order."*

   After correcting the applicable date, the above para shall be read as under:

   "8. Variable Cost Adjustment (VCA) Charge
   VCA charge on consumption ***from April 1, 2019*** *as per the formula and conditions specified in the CSERC MYT Regulations, 2015 shall be levied in addition to energy charge on all the LV categories including temporary supply. However, from the date of applicability of this Order, the base values for computation of VCA for succeeding period shall be revised in accordance to this Order."*

   Similarly, the modalities of VCA for HV categories, stipulated in Sl. No. 10 of para 1.2.12.1 of Tariff Schedule, shall be read as under:

   "10. Variable Cost Adjustment (VCA) Charge
   VCA charge on consumption **from April 1, 2019** as per the formula and conditions specified in the CSERC MYT Regulations, 2015 shall be levied in addition to energy charge on all the HV categories including temporary supply. However, from the date of applicability of this Order, the base values for computation of VCA for succeeding period shall be revised in accordance to this Order."

5. The word *"Registered Women self-help group"* stipulated in the applicability of LV-2: Non-Domestic category and LV-5: L.V. Industry category stands deleted.

Sd/-	Sd/-	Sd/-
(VINOD DESHMUKH)	**(ARUN KUMAR SHARMA)**	**(D.S. MISRA)**
MEMBER	**MEMBER**	**CHAIRMAN**

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Present: D.S. Misra, Chairman

Arun Kumar Sharma, Member

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CORRIGENDUM ORDER

(Passed on April 30, 2019)

A clerical error in the paragraph 1.2.7 (vii) and paragraph 1.2.7 (viii) of the tariff schedule came to the knowledge of the Commission. Accordingly, the Commission hereby makes following corrections in the tariff schedule:

(i) In paragraph 1.2.7 (vii) under the heading, ‘Conditions for start-up power consumers’, the words and expression “eventually draws power from the grid” shall be read as “eventually draws start-up power from the grid”.

(ii) In sub-para (viii) of para 1.2.7, under the heading HV 7: Start-up Power Tariff, the words "*solar and wind*" appearing in the second sentence shall be deleted.

Sd/-	**Sd/-**	**Sd/-**
(VINOD DESHMUKH)	**(ARUN KUMAR SHARMA)**	**(D.S. MISRA)**
MEMBER	**MEMBER**	**CHAIRMAN**

LIST OF ABBREVIATIONS

Abbreviation	Description
A&G	Administrative and General
AMC	Annual Maintenance Contract
APTEL	Hon'ble Appellate Tribunal of Electricity
ARR	Annual Revenue Requirement
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
COD	Date of Commercial Operation
CSEB	Chhattisgarh State Electricity Board
CSERC	Chhattisgarh State Electricity Regulatory Commission
CSPDCL	Chhattisgarh State Power Distribution Company Limited
CSPGCL	Chhattisgarh State Power Generation Company
CSPHCL	Chhattisgarh State Power Holding Company Limited
CSPTCL	Chhattisgarh State Power Transmission Company Limited
CSPTrdCL	Chhattisgarh State Power Trading Company Limited
CWIP	Capital Work in Progress
DPS	Delayed Payment Surcharge
DS	Domestic Service
FY	Financial Year
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoCG	Government of Chhattisgarh
GoI	Government of India
HT	High Tension
kcal	kilocalorie
kg	kilogram
kV	kilovolt
kVA	kilovolt-ampere
kW	kilowatt
kWh	kilowatt-hour
MAT	Minimum Alternative Tax
ml	Millilitre
MMC	Monthly Minimum Charges
MT	Metric Tonnes
MU	Million Units

Abbreviation	Description
MYT	Multi Year Tariff
NTI	Non-Tariff Income
O&M	Operations and Maintenance
PLF	Plant Load Factor
PLR	Prime Lending Rate
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RoE	Return on Equity
Rs	Rupees
SBI	State Bank of India
SCADA	Supervisory Control and Data Acquisition
SERC	State Electricity Regulatory Commission
SLDC	State Load Dispatch Centre
SLM	Straight Line Method
T&D Loss	Transmission and Distribution Loss
UI	Unscheduled Interchange

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1 BACKGROUND AND BRIEF HISTORY

1.1 Background

The Chhattisgarh State Electricity Board (CSEB) was restructured by the State Government in pursuance of the provisions of Part XIII of the Electricity Act, 2003. The Government of Chhattisgarh (GoCG) vide notification No. 1-8/2008/13/1 dated December 19, 2008, issued the CSEB Transfer Scheme Rules, 2008 with effect from January 1, 2009. The erstwhile CSEB was unbundled into five different Companies, viz., Chhattisgarh State Power Generation Company Limited (CSPGCL), Chhattisgarh State Power Transmission Company Limited (CSPTCL), Chhattisgarh State Power Distribution Company Limited (CSPDCL), Chhattisgarh State Power Trading Company Limited (CSPTrdCL), and Chhattisgarh State Power Holding Company Limited (CSPHCL). The assets and liabilities of the erstwhile CSEB have been allocated to the successor Companies w.e.f. January 1, 2009 according to the provisions of the CSEB Transfer Scheme Rules, 2010. The validity of the present Transfer Scheme is extended till December 2018.

1.2 The Electricity Act, 2003, Tariff Policy and Regulations

Section 61 of the Electricity Act, 2003 (herein after referred as the EA, 2003 or the Act) stipulates the guiding principles for determination of tariff by the Commission and mandates that the tariff should progressively reflect the cost of supply of electricity, reduce cross subsidy, safeguard consumers' interest and recover the cost of electricity in a reasonable manner. This Section also stipulates that the Commission while framing the Tariff Regulations shall be guided by the principles and methodologies specified by the Central Electricity Regulatory Commission for determination of the tariff applicable to generating companies and transmission licensees.

Section 62 of the EA, 2003 stipulates that the Commission shall determine the tariff for:

- Supply of electricity by a Generating Company to a Distribution Licensee;
- Transmission of electricity;
- Wheeling of electricity; and
- Retail sale of electricity.

The Tariff Policy notified by the Government of India in January 2006, as well as the amended Tariff Policy notified in January 2016, provides the framework to balance the conflicting objectives of attracting investments to ensure availability of quality power and protecting the interest of consumers by ensuring that the electricity tariffs are affordable.

1.3 Procedural History

The Commission notified the Chhattisgarh State Electricity Regulatory Commission (Terms and Conditions for determination of tariff according to Multi-Year Tariff principles and Methodology and Procedure for determination of Expected revenue from Tariff and Charges) Regulations, 2015 (hereinafter referred to as MYT Regulations, 2015) on September 9, 2015. Based on the above Regulations, the Commission issued the MYT Order dated April 30, 2016 for CSPGCL, CSPTCL, CSLDC and CSPDCL for the Control Period from FY 2016-17 to FY 2020-21.

Further, Utilities had filed Petitions for provisional true-up for FY 2016-17, on which the Commission has issued Order March 26, 2018, along with Tariff for FY 2018-19.

Now, CSPGCL filed the petition for approval of final true-up for FY 2016-17 and provisional true up for FY 2017-18 for Thermal Generation Stations and Hydro Electric Plants on December 31, 2018, which was registered as Petition No. 02 of 2019 (T). CSPTCL filed the Petition for approval of final true-up for FY 2016-17, provisional true up for FY 2017-18 and determination of Transmission Tariff for FY 2019-20 on December 31, 2018, which was registered as Petition No. 03 of 2019 (T). Also, CSLDC filed the Petition for approval of final true-up for FY 2016-17 and provisional true up for FY 2017-18 on December 31, 2018, which was registered as Petition No. 04 of 2019 (T). CSPDCL filed its Petition on December 1, 2018 for approval of final true-up for FY 2016-17, provisional true up for FY 2017-18, and determination of retail tariff for FY 2019-20, which was registered as Petition No. 05 of 2019 (T).

In this Order, the Commission has undertaken the final true-up for FY 2016-17 and provisional true up for FY 2017-18 for CSPGCL, CSPTCL, CSLDC and CSPDCL in accordance with the provisions of the MYT Regulations, 2015 and determination of revised ARR and Tariff for CSPDCL for FY 2019-20. Utilities have submitted that its audited accounts for FY 2017-18 are under preparation and hence Audited Accounts from the Utilities are not available. The Commission in this order has undertaken the provisional true-up based on the available provisional accounts. The Hon’ble APTEL in OP.NO.1 of 2011 has directed the state Commission to ensure that the Annual Performance review, true-up of past expenses has to be carried out on year to year basis.

1.4 Admission of the Petition and Hearing Process

The Petitions filed by CSPTCL, CSPDCL, CSPGCL and CSLDC were registered on January 3, 2019.

The Companies were directed to publish the abridged version of the Petition in Hindi and English newspapers for inviting comments / objections / suggestions from all the stakeholders. The Petitions were made available on the website of the Commission as well as on the Petitioners' websites. As required under Clause 21 of the CSERC (Details to be furnished by licensee etc.) Regulations, 2004, notices inviting suggestions /comments/objections from the stakeholders on the above proposals were published in the leading newspapers viz., The Hitavada, Nav Bharat, Nai Duniya, Dainik Bhaskar, Patrika, Hari Bhoomi, Central Chronicle, Amrit Sandesh, Deshbandhu on January 24, 2019, January 28, 2019, January 29, 2019, January 30, 2019 and February 2, 2019.

A period of twenty-one (21) days was given for submission of written objections and suggestions by the public. The Companies were also directed to submit written replies to the Commission with copies endorsed to the objectors.

In order to have better clarity on the data submitted by the Petitioners and to remove inconsistency in the data, the Technical Validation Sessions (TVS) were held on February 19, 2019.for CSPGCL, CSPTCL, CSLDC and CSPDCL with the petitioners. During the TVS, additional information required for processing of the Petitions was sought from the Petitioners. The Petitioners submitted the additional information sought in the TVS. Notices under Section 94(2) of the Act were published in the following newspapers of the State for hearings:

Newspaper Name	Date of Notice Published
Central Chronicle	February 5, 2019
The Hitavada	February 5, 2019
Dainik Bhaskar	February 5, 2019
Navbharat	February 5, 2019
Patrika	February 5, 2019
Nai Duniya	February 5, 2019
Hari Bhoomi	February 5, 2019
Deshbandhu	February 5, 2019
Ambika Vani	February 5, 2019
Dandkaraniya Samachar	February 5, 2019

The objections and suggestions from stakeholders were received on the Petitions filed by CSPGCL, CSPTCL, CSPDCL and CSLDC. The list of persons who filed the written submissions is annexed as **Annexure 1**.

The hearing was held on February 26 and 26, 2019 in the Commission's office at Raipur. The Commission has ensured that the due process as contemplated under the law to ensure transparency and public participation was followed at every stage and adequate opportunity was given to all the persons to offer their views. The list of persons who submitted comments during the Hearing is annexed as **Annexure 2**.

The issues raised by the stakeholders along with the response of the Petitioners' and views of the Commission are elaborated in Chapter 2 of this Order.

1.5 State Advisory Committee Meeting

A copy of the abridged Hindi and English version of the Petitions were also sent to all the members of the State Advisory Committee of the Commission for their comments.

A meeting of the State Advisory Committee was convened on February 23, 2019 to discuss the Petitions and seek inputs from the Committee. CSPGCL, CSPTCL, CSLDC and CSPDCL gave presentations in the meeting on the salient features of their Petitions. Various aspects of the Petitions were discussed by the Members of the Committee in the meeting. The list of the members who participated in the meeting in annexed as **Annexure 3.**

The following suggestions and Objections were made/raised:

1. Matters related to the tariff Petitions discussed in SAC Meeting:
   a. As regards LV-5 Industry Category:
      i. It should be reclassified in three sub-categories, i.e., 0-25 HP, 25-75 HP and 75 - 150 HP.
      ii. Tariff off 100 HP to 150 HP should be designed in such a way that consumer of this category gets benefit as envisaged at the time of enhancing 100 HP limit to 150 HP
   b. CSPDCL should endeavour to reduce power purchase costs.
   c. All the companies should complete accounts auditing exercise within specified timeframe.
   d. Discount for consumption during off-peak hours should be increased to incentivise consumption of surplus power within the state.
   e. Agro Industries should be included in agriculture allied tariff category.

f. Public Hearing on Tariff Petitions should be held at least in 4 places i.e., Raipur, Bilaspur, Ambikapur and Jagdalpur

g. Industrial consumers proposed to shift the lunch time to address the issue of afternoon dip in load curve if tariff is appropriately discounted at that time.

h. Load factor limit for exclusive rolling mill industries is proposed to be increased to 35% for discounted tariff.

i. Specially designed night-time tariff for HV-4 Category should be introduced.

j. Power-off hours for calculation of load factor should be considered as 30 hours per month.

2. General comments and suggestions made by the Members of the State Advisory Committee are as follows:

   a. Temporary Agricultural connections should be converted to permanent within six months.

   b. Safety of whistle blowers should be ensured.

   c. SAC members should be communicated through e-mails also.

   d. Prepaid meters may be used to address the issue of waiver of consumer security deposit.

   e. There should compulsorily be a staff CSPDCL present in the patrolling in addition to outsourced staff.

   f. A CSPDCL staff member should accompany outsourced staff at all times for patrolling purposes.

   g. To provide continuous supply to domestic consumers connected to Atal Jyoti Feeders during load shedding period, i.e., 5 pm to 11 pm, supply to one phase should be maintained.

The above issues raised by the members of SAC were deliberated during the meeting. The concerns of the members of the SAC have been appropriately addressed in this Order.

2 HEARING PROCESS, INCLUDING THE COMMENTS MADE BY VARIOUS STAKEHOLDERS, THE PETITIONERS' RESPONSES AND VIEWS OF THE COMMISSION

2.1 Objections on True-up for FY 2016-17 and Provisional True up of FY 2017-18 of CSPDCL

2.1.1 Suppression of Revenue and Over Recovery

The Objector submitted that CSPDCL has suppressed the actual revenue receipts from LV 3- Agriculture Category during FY 2016-17 and FY 2017-18, totalling Rs. 590.37 crore. Also, it has supressed the actual revenue receipts from LV1- Domestic Category and LV-2 Non-Domestic Category during FY 2016-17 and FY 2017-18, totalling Rs. 514.83 crore and Rs.59.24 crore, respectively. Hence, there is total suppression of revenue of Rs. 2574.82 crore towards various consumer categories.

Also, the Objector further added that CSPDCL has over recovered the amount of Rs. 25.12 crore during FY 2016-17 and Rs. 30.37 crore during FY 2017-18 from LV1 – Domestic category consumers and amount of Rs. 4.78 crore during FY 2016-17 and Rs. 5.32 crore during FY 2017-18 from LV2 – Non-Domestic category consumers. Such recovery over and above the approved tariff is liable to be refunded to the consumers as per Section 62 (6) of the Electricity Act, 2003.

Petitioner's Reply

CSPDCL submitted that the claim of objector as representative of Electricity Consumers of Chhattisgarh stands invalid as Confederation of Electricity Consumers of Chhattisgarh is neither a registered firm, nor it carries the approval of the Commission, which is a mandatory requirement as per CSERC (Conduct of Business Regulations), 2009. Therefore, the submissions made by the objector on behalf of the electricity consumers of the state should not be acceptable.

As regards suppression of revenue towards LV-1 (Domestic including BPL consumers) and LV 2 (Non-Domestic) tariff categories, CSPDCL submitted that the objector relies upon simple arithmetical multiplication of notified tariff of respective sub-category with respective consumption in the R-15 statement for FY 2016-17 and FY 2017-18, which is not prudent. Therefore, the submission of the objector in this regard carries no merit because of the following reasons:

a) CSPDCL's billing to various categories is based telescopic methodology notified by the Commission in the Tariff Orders for the respective years.

b) Telescopic principle is implemented in billing module of SAP-ERP system for billing of consumers in these categories, as per the Tariff Order for respective years.

c) Effectively, the revenue against the consumer count carries energy charge and fixed charge billed to the consumers as per the tariff notified in the Tariff Orders for respective years.

d) Therefore, objector has misconceived the telescopic principles notified by the Commission in the Tariff Orders for the respective years.

As regards revenue suppression for LV3 Agriculture category, CSPDCL submitted that it has implemented the policy directive of GoCG of subsidy to agricultural consumers, effective from FY 2013-14, and the same has been submitted in the monthly R15 statement as a part of compliance of directives.

As regards manipulation of data, CSPDCL submitted that it is a Chhattisgarh State owned company registered under Companies Act, and its financial accounts are subjected to audit by statutory auditor and CAG, and its tariff Petition is subject to scrutiny of MYT Regulations, 2015. Therefore, the figures submitted by it cannot be subject to any manipulation.

Commission's View

The Commission has undertaken the detailed scrutiny of actual revenue incurred by CSPDCL for FY 2016-17 and FY 2017-18. As regards the revenue for Domestic and Non-Domestic category, the Commission has analysed the R-15 data and found that the submission of CSPDCL is correct. However, regarding Agriculture category, the consumers were not been billed as per tariff approved by the Commission. The Licensee, in its justification, had submitted that the revenue corresponding to the approved tariff could not be recovered from Agriculture Consumers who opted for flat rate prescribed by the State Government. The Commission is of the view that it is licensee's responsibility to recover the revenue corresponding to the energy sales as per the approved tariff. Accordingly, the Commission has considered this unrecovered amount as deemed revenue for FY 2016-17 and FY 2017-18 for undertaking true-up for respective years. This has been discussed in detail in Chapter-6 of this Order.

2.1.2 Sale of ABVTPP power to Telangana

The objector submitted that CSPDCL has agreed back-to-back sale of power generated by ABVTPP to Telangana during FY 2017-18, which means that the retail consumers of Chhattisgarh are not concerned about expenses incurred by ABVTPP. CSPDCL has done under-recovery of more than Rs. 148.96 crore from Telangana and has put the burden of such under-recovery on the consumers of Chhattisgarh, which should be disallowed. The Objector further submitted that CSPDCL has suppressed the revenue of Rs. 61.65 crore on account of trading margin for sale of ABVTPP power to Telangana.

Petitioner's Reply

CSPDCL submitted that in its last Tariff Petition for FY 2017-18, it had clarified that CSPDCL has charged tariff as per the Interim Order of TSERC dated March 31, 2017, giving conditional approval to the draft PPA, which does not include trading margin. CSPDCL further submitted that as per Clause 6.8 of the PPA with Telangana DISCOMs, CSPDCL, in case of under-generation from ABVTPP, is bound to provide deficit power from alternate sources to meet its obligations of aggregated contracted capacity. As a result, there are deviations in units received from ABVTPP and subsequent sale to Telangana. CSPGCL further submitted that the current billing of CSPGCL and subsequent billing by CSPDCL to Telangana is strictly as per the tariff approved by the Commission.

Commission's View

The Commission has analysed the issue raised by the Objector. The detailed analysis and ruling of the Commission is stipulated in Chapter-6 of this Order.

2.1.3 O&M Expenses

The Objector stated that there is disproportionate increase in O&M expenses of CSPDCL vis-à-vis increase in sales from FY 2015-16. For FY 2016-17, sales have increased by 2.9%, whereas, Employee Expenses, R&M Expenses and A&G expenses have increased by 14.5%, 39.8% and 13%, respectively, over FY 2015-16. The entire A&G Expenses and R&M Expenses should be considered while determining the sharing of Loss for FY 2016-17, as per MYT Regulations, 2015

Petitioner's Reply

CSPDCL submitted that it is incorrect to state that has no control over its O&M Expenses. A major portion of A&G expenses is booked towards outsourced services availed by it towards meter reading and bill distribution. Further, operation and maintenance of 33/11 KV sub-stations is also undertaken through outsourcing. The wages paid to the outsourced worker is the minimum wage notified by District Collector under Minimum Wages Act. Further, CSPDCL submitted that the expenditure towards electricity charges of offices and establishment of petitioner is approx. 20% of A&G expenses. CSPDCL submitted that non-revision of normative expenses during a control period has put it to recurring loss.

As regards to contentions raised Objector regarding disallowance of over expenditure towards sub-head A&G and R&M under O&M expenses, CSPDCL submitted that it has evaluated the same as per the MYT Regulations, 2015, as amendments from time to time. However, specific prayer under change in law to revise normative level is made for kind consideration of the Commission, as substantial portion of A&G and R&M expenses mentioned under 5.41 to 5.50 relates to distribution business.

CSPDCL submitted that notification of final implementation towards wage revision during 2017-18 which is also covered under change in law as well as first amendment of MYT Regulations, 2015, effects to increase O&M expenses.

Commission's View

The Commission has allowed the O&M expenses on normative basis and has shared the efficiency gain/(loss) between the actual O&M expenses and normative expenses, in accordance with the CSERC MYT Regulations, 2015, as elaborated in Chapter-6 of this Order.

2.1.4 Preparation of R-15 data

The Objector submitted that R-15 format is being prepared by CSPDCL using SAP software, and the Commission is not authorised to look directly into the data fed into the SAP system. The Commission should seek SAP data directly and regularly.

Petitioner's Reply

CSPDCL submitted that the billing system adopted by petitioner is operated through SAP-ERP system. As regards to inspection and examination of data connected to revenue statement, CSPDCL submitted that that under statutory compliance, it sends the statement on month to month basis to the Commission. Further prudence check of data submitted in tariff petition undergoes technical validation session. Hence contentions raised by the Objector need not be considered.

As regards to status of defective meters and Assessed billing cases, CSPDCL submitted that it has maintained the percentage of stop defective meters as prescribed by the Commission, however, the replacement of stop defective meters depends upon several field constraints such as diversity in agriculture connections being located at distant, prolonged lock premises and resistance of consumers towards replacement.

Commission's View

The Commission is deeply concerned about the method of computing distribution loss. Presently, to a large extent, the billing, particularly in Agriculture and Domestic-BPL categories, is assessment-based because of high percentage of defective meters as well as untimely meter reading. Therefore, the reported distribution loss cannot be said to be realistic. This being the situation, the claims of CSPDCL regarding achievement of distribution loss target and incentive thereof cannot be accepted on their face value. The Commission has dealt this issue appropriately in detail and is elaborated in Chapter-6 of this Order.

As regards authorisation to access of SAP data, the Commission directs CSPDCL to provide real time access of the same to the Commission, within a period of three months from notification of this Order.

2.1.5 Banking of Power

The Objector submitted that quantum of banked power which is not accounted in the same financial year should be treated as stock in hand, and such banked power should be accounted in the same financial year. CSPDCL should be directed to maintain a 'Power Banking Passbook', having necessary details like banking partner, banked quantum, date and time of banking, effective UI Rates, etc.

Petitioner's Reply

CSPDCL submitted that the contentions raised by the Objector regarding maintenance of power banking pass book has no technical relevance as the banking of power between the supplier and buyer mostly depends upon convenience of parties. CSPDCL further submitted that no financial transaction is observed under this method of power management, except for the open access charges to be borne by the buyer. CSPDCL further submitted that short-term purchase during FY 2016-17 and FY 2017-18 indicates that it has efficiently managed the consumer load by availing and returning banking power.

Commission's View

The Commission agrees with the objector that the details of the Banking should be properly accounted for and incorporated in the petition. It is expected that the banking transactions are carried out in a transparent manner, so that there is no confusion regarding the same. The Commission, while undertaking the provisional true-up for FY 2016-17, had given certain directives to CSPDCL regarding accounting for Banked Power and for submission of the necessary data along with the present Petition. The Commission notes that CSPDCL has submitted the details of banking transactions for FY 2016-17 and FY 2017-18. The Commission's detailed views and ruling on the same, is elaborated in Chapter-6 of this Order. Further, Commission shall consider the necessity of framing suitable regulations in this regard.

2.1.6 Sale of surplus power and Power Purchase Cost

The Objector submitted that CSPDCL has shown lower realisation from sale of surplus power in its Petition, as compared to the approved realisation of tariff in the Tariff Order for FY 2016-17, and has not explained the underlying reasons for the same.

Further, the Objector submitted that the abnormal increase in power purchase cost for FY 2016-17 and FY 2017-18 is observed, mainly because of costly power purchased from ABVTPP. The cost of power purchase from renewable sources should not be considered while allowing the power purchase cost for CSPDCL.

Petitioner's Reply

CSPDCL submitted that the sale of surplus power depends upon market conditions. On a day ahead basis the surplus power is sold through power exchanges where the rates are discovered through an electronic process, not known either to seller or buyer. Further UI sales depend upon grid conditions, not under the control of petitioner.

CSPDCL further submitted that it has undertaken the surplus sale of power through aforesaid modes during true up years and effectively managed the power purchase which is demonstrated through UI sale/purchase.

As regards power purchase cost, the power purchase expenditure includes purchase of power from NTPC, CSPGCL and purchase of power from short term sources. Therefore, objector's claim is baseless. As regards inclusion of cost of power purchase from renewable energy in cost of power purchase, CSPDCL submitted that as per Section 86 (1) (e) of The Electricity Act, 2003, the Distribution Licensee is bound to procure power from non-conventional sources.

Commission's View

The Commission in Tariff Order for the respective years had approved the sale of surplus power based on the projections of sales quantum, distribution loss and power procurement quantum. However, the actual realisation is different from the projected figures.

Further, the Commission has time and again directed CSPDCL that accounts for power purchase be prepared as per the directives and regulatory requirements, indicating the separate details of UI charges (over-drawal and under-drawal), VCA Charges, trading of electricity, etc. These directives were given for enabling better analysis of data by the Commission. During the TVS, the Commission sought the additional information from CSPDCL in this regard. The Commission has undertaken final true-up for FY 2016-17 and provisional true-up for FY 2017-18, based on the available data and reconciliations of expenses submitted by CSPDCL with accounts. The Commission's analysis of quantum and cost of power purchase for CSPDCL for FY 2016-17 and FY 2017-18 is elaborated in Chapter-6 of this Order.

The Commission proposes to engage Centre for Energy Regulation (CER), IIT Kanpur to carry out a study to develop a framework for efficient procurement/sale of power for short to medium term. In addition, the study also aims to develop an efficient ToD tariff mechanism and to carry out accurate long-term demand forecasting. The findings of the study will help the Commission to give appropriate direction to CSPDCL to optimise procurement/sale of power.

2.1.7 UDAY Scheme and Distribution Loss

The Objector submitted that CSPDCL has over-stated distribution losses in FY 2016-17 and FY 2017-18, which has led to increase in power purchase cost. Further, he added that CSPDCL should provide clarity regarding the regulation followed by it in determination of AT&C Losses. The Objector has also reiterated various provisions of UDAY MoU. AT&C Loss of only 15% should be allowed strictly as per UDAY MoU for FY 2018-19 and even lesser for upcoming years. CSPDCL's plea of not stipulating to the AT&C Loss agreed by it under UDAY should be rejected and the no incentive on account of reduction of distribution losses should be given.

The Objector further submitted that the provision of 5% of standalone deficit (Rs. 54.82 crore) to be supported by State Government, as a grant agreed UDAY Scheme should be ensured. As per UDAY MoU, State Government has agreed to provide grant of Rs. 380.69 crore, which should be taken into account while determining interest Cost, Depreciation and RoE for FY 2016-17. In case CSPDCL has not such committed grant from GoCG, reminder should be sent for early release.

Petitioner's Reply

As regards overstatement of distribution loss, CSPDCL submitted that during FY 2016-17 and FY 2017-18, the computation of distribution loss is clearly submitted in its Petition. CSPDCL has also submitted detailed technical formats for the same, which are available in public domain. CSPDCL further submitted that for FY 2016-17 and FY 2017-18, revenue is based on actual metered consumption of electricity by various consumers across different categories.

As regards various provisions of UDAY MoU, CSPDCL submitted that it has clearly mentioned provisions of UDAY Scheme in its Petition for the consideration of the Commission.

As regards distribution loss target specified in UDAY Scheme, CSPDCL submitted that at the time of signing of UDAY MoU, in September 2015, CSPDCL had AT&C Losses of 22%, which was to be reduced to 15% till 2018. As regards incentive towards reduction of distribution loss, CSPDCL submitted that it has not claimed any incentive towards achievement of performance towards line loss during true up years. CSPDCL submitted that it has clarified at point no. 5.27 of the Petition that it expects to achieve a target lower than the level specified in MYT Regulations, 2015 due to committed efforts under UDAY with benefits to be passed-on to the consumers of the State.

As regards to consideration of AT&C agreed under UDAY for the purpose of Regulation 71.3 of MYT Regulations, 2015, CSPDCL submitted that it has made detailed submission under 5.15 to 5.29 of its tariff Petition. CSPDCL further submitted that the Objector failed to place single point justifying substitution of AT&C over T&D for the purpose of Regulations under 71.3.

As regards to grants under UDAY, CSPDCL submitted that it has not received any grant towards repayment of loans under UDAY scheme from State Government in FY 2016-17. CSPDCL further submitted that it has calculated depreciation and RoE along with appropriate treatment of grant received in UDAY. CSPDCL further stated that UDAY document carry an understanding between the signing parties and need not be considered as Agreement for the purpose of this Petition.

Commission's View

Considering the data on assessed sales and high number of defective meters, the Commission has approved the distribution loss based on the trajectory stipulated in CSERC MYT Regulations, 2015 and disallowed the incentive on account of lower distribution losses.

The Commission's detailed views and ruling on the Distribution Loss levels to be considered for final true-up for FY 2016-17 and provisional true-up for FY 2017-18 and the revised ARR for FY 2019-20, are elaborated in Chapter-6 and Chapter-7 of this Order.

2.1.8 Return on Equity

The Objector submitted that, in the present true-up Petition for FY 2016-17, CSPDCL has considered the RoE as 16%. The Rate of RoE should be considered as 15.5% for the True-up of FY 2016-17, as CSPDCL has not paid any Income Tax.

Petitioner's Reply

CSPDCL submitted that during MYT Order, the Commission has projected the RoE by taking 16% rate on average gross permissible equity and there is no reason to deviate from the aforesaid view as the Commission is bound to conduct truing-up on the same principles on which projections were made. It can be seen from Tables 12.6 to 28 in MYT Order that year to year RoE for Control Period, i.e., from FY 2016-17 to FY 2020-21, RoE has been computed by considering the rate 16% on average permissible equity base. Hence contentions to consider 15.5% of RoE is baseless.

Commission's View

The Commission has considered the rate of return on Equity for CSPDCL as 16% for FY 2016-17 and FY 2017-18 as per the provisions of CSERC MYT Regulations, 2015, without grossing up for MAT rate, as CSPDCL has not paid any Income Tax in FY 2016-17 and FY 2017-18. The Commission's detailed views and ruling on the Return on Equity to be considered for final true-up for FY 2016-17 and provisional true-up for FY 2017-18 and the revised ARR for FY 2019-20, are elaborated in Chapter-6 and Chapter-7 of this Order.

2.1.9 Non-Tariff Income

The Objector submitted that Non-Tariff Income for FY 2016-17 and FY 2017-18 is claimed by CSPDCL as Rs. 234.48 crore and Rs. 285.10 crore, respectively, as against Rs. 322.83 crore and Rs. 355.11 crore approved in the Tariff Order. CSPDCL has not provided any explanation for the variation.

Petitioner's Reply

CSPDCL submitted that major components of Non-Tariff Income are parallel operation charges & Cross subsidy surcharge. Due to pendency of disputes in several Judicial Forums i.e. APTEL, High Court & Supreme Court, recovery of payment against aforesaid components is affected. CSPDCL further submitted that non-availability component-wise break up in Tariff Orders issued by the Commission makes difficult to analyse the causes of gap between forecast and actual.

Commission's View

The Commission has considered the actual Non-tariff Income for FY 2016-17 based on the audited accounts and for FY 2017-18 based on provisional accounts, along with reconciliations submitted by CSPDCL.

2.1.10 Discrepancy in adjustment of surplus from True up of CSPGCL, CSPTCL and CSLDC

The Objector submitted that CSPDCL has adjusted the Surplus Revenue from the True-up of Petitions of CSPGCL, CSPTCL and CSLDC, but such amount of is not reconciling with the true-up Petitions of these companies.

Petitioner's Reply

CSPDCL submitted that the Commission registers separate petitions from individual stakeholders, i.e., CSPGCL, CSPTCL, CSLDC & CSPDCL, and issues a common Tariff Order after undertaking tariff proceedings. CSPDCL further submitted that as per adopted practice, wherein adjustment of revenue surplus of all other stakeholders is considered to obtain net revenue deficit or surplus into aggregate revenue requirement of ensuing year, contentions raised by the objector are invalid.

Commission's View

The Commission has considered appropriately the Revenue Gap/(Surplus) after final true-up for FY 2016-17 and provisional true-up for FY 2017-18 of CSPGCL, CSPTCL, CSLDC, and CSPDCL, as elaborated in Chapters 3, 4, 5, and 6, respectively of this Order. These Revenue Gap/(Surplus), with due carrying/holding cost for 2 years, have been considered for computing the cumulative Revenue Gap/(Surplus) of CSPDCL for FY 2019-20, as elaborated in Chapter-7 of this Order.

2.1.11 Pension Trust

The Objector submitted that:

a) Since constitution of CSEB Pension Trust on June 18, 2001, apart from monthly payment of Pension and Gratuity to the retired employees of CSEB, contribution was made to the Pension Fund from time to time.

b) Since previous five financial years, contribution to the Pension Fund is being made by successor companies of CSEB as per amount approved by the Commission in the Tariff Orders.

c) As per Order dated December 30, 2017 for redemption of Petition of retired employees of power companies, the corpus of Pension and Gratuity fund was increased. All pensioners were given arrears from April 1, 2016 due to revision of pay.

d) As per calculations of Actuarial Valuation on March 31, 2018, there is a need of Corpus of Rs. 13,115 crore in Pension and Gratuity Fund against existing Rs. 5,018 crore.

e) The contribution made to the Pension and Gratuity fund should be kept invested in the fund, so that corpus keeps on increasing from time to time, and reaches to the level of Actuarial Valuation in future,

f) For FY 2017-18 and FY 2018-19, actual pay-outs made by trust towards Pension and Gratuity of retired employees was more than the contribution approved by the Commission by Rs. 131.06 crore and Rs. 588.37 crore for the respective years, and for FY 2019-20 also, the actual pay-out is expected to be more than the contribution towards P&G Fund approved by the Commission for FY 2019-20, which is leading to the depletion of corpus.

g) For the purpose of disbursement of pension for FY 2019-20, Rs. 863.88 crore should be allowed as contribution to Pension and Gratuity Fund. Similarly, as per first amendment of MYT Regulations, 2015, for FY 2017-18 and FY 2018-19, the actual pay-out made by the fund, in excess of contribution to the P&G Fund by power companies approved Commission, should be allowed.

Commission's View

The Commission evaluated estimated outgo for FY 2019-20 based on the submission by CSPDCL and noted that the estimated pay-out towards Pension and Gratuity for FY 2019-20 would be Rs. 863.88 crore for all the utilities. The Commission is of view that a part of the requirement shall be met from interest accrual from Pension fund available with Pension Trust and the balance amount, from recovery through Tariff. Accordingly, provisions towards Pension and Gratuity has been reviewed in this Order.

Based on the submissions made by CSPDCL, the Commission notes that amount available with pension fund as on March 31, 2018 is Rs. 5018 crore. After considering the arrears payment of Rs. 329.43 crore, the estimated amount as on March 31, 2019 works out as Rs. 4,688.57 crore. The interest accrual from pension fund available works out as Rs. 421.97 crore at rate of interest of 9%. Accordingly, the balance amount of Rs. 441.91 crore shall be recoverable from tariff.

The Commission's detailed views and ruling on contribution towards Pension and Gratuity for FY 2019-20, is elaborated in Chapter-7 of this Order.

2.2 Objections on Proposals for Annual Revenue Requirement for FY 2019-20 of CSPDCL

2.2.1 Sales forecast for agricultural consumption

The Objector submitted that:

a) Report of the study on agricultural consumption carried out by the Commission, as decided in the Tariff Order for FY 2017-18 should be considered.
b) Action Taken Report to curb large number of defective energy meters and present status of such meters as observed under the Tariff Order of FY 2018-19 should be considered.
c) The sales forecast for agricultural consumption for FY 2019-20 should be approved based on realistic projections.

Petitioner's Reply

As regards projection of agricultural sales for FY 2019-20, CSPDCL submitted that it has calculated the energy sales on the basis of compounded annual growth rate for respective tariff category for one year to five-year period. The basis of this forecast is drawn from as per provisions contained in Regulation 65.1 of MYT Regulations, 2015.

Commission's View

In the past, the Commission had projected the agriculture sales on the basis of compounded annual growth rate. However, it has been observed that actual agriculture sales reported by CSPDCL are mostly based on assessed sales and high number of defective meters. Hence, the Commission, in the present Order, has estimated the agriculture sales for FY 2019-20 by applying consumption norms in terms of units per HP per month, derived on the basis of feeder level data. Further, CSPDCL is also directed to undertake a field level study of consumption data at feeder level spread across the state so as to arrive at a more realistic and credible estimation for future years. The Commission's detailed views and ruling on sales projection for Agriculture category for FY 2019-20, is elaborated in Chapter-7 of this Order.

2.2.2 Tariff for LV-1 Domestic Category

The Objector has submitted that consumption slab size for BPL consumers should be increased to 0-100 units from existing slab size of 0-40 units. Since, Chhattisgarh is a power surplus state, the tariff for Domestic category should be reduced.

Petitioner's Reply

As regards determination of retail tariff, CSPDCL submitted the Commission may take the appropriate view in the matter. CSPDCL requested the Commission to ensure the recovery of the ARR through revenue for FY 2019-20.

Commission's View

The Commission has rationalised the existing consumption slab structure for Domestic Category. Presently, there is a separate slab for BPL consumers, i.e., 0–40 kWh, as Government of Chhattisgarh has been traditionally reimbursing the billed amount to CSPDCL. However, keeping in view the fact that BPL consumers are defined as BPL card holders only, the existing slab of *up to 40 kWh* is merged with *0–100 units* slab. Fixed Charges and Energy Charges has been reduced for all consumption slabs especially for the low-income groups, so as to reduce overall tariff for this Category.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.3 Tariff for LV-2 Non-Domestic Category

The Objector submitted that tariff for very small shopkeeper (self-employed poor class) should be made equivalent to 80% of Average Cost of Supply (ACoS). The overall tariff for LV-2 Non-Domestic Category should be brought within ±20% of ACoS.

Petitioner's Reply

CSPDCL submitted that National Tariff Policy limits the retails supply tariff of the consumers within ±20% of ACoS, and therefore, the submission of the Objector is considerable. CSPDCL further requested the Commission to ensure the recovery of it approved ARR for FY 2019-20 through tariff.

Commission's View

The Commission has taken the cognizance of the submission of the Objector and rationalised the tariff for LV 2 Non-domestic category. The existing sub-categories have been restructured on the basis of Single Phase and Three phase connection. Accordingly, two Sub-categories have been created under this Category as *LV 2.1 Single Phase Non-Domestic* and *LV 2.2 Three Phase Non-Domestic*.

For *LV 2.1 Single Phase Non-Domestic*, the existing consumption slabs, along with tariff have been rationalised. Fixed Charges have been reduced from existing Rs. 70/kW to Rs. 50/kW. Energy Charges have also been reduced. For *LV 2.2 Three Phase Non-Domestic*, the demand-based tariff has been made applicable instead of prevailing contracted load based fixed charges. The cross-subsidy level for this category has been reduced to 128% from the existing level of 137%.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.4 Tariff for LV5-Industry Category

The Objector submitted that:

a) Small and tiny industries are having negative growth rate of their electricity consumption since last 6 years as they are fighting for survival. The effective steps taken by the Commission by reducing Demand charges and giving incentives to rural LT Industries have not provided the requisite relief.

b) The effective Tariff should be reduced, demand charges should be minimised or eliminated, and minimum monthly bill amount should be prescribed.

c) Rural incentive of 5% on energy charges should be continued and existing Tribal Area Incentive for Bastar and Sarguja should be fixed at 10% of energy charges, and only one incentive should be made available.

d) There should only be three (3) sub-categories – upto 20 kW, 20kW to 75 kW and above 75 kW, and the tariff should be made telescopic. Further, IT industry should be merged into LV-5 and an incentive of 10% should be given to them.

e) Only night tariff should be introduced to encourage consumption during off-peak hours in night and to discourage consumption during peak hours.

f) Load Factor incentive should be introduced for LV Industries like HV Industries.

g) Power Factor incentive should be increased and made applicable step-wise on each percent improvement.

h) Existing supply affording charges should be reviewed and possibility of bearing the same by the DISCOM should be explored by allowing such expenses under Capital Investment Plan, along with subsequent interest. Further, if any consumer is willing to opt HV supply, supply affording tariff should be derived by adjusting such charges paid by consumer to avail HV supply.

i) Energy security deposit (ESD) of 1.5 times the average monthly consumption should be held instead of 2 times.

Petitioner's Reply

CSPDCL submitted that, regarding the proposal of reduction of effective by minimising or eliminating demand charges, continuation of rural incentive of 5%, abolishment of connected load-based tariff, load based sub categories, introduction of telescopic tariff, merger of IT industry, and introduction of only night tariff design, the Commission may take the appropriate view in the matter as per Section 62 (3) of the Electricity Act, 2003.

As regards Power Factor Incentive, CSPDCL submitted that present structure of power factor is applicable for incentive beyond 90%. CSPDCL further submitted that no load factor incentive has been introduced for LV Industry considering poor growth and operation at LV industries at substantially low load factor. CSPDCL requested the Commission to ensure the recovery of approved ARR for FY 2019-20 through tariff.

CSPDCL submitted that issues regarding supply affording charges, energy security deposit and willingness of LT Industry Consumers to opt for HT Supply are not the subject matter of the present Tariff Petition, and hence not replied to.

Commission's View

The Commission has taken cognizance of the submission of the Objector and rationalised the tariff for LV 5 Industry category. Demand based tariff has been made applicable for all sub-categories. For LV 5.1 sub-category, the load limit has been enhanced to 25 HP so as to facilitate expansion of small-scale units.

To facilitate expansion in existing capacity of LT Industries, the existing slabs have been restructured as follows:

i) Upto 25 HP

ii) Above 25 HP upto 150 HP

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.5 Tariff for Telecom Operators

The Objector submitted that:

a) Suitable tariff benefit should be provided to telecom tower operators operating in extreme interior areas of Chhattisgarh like Dantewada, Jagdalpur, etc.

b) Demand Charges are very high in the Demand Based Tariff Option in LV3 Non-Domestic category, which is currently applicable to telecom tower operators. This make telecom operation infeasible.

c) The Objector has requested a separate Category for telecom towers operators, with, with lower tariff.

d) The load factor benefit proposed in FY 2019-20 by CSPDCL should be made applicable to the telecom tower operators also.

Petitioner's Reply

CSPDCL submitted that it has suggested only three changes in the existing retail tariff structure, which does not include the objections raised by the objector and the Commission may the appropriate view in the matter. CSPDCL requested the Commission to ensure the recovery of the ARR through revenue for FY 2019-20.

Commission's View

The Commission has taken cognizance of the submission of the Objector and rationalised the tariff for LV 5 Industry category. The existing sub-categories have been restructured on the basis of Single Phase and Three phase connection. Also, the Demand Charges for existing LV-3 Non-Domestic category has been reduced from Rs. 240/kVA/month to Rs. 180/kVA/month.

Further, in order to promote and incentivize telecom connectivity in the remote left-wing extremism affected districts, new mobile towers, to be set up in these areas after April 1, 2019, shall be eligible for 50% rebate in energy charges.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.6 Tariff for LV-3 Agriculture Category

The Objector submitted that CSPDCL has stated load factor for agricultural consumers as 42%, whereas well-off farmers of Haryana have load factor below 30%. Even steel industries in Chhattisgarh have average load factor of 43%. Objector further submitted that, instead of taking actual meter reading, CSPDCL is adjusting the theft of electricity in the account of agricultural consumers by assessment of sales. The Commission, in 2011, had directed CSPDCL to give only metered connections to new consumers, but CSPDCL is still providing unmetered connections to new consumers. Meter reading for agricultural consumers should be done regularly, unmetered connections should be made metered, and damaged meters should be promptly replaced. If meter reading is not done for more than 3 months or damaged meter is not replaced within 3 months, bill for 0 consumption should be raised for the consumers.

The Objector further submitted that temporary agricultural connections should be made permanent. The flat rate Agricultural Tariff proposed by CSPDCL for agricultural consumers should not be accepted because by such proposal, CSPDCL intends to recover the shortfall of revenue due to flat rate tariff through ARR. However, currently, the flat rate tariff option is provided by Government of Chhattisgarh (GoCG), and short fall in tariff due to flat rate tariff is met by the subsidy provided by GoCG. Therefore, it will put burden on other electricity consumers of State.

The Objector further submitted that energy charges and fixed charges for agricultural pump-sets should be reduced to Rs. 2 /kWh and Rs. 40/HP/Month, respectively. Subsidy given should be lodged directly in consumer's account post payment of bills/dues. Subsidy in line erection for pump should be increased in remote areas like Sarguja and Bastar. The onus of Power Factor improvement should be on CSPDCL, and not on farmers. Maximum Demand of the pumps should be recorded at the normal running time of the pump, instead of pump start up time. Further, maximum demand of the pump should be recorded at correct voltage levels.

In the regions where domestic connection was provided to the agricultural consumers prior to the implantation of Atal Jyoti Yojna, separate feeder should be installed for providing domestic supply.

The Objector submitted that, for the consumers having homes in the farm, electricity should be supplied to household use at Agriculture tariff. For non-subsidised agricultural consumers, existing rebate of 10% on energy charges should be continued. He further added that, as stated on February 23, 2018 by then Chief Minister of Chhattisgarh in Vidhaan Sabha, State Government disbursed the subsidy of Rs. 2975 crore to 4,70,000 agricultural consumers in the state. In reality the number of agricultural consumers in Chhattisgarh, and their billed amount is much less.

Petitioner's Reply

As regards proposal for flat rate tariff, CSPDCL submitted that under Krishak Jeevan Jyoti Yojna, agricultural consumers, who have opted for flat rate tariff option, are being billed for flat rate tariff. CSPDCL further submitted that, since the electricity distribution area of the State is regulated by the Commission, the flat rate tariff issued to the consumers should also be made a part of retails supply tariff.

As regards load factor, CSPDCL submitted that diversity factor is a major factor in consumption of electricity by agricultural pump-sets, as a result, at the time of supply, this load is always available. CSPDCL further submitted that there are two harvesting seasons in Chhattisgarh, and electricity is supplied for average 18 hours per day to agricultural consumers. Therefore, load factor depicted by CSPDCL is justified.

As regards irregular meter reading for the agricultural consumers, CSPDCL submitted that due to various factors such as inadequate manpower in rural areas, meter installed in the premise of consumer, lack of security, etc., meter reading for agricultural consumers gets effected. However, CSPDCL provides assessed bills to agricultural consumers. CSPDCL further submitted that it provides electricity meter to the consumer at the point of supply, meter protection is the responsibility of the consumer.

As regards subsidy, CSPDCL submitted that as per the Electricity Act, 2003, the matter of subsidy falls under the jurisdiction of State Government.

As regards issue regarding Atal Jyoti Yojna and supply of uninterrupted power to the Domestic Consumers, CSPDCL submitted that in compliance to the directives issued by the Commission in previous Tariff Orders, it has provided details of shifting of DLF Consumers from Atal Jyoti Yojna. CSPDCL submitted that, in this regard there are only 784 consumers located in non-habitat area, for which the supply can be arranged by solar lanterns. The further course of action for these 784 consumers would be completed by CREDA.

As regards power factor, CSPDCL submitted that suppression of disturbances in voltage/current can only be achieved by installation of the capacitor banks at the point close to source of creation of such disturbances. Further, CSPDCL submitted that it has also installed capacitors at distribution transformers and 33/11 kV sub-stations to maintain power factor.

As regards issue related to maximum demand shoot, CSPDCL submitted that energy meters meet the requirements specified by the Commission to record the maximum demand by sliding window principle of measuring average kVA or average kW as the case may be) at the point of supply of consumer during consecutive period of 30 minutes during the billing period. CSPDCL further submitted that, the sudden in rush of current required by the agricultural pump during starting time persists for less than 2 seconds, which is sampling period for energy meter, during which AC supply will undergo more than 100 cycles. In case the sudden inrush exists for more than 2 seconds, equipment will be exposed to the fault, which is not the case as submitted by the Objector.

As regards information provided by Hon'ble Chief Minister of Chhattisgarh in Vidhaan Sabha, CSPDCL submitted that the Objector has not presented the facts properly. CSPDCL submitted that under Jeevan Jyoti Yojna notified by GoCG, both permanent and temporary connections are included. CSPDCL submitted that the requisite data has been furnished in its revenue report, which has been submitted by current tariff petition.

As regards determination of retail tariff for agricultural category, CSPDCL submitted the Commission may the appropriate view in the matter. CSPDCL requested the Commission to ensure the recovery of the ARR through revenue for FY 2019-20.

Commission's View

The Commission has taken cognizance of the submission of the Objector. For LV 3 Agriculture, the energy charges are reduced to Rs. 4.40/kWh from the present level of Rs. 4.70/kWh. Also, power factor surcharge of 35 paise per kWh has been done away with. Further, regarding the temporary connection, a separate directive has been given to CSPDCL that, for a farmer requiring temporary agriculture pump connection more than once within a period of one year from the date of disconnection of the previous connection, no fresh paper formalities would be required.

2.2.7 Tariff for Huller Mills

The Objector submitted that the tariff for Huller Mills up to 15 HP connected load, Demand/Fixed Charges should set in the range of Rs. 0 to 10 /HP/month.

Petitioner's Reply

As regards determination of retail tariff, CSPDCL submitted that the Commission may take an appropriate view in the matter. CSPDCL requested the Commission to ensure the recovery of the approved ARR through revenue for FY 2019-20.

Commission's View

The Commission has taken due cognizance of the submission of the Objector and rationalised the tariff for LV 5 Industry category. Demand based tariff has been made applicable for all sub-categories. However, the Demand Charges have been kept at the existing level, even though there is shift to demand based tariff. Also, for LV 5.1 sub-category, the load limit has been extended upto 25 HP so as to accommodate expansion of small-scale units. The energy charges are reduced from Rs. 3.80/kWh to Rs 3.60/kWh.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.8 Separate category for hospitals, clinics and nursing homes.

The Objector submitted that the hospitals, clinics and nursing homes are currently billed under LV-2 Non-domestic Category. A separate category for hospitals, clinics and nursing homes should be created, and should be charged minimal tariff.

Petitioner's Reply

CSPDCL submitted that it has suggested only three changes in the existing retail tariff structure, which does not include the objections raised by the objector and the Commission may take an appropriate view in the matter. CSPDCL requested the Commission to ensure the recovery of the ARR through revenue for FY 2019-20.

Commission's View

The Commission has not created a separate Tariff category for hospitals, clinics and nursing homes. Moreover, the Commission has taken cognizance of the submission of Objector and has rationalised the tariff for LV 2 Non-Domestic Category. The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.9 Tariff for Railways

The Objector has submitted that:

a) Favourable tariff should be formulated for Railways, at it is the bulk customer.

b) Railway Traction Tariff (HV-1 Category) as proposed by CSPDCL should be further reduced at the level of net power purchase cost of CSPDCL.

c) For non-traction load of railways, LV-6 Public Utility category should be applicable as railways is a public utility.

Petitioner's Reply

As regards formulation of favourable tariff for railways and reduction of tariff of HV-1 category to the level of net power purchase cost, CSPDCL submitted that introduction of monthly Load Factor rebate of 30% on the energy charges for HV-1 category when the load factor is about 20%, has effectively reduced the ABR for this category. CSPDCL requested the Commission to continue the existing tariff applicable for HV-1 category without any change.

As regards consideration of non-traction load of railways under public utility category, CSPDCL submitted that specific tariff has been framed by the Commission for bulk supply at one point to establishment, which is applicable to the consumers like railways for load other than the traction load. The bifurcation of demand charges and energy charges is on the basis of load factor, which has commercial implications, and optimum usage of contracted load is within the control of consumers. CSPDCL further submitted that inclusion of non-traction load under *'LV 6-Public Utilities'* category may observe the constraint of simultaneous HV and LV supply within the same premise.

Commission' View

The Commission, in Tariff Order for FY 2018-19, had designed the tariff of the Railway in a way such that it balances the interest of the consumers and Petitioner. A significant reduction in tariff has been considered for Railways. For FY 2019-20, the applicable tariff and conditions has been kept at existing level. The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.10 Tariff for HV-3 Other industrial and General Purpose Non-Industrial category

The Objector submitted that, because of steep increase in electricity tariff for HV-3 Other industrial and General Purpose Non-Industrial category over the years, its production from textile mills have stopped and the plant operations have become unviable. The electricity tariff should be reduced to make plant operations viable.

Petitioner's Reply

CSPDCL submitted that the Objector belongs to HV-3 Category, which generates 15% to 18% of the revenue for CSPDCL and has wide spread of electricity usage. Further, the Category has classification on the basis of Load Factor, which is effectively billed as per the capacity of the consumer to use its contract demand. CSPDCL further submitted that the reason of high electricity tariff submitted by the Objector is not considerable as there are other textile industries in the state which are not facing any problem.

CSPDCL submitted that the tariff determination is the prerogative of the Commission and requested the Commission to ensure the recovery of its ARR through tariff.

Commission's View

The Commission has taken due cognizance of the submission of the Objector and rationalised the tariff for HV-3 category.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.11 Tariff for poha, pulses and murmura industries

The Objector submitted that:

a) 50 % rebate in Demand Charges in Energy Charges should be given.

b) Meter rent for HT connection should not be more than Rs. 300 per month

c) Consumers having Contracted Load upto 300 kW should not be put under Load Factor regime.

d) For HT connection, load factor for applicability of different tariff should be changed from 15% to 30%.

e) For HT connections upto 300 kVA, demand charges and energy charges applicable to LT connections should be made applicable.

f) 5% incentive applicable to MSMEs in rural areas should be made available in urban areas as well.

Petitioner's Reply

CSPDCL submitted that this industry is covered under HV-3 Tariff Category, wherein Demand Charges are applicable as per load factor, and CSPDCL realises 15% of its total revenue from this category. CSPDCL further submitted that Demand Charges provides fixed revenue to it, which is important to meet fixed costs. Therefore, no changes should be made in Demand Charges.

As regards determination of retail tariff, CSPDCL submitted that the Commission may take an appropriate view in the matter. CSPDCL requested the Commission to ensure the recovery of the ARR through revenue for FY 2019-20.

As regards demand charges and energy charges for HT connections, CSPDCL submitted that the Commission has determined separate tariff for LT and HT category.

As regards incentive for MSMEs in urban areas, CSPDCL submitted that, currently, it is applicable for LT in rural areas. CSPDCL submitted that, it would be prudent to provide any such rebate without detailed analysis of the matter.

Commission's View

The Commission has taken due cognizance of the submission of the Objector and accordingly rationalised the tariff for HV-3 category.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.12 Tariff applicable to Steel Tube Mill

The Objector submitted that Steel Tube Mill should be included under HV-4 Steel Industries category. Demand and Energy Charges should be charged at 1.25 times and 1.5 times of the normal tariff applicable to the consumers for the excess demand to the extent of 20% of the contracted demand and beyond 20% of the contracted demand, respectively.

Petitioner's Reply

As regards inclusion of Steel Tube Mill in HV-3 Steel Industries category, CSPDCL submitted that it is the request to enlarge the scope of HV-4 Category. Currently, there is no specific mention of Steel Tube Mill in the existing terms of applicability of tariff, and by default, HV-3 Tariff is applicable to all such purposes having no specific tariff. CSPDCL further submitted that applicability of any tariff pro utilisation is prerogative of the Commission.

As regards objector's submissions regarding Demand Charges and Energy Charges, CSPDCL submitted that the usage of excess demand over and above contracted capacity falls under unauthorised use of electricity, and the statutory provision under Section 126 of the Electricity Act, 2003 provides for a penalty of two times of applicable tariff for unauthorised use.

Commission's View

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.13 Tariff of HV-4 Steel Category

The Objector submitted that CSPDCL has a surplus of Rs. 2193.59 crore for FY 2019-20. The carry forward losses in FY 2016-17 and FY 2017-18 are mainly on account of Hon'ble APTEL Judgement, which is notional in nature and has actually created a cash surplus situation for CSPDCL. This surplus should be used to reduce the retail supply tariff for FY 2019-20. The tariff for HV-4 Steel Industries should be reduced by 25%. The Objector further submitted that:

a) The outstanding dues of Rs. 3,000 crore stuck with railways is burden on the Chhattisgarh State Electricity Consumers.

b) Monthly load factor rebate should be 20% for a load factor of 70%.

c) Power off hours of minimum 60 hours per month should be considered while calculating the load factor discount. Another Objector submitted that Non-supply hours for calculation of Load Factor should be considered as 36 hours per month instead of 30 hours per month proposed by CSPDCL.

d) All national holidays and gazetted holidays should be should be considered as non-supply days for calculation of load factor.

e) Separate tariff for Mini Steel Plants should be created.

f) Off-peak ToD rates should be revised to 70% from existing 75%

g) Increase the tariff difference of 40 paisa to 50 paisa applicable to 132 kV Steel Industries, considering low line loss and O&M Expenses to supply on 132 kV as compared to 33 kV and 11 kV and excess burden incurred to avail 132 kV supply by the consumer.

h) Increase the present limit of load factor incentive from 15% to 20%, proposed for the load factor from 55% to 74%.

i) Night time off-peak hours timings should be changed to 10 pm to 6 am instead of existing 11 pm to 5 am.

j) Increase the limit of permitted increase in contract demand for off-peak consumption during the night to 35% from 20%. This would allow steel plants to consumer surplus power available with CSPDCL during night.

k) CSPDCL is continuously applying the method specified by Hon'ble APTEL in its Judgement on Appeal No. 102 of 2010, dated May 30, 2011, for calculating cost of supply and proposing tariff accordingly, without considering the availability of metering network and availability of actual voltage wise losses. Therefore, voltage-wise cost of supply should be considered for determining the tariff for various voltage level consumers.

Petitioner's Reply

CSPDCL submitted that Objector's request is based on the standalone surplus of Rs. 2476.22 crore for FY 2018-19 and outstanding amount of Rs. 3000 crore with railways. Both these grounds cannot be taken into the consideration because:

a) Surplus of FY 2018-19 shown by Objector has not been subject to the scrutiny of MYT Regulations, 2015, as the true up for FY 2018-19 is not done yet.

b) The contention about revenue of Rs. 3000 crore from railways has no basis at this stage, as the same related to the billing dispute between erstwhile CSEB and Railways, and is presently sub-judice with Arbitration Tribunal. Further, the revenue status of CSPDCL is under regulatory scrutiny and the treatment of same is subjected to prudence check under provisions of tariff regulations.

As regards revenue surplus status during FY 2019-20, that it has taken the same into consideration while proposing the retail supply tariff for FY 2019-20. Further, CSPDCL requested the Commission for the protection and recovery of its approved ARR.

As regards increase in tariff difference between 132 kV Steel Industries and rest of the Steel Industries, CSPDCL submitted that retail tariff of any category should be within ± 20% of ACoS. Steel Industry, being power intensive, pays 18% of revenue to CSPDCL. Further, as per provisions of existing Tariff Order, Steel Industry category avails a benefit of almost 11% concession in energy charges on account of load factor incentive and ToD billing. Any further reduction in tariff would result into lower ABR, consequently affecting the retail consumer tariffs of other categories.

As regards modification of Load factor Incentive structure, CSPDCL submitted that more than 15% of the consumers under HV-4 Category are availing the benefit of load factor rebate under the existing framework and; any relaxation in lower limit would result in the revenue loss for CSPDCL.

As regards non-supply hours for the computation of load factor, CSPDCL submitted that the same is determined on the basis of average annual interruption due to all possible reasons, including emergency and shutdowns.

As regards consideration of national holidays and gazetted holidays as off-supply days for the computation of Load factor, CSPDCL submitted that the availability of supply at consumer's point of supply carries prime importance from commercial point of view, including during national holidays and gazetted holidays as electricity falls under emergency services. The onus to run factory on each day is on the consumer.

As regards increase of off-peak consumption demand limit during night, CSPDCL submitted that due to this, the capacity of the distribution system feeding the consumer supply may get adversely affected, and may also affect the supply reliability of the adjoining consumers.

As regards Voltage-wise Cost of Supply, CSPDCL submitted that, this proposal of Objector should not be considered as in the Hon'ble APTEL's Judgement in Appeal No. 131, 134, 151 and 185 of 2012 in the matter of Bihar Chamber of Commerce vs Bihar Electricity Regulatory Commission, issue related determination of category wise cost of supply and adjustment of category wise loss thereon to determine applicable tariff for different class of consumers has been decided. CSPDCL submitted that as per the aforesaid Judgement, Voltage-wise Cost of Supply calculated in its present Petition, being indicative in nature, should not be used for determination of retail tariff.

Commission's View

The Commission has considered the past revenue gap/(surplus) arising out of final True-up for past years for CSPGCL, CSPTCL, CSLDC and CSPDCL for reducing the overall tariff for all consumer categories. For HV-4 Steel Industries, the Commission has reduced Demand Charges by Rs. 10 per kVA per month across all voltage levels. The existing scheme of Load Factor Incentive starting from 65% upto 79% has been restructured to 63% upto 77% to enable relatively small units to achieve load factor incentive. The power-off (non-supply) hours shall be considered as 30 hours per month for computation of monthly load factor.

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.14 Tariff for rolling mills

The Objector submitted that Average Billing Rate of Rs. 5/kWh should be made applicable for Rolling Mills and load factor limit should be changed from 25% to 35%. For all industries in the State, flat rate tariff plan should be made applicable, which would include load factor rebate.

Petitioner's Reply

CSPDCL submitted that rolling mills operate in a single 12-hour shift. Further, as per technical requirements of rolling mills, maximum demand occurs for very limited time only, which is reflected in their monthly energy consumption. As a result of operation at low load factor, load charges for this industry appear to be high. To address this anomaly, different energy charges and demand charges have been determined for different ranges of load factor. CSPDCL, accordingly, requested the Commission to keep demand charges and energy for this category unchanged.

As regards proposal for flat tariff for all industries, CSPDCL submitted that as per previous years' Tariff Orders determined by the Commission, different tariff has been made applicable for high load and very high load industries, as per their consumption pattern, and same should be continued.

Commission's View

The Commission has increased the Load Factor limit for 33 kV and 11 kV sub-categories from the existing level of 25% to 35%, exclusively for Rolling Mills consumers. Further, the Commission has also reduced Demand Charges by Rs. 10 per kVA per month for rolling mills consumers. The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.15 Digital Billing

The Objector submitted that, since all electricity bills are available on CSPDCL website, the paper billing should be stopped. CSPDCL should pass benefit to the consumers opting for the digital bills instead of paper bills.

Petitioner's Reply

CSPDCL submitted that the facility of digital electricity bills is already in service for electricity consumers of the state from October, 2013. For this purpose, the consumer has to register under 'e-Sewa' provided by CSPDCL and the details regarding the same are available on CSPDCL's website.

Commission's View

Presently, there is no scheme to incentivise digital billing and online payment of bills. Accordingly, the Commission would strive towards putting in place appropriate mechanism to promote the same.

2.2.16 Power Factor Incentive and Surcharge

The Objector submitted that

a) No consumer should be penalised without verifying the power factor from electricity meter installed by CSPDCL. Power Factor should be mentioned in monthly bill, so that consumer can take necessary action to maintain the power factor as desired by CSPDCL.

b) Power Factor Penalty should not be charged from Municipal Corporations.

c) Power Factor Incentive is being charged on street lights, which is against CSERC Supply Code. Further, no power factor surcharge is applicable as per existing Tariff Order, but CSPDCL is still charging it and this practice should be stopped.

d) Like LT connections, Power Factor Incentive should be made applicable to HT connections also.

Petitioner's Reply

CSPDCL submitted that the Objector has raised billing issue related to several Telecom Towers, where LT Connection with contract demand ranging between 7 kW to 35 kW exists. The billing issue is not related to the current tariff petition and should be taken up with concerned field officers. Further, CSPDCL submitted that billing of Power Factor Incentive and Surcharge to LT Consumers is in alignment with provisions notified in Clause 9.1.10 of Tariff Order for FY 2018-19.

Ass regards power factor for HT categories, CSPDCL submitted that currently, kVAh billing is done for HT consumers, under which power factor is already accounted for. Therefore, power factor incentive is required for HT category consumers.

As regards power factor incentive being charged on street lights, CSPDCL submitted that the matter is a regular billing related issue, which is not the subject matter of its current Petition. CSPDCL further submitted that Objector should present its case to the appropriate division.

Commission's View

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.2.17 Waiver of OA Charges for Firm Renewable Energy Projects

The objector submitted that firm Renewable Energy (FRE) sources are the projects with co-located storage solutions with solar PV and/or Wind projects, rendering firm and dispatchable generation, which lends great advantage to DISCOMs. The intermittent nature of renewable energy generation makes demand-supply balancing difficult for LDCs, and also leads to stranding of the thermal capacity, lower PLFs, and frequent ramp-ups and ramp-downs. The natural RE generation (wind and solar) is also rigid and not responsive to demand, and therefore, are not suitable to match the demand pattern of the country on isolated / stand-alone basis. As the percentage contribution of variable RE (VRE) increases in the overall generation mix of India, there will be an increasing challenge of meeting base load requirement. Therefore, it is necessary to VRE to being able to service the base load and on-demand requirements. FRE projects offer the most feasible solution to address these challenges as it can eliminate the 'hidden' grid balancing cost of Rs. 3.50/kWh FRE projects can also provide additional operational benefits to DISCOMs as they do not suffer from intermittency issues. They can internally store the excess generation when the supply is not needed, and then extend the supply hours to respond to the demand, thereby supply power on demand. The Objector suggested for granting of complete waiver of OA charges (Cross-subsidy Surcharge, Additional Surcharge, Transmission Charges and Wheeling Charges) to OA consumers on the power consumed from FRE generating projects for the useful life of the project or 25 years, whichever is lesser, provided that the projects are commissioned before 2024.

Petitioner's Reply

CSPDCL submitted that the request of complete waiver of OA Charges for FRE projects should not be considered because the rates for intra-state open access electricity are Nil, i.e., the consumers who have intra-state open access do not have to pay transmission charges, wheeling charges and SLDC operating charges. However, cross subsidy surcharge for renewable energy is 50% of the rates of CSS applicable for consumers sourcing electricity through conventional sources.

CSPDCL further submitted that the carriage of additional power in intra-state network, including distribution system on 33 kV would involve additional costs. CSPDCL also submitted that this proposal would have commercial implications as the revenue generated from sale of power to Open Access consumers comes under non-tariff income. Therefore, any reduction of revenue under this head would consequently burden the normal electricity consumers of Chhattisgarh.

CSPDCL further submitted that the condition of considering FRE projects commissioned before 2024 is discriminatory and objector has furnished no reasons to support this.

CSPTCL submitted the of waiver of OA Charges for the Open Access consumers sourcing power from FRE projects is the prerogative of the Commission.

Commission's View

Presently, transmission, wheeling and SLDC Operating Charges have been waived for Open Access consumers availing supply from Renewable Energy sources through open access. However, cross subsidy surcharge is payable at the rate of 50% of Cross-subsidy Surcharge. In order to promote Solar Energy transactions, Cross-subsidy Surcharge is being waived for open access solar power consumers.

2.2.18 Wheeling of power under intra-state Open Access

The Objector submitted that the Charges and losses for intra-state open access should be reduced. The transmission charges should be reduced to 15 paise/kWh and transmission loss should be reduced to 2%. For intra-state open access (STOA), in the event of force shut down, the seller has to inform the concerned SLDC regarding the forced shut down, which is effective from 00:00 hours of the next day and the downward revision is permitted only twice per month. The Objector requested that in case of forced shut down, it should be applicable from the next 4th block after intimidation to the concerned SLDC. Further, the clause of downward revision permitted only twice per month should be removed. The declaration of quantum of power should be done on day ahead basis.

Petitioner's Reply

As regards reduction of intra State OA Charges, and transmission charges and losses, CSPDCL submitted that transmission charges and losses are notified after the prudence check by the Commission. Transmission Charges are the mode of recovery of ARR and any reduction in intra-state OA charges would adversely affect the tariff income of the utility, which will ultimately burden the normal electricity consumers.

As regards the issue of ‘forced shut down’ and ‘declaration of quantum of power’ raised by the Objector, CSPDCL submitted that it does not relate to the subject matter of the Petition. CSPDCL further submitted that the tariff Petition is filed under the Section 61 of the Electricity Act, 2003, and the Tariff Order is issued as per Section 64 of the Electricity Act, 2003, which have no consideration to the context raised by the Objector.

CSPTCL submitted that the rate of transmission charge and loss for intra state open access are the prerogative of the Commission. As regards the forced shut down and declaration of quantum, CSPTCL stated that matter related to the amendment of Regulation 8.3 of ABT and DSM Regulations, 2016, which is in the purview of the Commission.

Commission’s View

The Commission is of view that the issue is not related to the present Petition under consideration. However, the Commission notes the issue and will be dealt appropriately.

2.2.19 Settlement of energy at drawal point in case of Multiple Supply Consumer

The Objector submitted that, for the purpose of levy of contract demand by CSPDCL, the quantum of power should be proportionate to contract demand quantum as well as open access quantum. As per current provisions, in case of solar and wind generators having capacity less than 5 MW, the generator shall be considered as the first supplier and the supply in excess of actual open access supply by the generator in the same time block is deemed to have been supplied by CSPDCL. This provision should be made applicable for all intra-state OA consumers.

Petitioner’s Reply

CSPDCL submitted that the issues raised by CSPDCL does not relate to the subject matter of the Petition. CSPDCL further submitted that the tariff Petition is filed under the Section 61 of the Electricity Act, 2003, and the Tariff Order is issued as per Section 64 of the Electricity Act, 2003, which have no consideration to the context raised by the Objector.

Commission's View

The Commission is of view that the issue is not related to the present Petition under consideration. However, the Commission notes the issue and will be dealt appropriately.

2.2.20 Miscellaneous Objections

The other Objectors submitted that the following observations can be made from the Tariff Petition of CSPDCL:

a) In order to prevent theft and loss, AB Cables should be installed, or High Voltage Distribution System should be introduced.

b) To reduce transparency and reduce delays in new connection, existing status of transformer load should be made online.

c) In case of DG sets, the licence requirement and electricity cess should be discontinued.

d) The electricity tariff should be hiked only once in three years.

Petitioner's Reply

As regards AB Cables, high voltage distribution system, making status of connection online, and licence requirements for DG sets, CSPDCL submitted that the issues are not the subject matter of present Petition.

As regards Objector's proposal of tariff hike to be done only once in three (3) years, CSPDCL submitted that revised proposal for determination ARR and determination of Tariff is filed as per the provisions of MYT Regulations.

Commission's View

The Commission's detailed tariff philosophy and categorisation are elaborated in Chapter-8 of this Order.

2.3 Objections on True-up for FY 2016-17 and Provisional True up for FY 2017-18 for CSPGCL

2.3.1 Purchase of poor-quality Coal at higher price

The Objector has submitted that CSPGCL has purchased lower GCV coal at higher price than fixed by South Eastern Coalfields Limited (SECL) during FY 2016-17 in HTPS and KWTPP, leading to the revenue loss of Rs. 97.63 crore. CSPGCL has purchased lower GCV coal at higher price than fixed by SECL during FY 2016-17 for

DSPM, leading to the revenue loss of Rs. 163.57 crore. Instead of claiming this excessive amount from SECL, CSPGCL preferred to recover this cost from Retail Consumers through Fuel Cost Adjustment.

Petitioner's Reply

CSPGCL submitted that as per Fuel Supply Agreement (FSA), GCV, on the basis of which classification of coal is made and prices are charged is defined as GCV on 'Equilibrated Basis' or 'Conditioned Moisture basis'. As per applicable standards mentioned in standard FSA document of Coal India the to measure the Equilibrated GCV, sample is conditioned for 72 hours at 40-degree centigrade temperature and 60% relative humidity and then the test is carried out in a standard laboratory. However, the firing in boiler takes place under actual conditions, wherein, coal contains inherent moisture as well as surface moisture, whereas in the conditioned sample (as per IS) the surface moisture gets evaporated and only the 'Inherent' or 'Conditioned' moisture survives. CSPGCL further submitted that it's not possible to condition the coal for 72 hours before feeding to the boiler and is fed to the boiler on as it is basis. Due to presence of surface moisture the actual GCV of coal is lower. This GCV which is available for utilisation in the boiler is called GCV on TM basis, where TM stands for Total Moisture. The formula for conversion of GCV on equilibrated basis to GCV on TM basis is again specified in the IS itself.

CSPGCL further submitted that due to various technical reasons, there is a deterioration in coal quality from the loading point to the coal bunker.

As regards HTPS, CSPGCL submitted that, at HTPS, during the year out of 365 days, the normal coal stock (10 days or more) was available only for 42 days. Out of these 42 days 41 days were from 19th February to 31st March. For a very large number of days the stock was in 'Supercritical" zone and "Critical" zone. Critical and Supercritical stock is defined by Central Electricity Authority (CEA) as stocks lower than seven (7) days and three (3) days, respectively. As the coal receipt dips below the coal consumption, more and more old stock has to be fed to boiler. When stock comes below the supercritical zone, practically, the generator is forced to dig into the carpet coal. As such situation arises rarely, the carpet coal age is usually more than a year. Older the stock higher is the stacking losses. According to a well-known and acknowledged study, the stacking losses in a coal yard is around 600 kCal/kg per year. The stacking loss alone, as estimated by CEA is to about 35 kCal/kg per month. Additionally, as far as carpet coal is concerned, with open storage on earthen soil, the carpet coal quality deteriorates as it mixes with sand and soil and also absorbs considerable moisture from ground.

As regards DSPM, CSPGCL submitted that SECL started supply of some of the coal from Surakachar mines. The average designated grade of Surakachar Mine is G-5. The FSA allows SECL to supply coal of any grade from any mine and refusal to accept coal may have severe repercussions. CSPGCL further submitted that DSPM TPS is one of the cheapest sources of power in state and thus, resorting to non-utilisation of coal being supplied by SECL and part loading of machines in a plant running at higher than normative PAF was not a prudent option. With better than normative parameters, more loading at DSPM was beneficial to all stakeholders. However, G-5 grade coal is much costlier than the G-11 grade coal. A comparison of cost per 1000 kCal GCV reveals that the 65 grade coal costs about 81% higher than the G-11 Coal As per coal price notification, rate and CV do not follow a linear relationship. A mix of G5 with G-12 giving the same heat value costs higher than the G-11 of the same heat value- Thus it is not -prudent to draw any inference on the basis of average rate and compare it with cost derived from CV. All payments have been made in accordance to the standard FSA terms and there is no wasteful expenditure.

CSPGCL submitted that the coal bills are issued by the coal company on the basis of declared grade for that mine, which has to be paid as per FSA. The grade of coal for a mine / colliery is declared annually by the Coal Controller, an organization under Ministry of Coal, Government of India. The designation is done by the Coal Controller on the basis of a laid down sampling procedure. The samples are drawn randomly on at least 3 different dates spaced at a minimum interval of 7 days and grade is determined by taking the average of the samples. For any particular rake / lot against grade up / down, supplementary bill / credit note is issued by coal company on settlement. As and when a debit / credit note is realized, CSPGCL earnestly passes it on to the beneficiary through the bimonthly FCA bill itself. Therefore, it is incorrect to allege that CSPGCL raises no claim against grade slippages. CSPGCL submitted that in FY 2016-17, at HTPS/KWTPP, 38 credit claims have succeeded, realized and passed to beneficiaries in the subsequent FCA bills.

Regarding adjustment amount charged by Coal company and shown in the petition, CSPGCL submitted that the amount is part of FCA and as the revenue indicated in the petition include the FCA income on expense side also, the same is included. The details of the adjustment amount have been submitted with respective FCA bills. However, for ready reference it is submitted that major part of the adjustment amount pertains to the DMF arrears, which was imposed w.e.f. 12th January 2015 but the arrears for the previous years (about 15 months) were raised by SECL in FY 2016-17.

Commission's View

The Commission examined the submissions made by the objector and CSPGCL. The Commission is in agreement with the submission made by CSPGCL.

2.3.2 Double counting of railway freight

The Objector submitted that CSPGCL has claimed Rs. 64.67 crore as railway freight charges for DSPM for FY 2016-17, which was already claimed in the coal bills raised by SECL, leading to the double counting. CSPGCL should provide the clarification for such expenditure.

Petitioner's Reply

Regarding the railway freight charge, CSPGCL submitted that SECL does not charge any rail freight, and same has not been claimed by CSPGCL under the head 'payment made to Coal Company'. In the FCA bills too, the amount is shown separately. CSPGCL further submitted that the sum total of transportation charges appearing in the bimonthly FCA bills also matches with the Transportation charges claimed in the petition. CSPGCL submitted that the Objector, from the breakup of transportation charges, has picked up only one part of the transportation charges. The Railway charges are categorized under two different heads, Freight Charges and Engine Hauling Charges. Railway issues separate bills against the two which are paid by CSPGCL separately. CSPGCL further submitted that both are towards transportation of coal and hence qualify under Coal Transportation charges of Rs 64.67 crore.

Commission's View

The Commission examined the submissions made by the objector and CSPGCL. The Commission is in agreement with the submission made by CSPGCL.

2.3.3 Cost of Generation in Marwa TPP during FY 2016-17

The Objector submitted that the Commission had approved Annual Fixed Cost of Rs. 2/unit for ABVTPP, whereas CSPGCL has claimed Annual Fixed Cost of Rs. 1286.20 crore for ABVTPP for FY 2016-17, which is in excess by Rs. 701.51 crore. For FY 2016-17, ABVTPP alone had huge revenue deficit of Rs. 709.58 crore, whereas all other thermal power plants had revenue surplus of Rs. 400.27 crore. ABVTPP was originally planned with Capital Cost of Rs. 6317.10 crore, for the installed capacity of 1000 MW. However, the final cost was provisionally assessed as Rs. 8,893 crore and the installed capacity was reduced to 834 MW. Further, the project was completed with a massive delay of 42-44 months. This high revenue deficit of ABVTPP is caused because of high Capital cost, inefficient operation, faulty planning, major failure of new machineries, etc. The cost of all such inefficiencies and deficiencies on part of CSPGCL should not be passed on to the consumers.

Petitioner's Reply

As regards capital cost for ABVTPP, CSPGCL submitted that issue is not the subject matter of the current Petition, and has no locus for consideration.

As regards Annual Fixed Cost, CSPGCL submitted that the Objector has mixed up the provisional order with the final order. The provisional tariff in the Order dated March 31, 2016, in terms of Annual Fixed Cost, per unit cost had limited applicability, and it got superseded by the Commission's tariff order for FY 2017-18, which further attained finality with the final Order dated July 7, 2018. CSPGCL further submitted that Annual Fixed Cost is a fixed cost, as is not represented in Rs. /kWh, and; if the proposal of the Objector is accepted, the consumers will get deprived of the sharing of gains, and will have to pay fixed cost Rs. 2.70/kWh for all the time to come.

As regards capacity of ABVTPP, CSPGCL submitted that 834 MW capacity indicated for the first year of operation is the proportionate capacity computed for full year (due to COD of Unit #2 on July 31). For FY 2017-18, installed capacity of ABVTPP has been considered as 1000 MW only.

Commission's View

The Commission in its Order dated March July 7, 2018 had approved the capital cost of ABVTPP after due prudence check. The same capital cost has been considered for the purpose of final true-up for FY 2016-17 and provisional true-up for FY 2017-18. For undertaking the true-up for ABVTPP, the Commission had sought additional details/information and justification from CSPGCL regarding ABVTPP.

The Commission has undertaken the True-ups based on the available data and reconciliation of expenses submitted by CSPGCL with accounts. The Commission's analysis for the true-up for FY 2016-17 and provisional true-up for FY 2017-18 is elaborated in Chapter-3 of this Order.

3 FINAL TRUE-UP FOR FY 2016-17 AND PROVISIONAL TRUE-UP OF ARR FOR FY 2017-18 FOR CSPGCL

3.1 Background

In accordance with the CSERC MYT Regulations, 2015, CSPGCL has filed this Petition for final true-up of FY 2016-17 and provisional true-up of FY 2017-18 for its existing Thermal Generating Stations, viz., HTPS, KTPS (East), DSPM TPS, 500 MW Korba West TPP, and Hasdeo Bango Hydro power plant and Marwa TPP.

CSPGCL submitted that it has filed the Petition based on audited annual accounts for FY 2016-17 and provisional annual account of FY 2017-18. CSPGCL submitted that provisional true-up of FY 2016-17 has already been completed by the Commission in the previous year.

As regards ABV TPP, the Commission vide its Order dated July 7, 2018 had approved the ARR and tariff for the period from FY 2018-19 to FY 2020-21. In this Order, the Commission had not undertaken the provisional true-up for FY 2016-17 for the reasons mentioned in that Order.

3.2 Generation Capacity of Existing Generating Stations

The details of the existing Generating Stations are shown in the following Table:

Table 3-1: Generation Capacity (MW) of existing Generating Stations

Sr. No.	Particulars	No. of Units& Capacity (MW)
1	Korba East Thermal Power Station (KTPS)	(4x50) +(2x120) = 440 MW
2	Hasdeo Thermal Power Station (HTPS)	4x210 = 840 MW
3	1x500 MW Korba West Thermal Power Plant (KWTPP)	1x500 MW=500 MW
4	Dr. Shyama Prasad Mukherjee Thermal Power Station (DSPM)	2x250=500 MW
5	Mini Mata Hasdeo Bango Hydro Electric Project	3x40=120 MW
6	Atal Bihari Vajpayee Thermal Power Plant (ABVTPP), Janjgir Champa	2x500 = 1000 MW

3.3 Normative Annual Plant Availability Factor (NAPAF)

CSPGCL's submission

CSPGCL submitted NAPAF for existing Generating stations, except for ABVTPP (for which the provisional truing up was not done) is same as submitted by it in provisional true-up petition. CSPGCL submitted the actual PAF for its stations for FY 2016-17 and FY 2017-18 as compared to NAPAF approved by the Commission in the MYT Order is as shown in the Table below:

Table 3-2: Actual Plant Availability Factor for FY 2016-17 and FY 2017-18 as submitted by CSPGCL

Station	FY 2016-17	FY 2017-18
KTPS	58.27%	51.82%
HTPS	80.63%	75.49%
DSPM	93.10%	96.30%
KWTPP	76.50%	92.10%
ABVTPP	33.24%	65.31%

As regards DSPM, CSPGCL submitted that PAF for FY 2016-17 is at the same level as considered in the provisional true up for FY 2016-17. The sharing of gains and losses has been computed in the manner adopted by the Commission in provisional true-up of FY 2016-17. Further, DSPM has performed better than the norms specified by the Commission during FY 2017-18.

As regards HTPS and KWTPP, CSPGCL submitted that HTPS and KWTPP have performed better than the norms specified by the Commission during FY 2017-18.

As regards KTPS, CSPGCL submitted that throughout the year, the old units suffered from technological obsolescence, coal shortages, etc. CSPGCL further submitted that with advancement of technology, some of the hardware/software support has also dried up, and with imminent retirement of the units, capital investment could also not be taken up.

As regards ABVTPP, CSPGCL submitted that the prime reason for the low PAF during FY 2016-17 was outage of Unit I on account of high vibration and problems in barring. The machine has been supplied and erection / commissioning has been done by BHEL. On May 14, 2016, the barring jammed. The efforts were made for in-site corrections however, as last measure, HP inner casing and rotor had to be sent to BHEL Hardwar works. The matter for speedy restoration was taken up at the highest levels. The complete de-blading and re-blading with new blades in 5 stages and replacement of all inter stage and shaft sealing fins of HP rotor and inner casing were carried out. The restoration work was got done at the cost of BHEL. Also, CSPGCL submitted that further details will be submitted upon contract closure. After restoration, the machine was synchronized again on March 12, 2017. Finally, BHEL vide Technical Circular dated March 23, 2017, confirmed that, if two out of 14/16 signals from X or Y direction shaft vibration probe or bearing pedestal exceed 300 microns, tripping at time delay of one second shall be released. Currently, the machine is being operated within that range only. In addition to this, R- phase GT of Unit 2 also witnessed gas formation and had to be replaced.

In this regard, CSPGCL further submitted that, apart from the teething technical trouble, ABVTPP also witnessed partial loading due to critical coal stock and even if, there would have none of the above two incidents, with the coal made available by SECL, the maximum achievable PLF would have been not been more than 37% for FY 2016-17. CSPGCL submitted that major reason for deviation from performance parameters in FY 2016-17 and FY 2017-18 was coal shortage.

CSPGCL submitted that ABVTPP had the coal assurance from the start but it had to face coal shortages due to unforeseen and uncontrollable circumstances. Originally, Parsa Coal Block was allocated to ABVTPP. Firstly, it was suffered due to Change in law (Environment policy related to Go/ No-go) and then subsequent to Hon'ble Supreme Court order on Coal block allocation policy wherein the allocation was cancelled by GoI. The tapered linkage was also withdrawn. The Order of the Hon'ble Supreme Court on coal block allocation policy was an uncontrollable factor for CSPGCL.

In view of the simultaneous de-allocation of number of coal blocks throughout the country and cancellation of tapered linkages too, the number of power projects got stranded. CSPGCL submitted that, for Central and State Public Sector Undertakings, vide OM dated February 8, 2016, Ministry of Coal, Government of India, introduced a policy guideline for grant of "Bridge Linkage", whose policy para (vii), (viii) and (ix) are shown as under:

> *"(vii) As there are constraints in availability of coal and in view of the negative coal balance, CIL/ SCCL shall endeavour to supply 75% of agreed Requirement' of coal where 'Agreed Requirement' is calculated at 90% of normative requirement of the plant at 85% PLF. There shall be no minimum assured quantity. Coal will be supplied on "best effort basis" after meeting existing contractual obligations of coal companies.*

(viii) There shall be no penalty for supply of coal below Agreed Requirement.

(ix) Fuel Supply Agreement (FSA) shall not be signed between EUP and coal company. The coal will be supplied on best effort MOU basis."

Accordingly, CSPGCL submitted that, as per 'Bridge Linkage' Policy:

a) Agreed Requirement of coal = Coal required for 76.5% PLF (90% of 85%)

b) Best effort of Coal Company = Coal required for 57.375% (75% of 76.5%)

c) Minimum assured quantity of coal to be supplied = Nil.

CSPGCL further submitted that Coal India and Ministry of Coal, Government of India were not confident that even this much coal could be supplied. It was the most optimistic scenario, under Best Effort basis. CSPGCL further submitted that because of all out efforts made by it to pursue its case for higher supplies in FY 2017-18, CSPGCL was able to bring in more than 50,000 tons of coal in excess of what Coal India Limited and Ministry of Coal, Government of India expected on the best effort basis. In the ideal condition, this would have implied maximum PAF of about 69.47%.

Accordingly, CSPGCL requested the Commission to revisit and fix the normative PAF for ABVTPP at a maximum level of 57.375% for FY 2016-17 and 69.47% for FY 2017-18.

Commission's View

The actual availability of the Generating Stations for FY 2016-17 and FY 2017-18 through CSLDC's certificate as submitted by CSPGCL has been examined. The Commission has considered the actual availability as per CSLDC's certificate for both years for undertaking sharing of gains and losses.

As regards DSPM, the Commission approves the NAPAF of 85% as per the MYT Order for the purpose of final true-up for FY 2016-17 and provisional true-up for FY 2017-18.

As regards HTPS and KWTPP, the Commission, while undertaking provisional true-up for FY 2016-17, has approved the PAF of 81% for FY 2016-17, considering the delay in commissioning of LDCC. The relevant extract of Order is as under:

*"**3.3 Commissioning of LDCC for KWTPP and allied issues***

… …

> ***Commission's View***
>
> *… … …*
>
> *In view of this, there appears to be some merit in submission of CSPGCL regarding the relaxation of PAF for HTPS and KWTPP. The reasons stated by the Petitioner appear to be not under the control of the Generating Company. Therefore, being special and exceptional circumstances,* ***the Commission in exercise of its powers to relax under Regulation 83 of MYT Regulations, 2015, revises the normative PAF to 81% for HTPS and KWTPP for FY 2016-17****. Being provisional true up at this stage, no relaxation has been considered in any other parameter for HTPS and KWTPP. This issue will be taken up during final true up. The consequences of performance below this level shall be treated in accordance with the applicable Regulations."* ***(emphasis added)***

In line with the above, the Commission hereby approves PAF of 81% for HTPS and KWTPP for FY 2016-17, after final true-up.

In the MYT Order normative availability of 74.38% was approved for HTPS considering the ESP augmentation of both units. However, the Commission observes that CSPGCL has started ESP augmentation work in FY 2017-18 for Unit 1. CSPGCL further clarified that delay in ESP augmentation has not made any adverse impact on any of the performance parameters prescribed by the Commission and cost parameters. As the outage of unit lead to deterioration of performance parameters, with outage of only one unit instead of simultaneous outage / part loading of two units, led to lesser cost of generation. Also, Auxiliary consumption (in absolute terms) does not get reduced linearly with the generation, with sequential outage of units the loss due to degradation of AEC is lower than the simultaneous outage of two units.

It has to be noted that relaxation of 8.62% (i.e., 83% - 74.38%) has been allowed in MYT Order on account of outage of both units. Hence, since outage is for one unit, by applying the same principle, the relaxation of 4.31% is allowed as adopted in MYT Order. Accordingly, the Commission approves NAPAF of 78.69% for HTPS for FY 2017-18. In view of this, the Commission approves NAPAF of 85% for KWTPP for FY 2017-18.

Regarding ABVTPP, the Commission notes that CSPGCL has sought relaxation in PAF for FY 2016-17 and FY 2017-18 on account of non-availability of coal. The Commission notes the actual PAF of ABVTPP was 33.24% in FY 2016-17 and 65.31% in FY 2017-18. The Commission notes that this availability is as per CSLDC certificate and CSPGCL also submitted the details of unit-wise outages during FY 2016-17 and FY 2017-18. The Commission notes that it has approved PAF of 76.50%

for the period from FY 2018-19 to FY 2020-21 in its Order dated July 30, 2018. The relevant extract of Order is as under:

> *"Further, the Commission notes that arrangement of fuel is primary responsibility of generating company. However, after perusal of documents of Bridge linkage, it is understood that the agreed coal requirement is 76.5% of coal requirement of plant. Hence, it would not appropriate to consider the normative PLF of 85% for MTPP since it would be difficult to achieve during the period, on account of lower supply of coal.*
>
> ***In view of the above, the Commission after exercising its powers Under Regulation 83 and 85 of CSERC MYT Regulations, 2015 approves normative PAF and PLF of 76.5% for MTPP for the period from FY 2018-19 to FY 2020-21.*** *Further, the Commission clarifies that this relaxation does not bar CSPGCL from achieving the higher PAF and PLF than 76.5% during such period." (emphasis added)*

Regarding the forced breakdown of one unit, the Commission sought the details of BHEL recommendations, technical circular of BHEL and preventive measures taken by CSPGCL to avoid such instances in future. CSPGCL submitted that due to outage of unit, inspections were carried on site, number of discussions done and meetings took place on the issue. Finally, it was decided that repair is needed at Haridwar works. The Commission has verified a copy of the final e-mail from BHEL confirming the same. BHEL confirms that it has decided to do IP inspection at site, the HP rotor with inner casing (both halves with parting plane fasteners and Dowel pin) along with HP outer casing exhaust side seal bushes are to be sent to BHEL Haridwar works for repair. The material was finally dispatched on September 30, 2016 and October 1, 2016 in two trailers, which reached at BHEL works on October 10, 2016. CSPGCL also submitted copy of the gate passes issued at Marwa end as well as receipt at Haridwar end.

Further, CSPGCL submitted the technical circular of BHEL dated March 23, 2016. The circular was issued by BHEL after a workshop on turbine protection and governing at PSTS Noida. Regarding preventive / precautionary measures, CSPGCL submitted that a continuous vigil is being maintained. With the minute observations, it has been found that the vibrations improve when machine is operated at slightly lower temperature range. BHEL has also confirmed the same. Accordingly, the machine is being run at such lower temperatures. Further, at the time of synchronization the temperature and load gradient are being monitored closely. The vibration and bearing temperatures are taken as key considerations. The machine behaviour is expected to improve after the AOH.

Regarding the coal shortage for CSPGCL, the Commission sought copies of all documentary evidences mentioned by CSPGCL. CSPGCL submitted the copy of the minutes of the high-level meeting dated August 29, 2016. The meeting has resulted in improvement of coal supplies. The average coal supply during the remaining months of FY 2016-17 was approximately double than the average supplies received during the prior period. However, still, the coal receipt was less than the required / committed quantity. It underlines the limitation on coal front due to multiple constraints ranging from coal availability at SECL end to logistic problems at Railways end.

Further, the Commission has gone through copy of office memorandum. In this regard, CSPGCL submitted that under the Bridge Linkage, there is no minimum assured quantity and there would be no Fuel supply Agreement, only MOU would be entered with no penalties for lower supplies. Coal will be supplied on ‘best effort basis’ after meeting existing liabilities. Agreed Requirement of Coal needs to be calculated at 90% of the normative requirement of the plant at 85% PLF. The quantification would be certified by Coal controller. The best effort would be limited to supply of 75% of ‘Agreed requirement of Coal’. Thus, effectively the supply under Best effort Basis MOU is limited to coal requirement of the plant at 57.375%. The coal availability is matter of government policy. The coal shortfall has arisen as a result of the decision of Hon’ble Supreme court on coal block allocation and consequently the previously entered FSA got scrapped. This is a situation of ‘Change in Law’, uncontrollable for CSPGCL.

Further, regarding the assured contracted quantity of coal for ABVTPP, CSPGCL submitted that there is no assured contracted quantity. The Government of India Policy, do not permit Coal India to enter into any such contract. Only MOU on best effort basis is permissible and same has been entered into in July 2016. CSPGCL submitted the copy of MoU and coal receipts.

The Commission observes that there is shortage of coal for ABVTPP during FY 2016-17 and FY 2017-18. The Commission observes that there is possibility of arranging the coal from alternate source for operation of ABVTPP. In this regard, CSPGCL submitted that coal from other sources has two severe bottlenecks. The shortage was most severe in FY 2016-17, as it was the first year after the Office Memorandum and the cancellation of coal mines. Any attempt to import coal / purchasing of coal through e-auction takes minimum six months to fructify due to procedural and logistic arrangement for coal transport etc. State of Chhattisgarh is a land locked State hence import becomes much costlier and transportation also becomes difficult. The most important aspect is the prohibitive costing. At a rough estimate the ECR becomes more than double and the power becomes unviable. Also, in the year FY 2016-17 itself, SECL under the FSA (i.e. at the notified rates) supplied some coal from its Surakachar coal and that resulted in significant rise in FCA / VCA for KTPS. All stakeholders expressed severe concern and Coal India had to be pursued for avoiding dispatches of such high cost coal. Therefore, arranging coal from other sources is not a commercially beneficial option. Efforts are being made to get more coal from the existing arrangement and the coal availability is continuously improving year by year.

Further, the Commission notes that arrangement of fuel is primary responsibility of generating company. However, after perusal of documents of Bridge linkage and other documents submitted by CSPGCL, there appears to be some merit in submission of CSPGCL regarding the relaxation of PAF for ABVTPP. The Commission in its Order dated July 30, 2018 has already acknowledged the fact for shortage of coal and approved NAPAF of 76.5%, which is 90% of normative availability. The reasons stated by the CSPGCL appear to be not under the control of the Generating Company. Therefore, being special and exceptional circumstances, **the Commission in exercise of its powers to relax under Regulation 83 of MYT Regulations, 2015, revises the normative PAF to 57.38% for FY 2016-17 and 69.47% for FY 2017-18**. **The Commission further clarifies that this relaxation has been allowed as special case and the same shall not be considered as precedence for other matters.** The consequences of performance below this level shall be treated in accordance with the applicable Regulations.

The PAF approved by the Commission for final True-up of FY 2016-17 and provisional True-up for FY 2017-18 is shown in the following Table:

Table 3-3: Approved Plant Availability Factor for FY 2016-17 and FY 2017-18

Station	FY 2016-17		FY 2017-18	
	NAPAF	Actual PAF	NAPAF	Actual PAF
KTPS	60.52%	58.27%	66.19%	51.82%
HTPS	81.00%	80.63%	78.69%	75.49%
DSPM	85.00%	93.10%	85.00%	96.30%
KWTPP	81.00%	76.50%	85.00%	92.10%
ABVTPP	57.38%	33.24%	69.47%	65.31%

3.4 Auxiliary Energy Consumption

CSPGCL's Submission

CSPGCL has submitted the actual Auxiliary Energy Consumption for its stations for FY 2016-17 and FY 2017-18, as shown in the following Table:

Table 3-4: Auxiliary Energy Consumption for FY 2016-17 and FY 2017-18 as submitted by CSPGCL

Station	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Submission	MYT Order	CSPGCL's Submission
KTPS	11.25%	12.65%	11.25%	13.23%
HTPS	9.76%	9.76%	9.70%	9.90%
DSPM	9.00%	7.78%	9.00%	7.92%
HBPS	1.00%	0.61%	1.00%	0.40%
KWTPP	5.25%	5.00%	5.25%	4.41%
ABVTPP	5.25%	8.97%	5.25%	6.61%

CSPGCL submitted that all its stations performed better than the norms except KTPS, HTPS and ABVTPP, during FY 2017-18. Also, AEC for all stations for FY 2016-17 is at same level as considered in provisional true-up of the same year.

As regards HTPS and KWTPP, CSPGCL submitted that there is rectification in normative Auxiliary energy consumption and Station Heat Rate for FY 2016-17. CSPGCL submitted that the specific dispensation of these two parameters was made by the Commission in provisional true up Order for FY 2016-17. CSPGCL further submitted that as per Standard Bidding Documents floated by Ministry of Power, Government of India, and in Indian Electricity Grid Code (4th amendment), degradation SHR and AEC due to part loading of machines are considered as uncontrollable phenomenon. CSPGCL further submitted that the Commission had also acknowledged the above principle in the MYT Order as under:

> *"... As far as CSPGCL's prayer for allowing impact of outage on norms of operation is concerned, the relaxation in norms shall be decided at the time of true-up in accordance with the provisions in IEGC under the heading "Technical minimum schedule for operation of CGS and ISGS ..."*

CSPGCL submitted that at 81% PLF, the normative AEC and SHR for HTPS and KWTPP need to be compensated by 0.35% and 2.25%, respectively, subject to such lower degradation or actual. Accordingly, CSPGCL submitted that normative AEC for HTPS needs to be adjusted to 9.76% for FY 2016-17.

As regards KWTPP, CSPGCL submitted that, since the actual AEC for FY 2016-17 is lower than the norm, no relaxation is needed.

As regards ABVTPP, CSPGCL submitted that higher AEC was mostly on account of outage of one unit for considerable time and part loading of other because of coal shortage. During the period, common services remain in operation and with reduction in load, AEC in absolute terms reduces but, it increases in percentage terms. Further, with part loading of machines deterioration of SHR is an uncontrollable and technical phenomenon. Accordingly, CSPGCL requested the Commission to consider normative AEC as 6.25% for FY 2016-17 and 5.90% for FY 2017-18. The higher specific oil consumption was primarily due to repeated rolling of unit I.

Commission's View

It is pertinent to note that CSPGCL filed Appeal No. 222 of 2015 before the Hon'ble APTEL in which the issue of relaxed norms of AEC for KTPS as approved in Order dated May 23, 2015 has been raised. In this order Hon'ble Tribunal has held that there is no unjustness in the order and the State Commission has rightly approved the norms strictly as per the Regulations. Accordingly, in this Order norms of AEC for truing up has been approved as per MYT Order.

CSPGCL has prayed for relaxation in AEC & SHR on account of lower NAPAF. CSPGCL has placed reliance on the IEGC 4th amendment and the MYT Order. Commission has given a careful consideration to the pleadings. It is true that part load operations result in higher AEC & SHR, however, to qualify for any relaxation in such norms the lower NAPAF should be a result of statutory constraints leading to part load operation. Backing down instructions (BDIs) as considered in IEGC and the outages due to capital works such as ESP up-gradation as considered in the MYT order, qualify under this category. A power station cannot avoid BDI from SLDC nor part loading during ESP up-gradation may be avoided. However, coal shortages do not qualify in this category. Constraint in coal supply may itself be uncontrollable and as such qualify for relaxation in NAPAF, however, it does not necessarily imply sustained or intermittent part load operation results in higher AEC & SHR. As such, though KWTPP and ABVTPP qualify in relaxation in NAPAF, yet following the principles of equity and fairness, to balance the interest of all stakeholders, the

Commission is not inclined to accept the prayer for relaxation in AEC & SHR for the two stations.

For HTPS, the ESP capital work qualifies for consideration. However, a closer review of performance reveals that the plant is already in overall gain. Therefore, relaxation is not justified for higher gains. Therefore, Commission is not considering any relaxation on AEC / SHR for this plant too.

For the purpose of sharing of efficiency gains and losses the actual AEC for FY 2016-17 and FY 2017-18 has been considered as submitted by CSPGCL. Further, the normative AEC for FY 2016-17 and FY 2017-18 has been considered for computation of normative net generation, as shown in the Table below:

Table 3-5: Approved Auxiliary Energy Consumption for FY 2016-17 and FY 2017-18

Station	FY 2016-17			FY 2017-18		
	MYT Order	CSPGCL's Submission	Approved in this Order	MYT Order	CSPGCL's Submission	Approved in this Order
KTPS	11.25%	12.65%	11.25%	11.25%	13.23%	11.25%
HTPS	9.70%	9.76%	9.70%	9.70%	9.90%	9.70%
DSPM	9.00%	7.78%	9.00%	9.00%	7.92%	9.00%
HBPS	1.00%	0.61%	1.00%	1.00%	0.40%	1.00%
KWTPP	5.25%	5.00%	5.25%	5.25%	4.41%	5.25%
ABVTPP	5.25%	8.97%	5.25%	5.25%	6.61%	5.25%

3.5 Gross Generation and Net Generation

CSPGCL's Submission

CSPGCL submitted the actual gross generation and net generation for FY 2016-17 and FY 2017-18 as shown in the Table below:

Table 3-6: Gross Generation and Net Generation for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (MU)

Station	FY 2016-17		FY 2017-18	
	Gross Generation	Net Generation	Gross Generation	Net Generation
KTPS	2,290.56	2,000.85	1,787.79	1,551.30
HTPS	5,932.51	5,353.65	5,297.57	4,773.37

Station	FY 2016-17		FY 2017-18	
	Gross Generation	Net Generation	Gross Generation	Net Generation
DSPM	3,982.41	3,672.68	4,043.00	3,722.87
HBPS	147.52	146.62	216.87	216.00
KWTPP	3,322.10	3,155.96	3,986.07	3,810.45
ABVTPP	2,378.75	2165.30	5,719.99	5,342.17
Total	18,053.85	16,809.08	21,051.29	19,416.16

Commission's View

The billing mechanism has been changed from October 2014 where in three-part ABT billing is done based on declared capacity and corresponding scheduled energy and the deviations from the schedule are governed through deviation settlement mechanism. The above figures submitted by CSPGCL is the actual generation and not the scheduled generation. For the purpose of sharing of efficiency gains and losses the Commission has considered the actual Gross Generation and actual Net Generation as submitted by CSPGCL, duly verified with the monthly Statements. The actual gross generation and net generation is based on actual metered data and the normative gross generation and net generation has been arrived based on normative figures approved in the Tariff Order as shown in the Table below:

Table 3-7: Approved Gross Generation and Net Generation for FY 2016-17 (MU)

Station	FY 2016-17			
	Normative		Actual	
	Gross Generation	Net Generation	Gross Generation	Net Generation
KTPS	2332.68	2070.26	2,290.56	2,000.85
HTPS	5960.30	5382.15	5,932.51	5,353.65
DSPM	3723.00	3387.93	3,982.41	3,672.68
HBPS	147.52	146.62	147.52	146.62
KWTPP	3547.80	3361.54	3,322.10	3,155.96
ABVTPP	4192.97	3972.83	2,378.75	2165.30
Total	**19,904.27**	**18,321.33**	**18,053.85**	**16,495.06**

Table 3-8: Approved Gross Generation and Net Generation for FY 2017-18 (MU)

Station	FY 2017-18			
	Normative		Actual	
	Gross Generation	Net Generation	Gross Generation	Net Generation
KTPS	2247.12	1994.32	1,787.79	1,551.30
HTPS	5790.32	5228.66	5,297.57	4,773.37
DSPM	3723.00	3387.93	4,043.00	3,722.87
HBPS	274.00	271.26	216.87	216.00
KWTPP	3723.00	3387.93	3,986.07	3,810.45
ABVTPP	6085.94	5766.43	5,719.99	5,342.17
Total	**21,843.38**	**20,036.53**	**21,051.29**	**19,416.16**

3.6 Gross Station Heat Rate

CSPGCL's Submission

CSPGCL submitted the actual Gross Station Heat Rate (GSHR) approved for FY 2016-17 and FY 2017-18 for existing Generating Stations. Further, CSPGCL submitted that with part loading of machines deterioration of SHR is an uncontrollable and well recognized technical phenomenon. As regards ABVTPP, CSPGCL prays that under the conditions forced by Change in Law, degradation of SHR by 4% and AEC by 0.65% qualifies for consideration in accordance to the provisions of Indian Electricity Grid Code (IEGC- 4th amendment). Accordingly, CSPGCL prays to consider normative AEC as 5.90% & SHR 2385.46 kcal/kwh for ABVTPP. The details of SHR are shown in the following Table:

Table 3-9: GSHR for FY 2016-17 and FY 2017-18 (kcal/kWh)

Station	FY 2016-17	FY 2017-18
KTPS	3187.66	3047.3
HTPS	2671.78	2655
DSPM	2435.54	2434.4
KWTPP	2494.55	2398.2
ABVTPP	2479.3	2385.5

CSPGCL submitted that DSPM performed as per norms and achieved all the targets. Regarding HTPS, ESP augmentation work has started. However, looking to the power requirement, simultaneous long outage of two units was not found to be feasible and prudent. Accordingly, instead of taking two units on outage during one year, CSPGCL has taken up ESP work on one unit during FY 2017-18. CSPGCL submits that considering the revised PAF the normative Station Heat Rate (SHR) and normative Auxiliary Energy Consumption (AEC) or HTPS needs to be slightly adjusted in accordance to MYT order, (as per computation methodology given under Indian Electricity Grid Code). Regarding KWTPP, it did not achieve the SHR target. For KTPS, itis submitted that old units were suffered from vintage, technological obsolescence, coal shortages, etc. during the year. With advancement of technology, some of the hardware / software support has also dried up and with the imminent retirement of units, capital investment also could not be taken up. The gains / losses are proposed to be shared as per Regulation. The performance of ABVTPP was as per norms.

Commission's View

As per the reasons stated above in this order also the Commission is not inclined to relax the norms of AEC for truing up. For DSPM, GSHR has been considered as approved in the MYT Order.

As regards SHR of ABVTPP, the Commission in its Order dated July 30, 2018 has approved SHR of 2378.42 kCal/kWh which is based on design heat rate and provisions of Tariff Regulations. The Commission approves the same SHR for the purpose of final true-up for FY 2016-17 and provisional True-up for FY 2017-18.

The actual SHR for FY 2016-17 and FY 2017-18 has been considered as submitted by CSPGCL for the computation of actual Fuel Cost and the normative SHR has been considered for computation of normative Fuel Cost. SHR approved by the Commission for FY 2016-17 and FY 2017-18 are shown in the following Table:

Table 3-10: Approved GSHR for FY 2016-17 and FY 2017-18 (kcal/kWh)

Station	FY 2016-17		FY 2017-18	
	Normative	Actual	Normative	Actual
KTPS	3110.00	3187.66	3110.00	3047.3
HTPS	2650.00	2671.78	2650.00	2655
DSPM	2500.00	2435.54	2500.00	2434.4
KWTPP	2375.00	2494.55	2375.00	2398.2
ABVTPP	2378.42	2479.3	2378.42	2385.5

3.7 Secondary Fuel Oil Consumption

CSPGCL's Submission

CSPGCL has submitted the Secondary Fuel Oil Consumption (SFOC) for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 3-11: SFOC submitted by CSPGCL for FY 2016-17 and FY 2017-18 (ml/kWh)

Station	FY 2016-17		FY 2017-18	
	MYT Order	Actual	MYT Order	Actual
KTPS	2.00	1.59	2.00	1.60
HTPS	0.80	0.61	1.00	0.60
DSPM	0.50	0.19	0.50	0.21
KWTPP	0.50	0.51	0.50	0.18
ABVTPP	--	2.34	--	0.82

Commission's View

For the purpose of sharing of efficiency gains/losses, actual SFOC has been considered vis-a-vis normative SFOC for computation of normative fuel cost, as shown in the Table below:

Table 3-12: Approved SFOC submitted for FY 2016-17 and FY 2017-18 (ml/kWh)

Station	FY 2016-17		FY 2017-18	
	Normative	Actual	Normative	Actual
KTPS	2.00	1.59	2.00	1.60
HTPS	0.80	0.61	0.90	0.60
DSPM	0.50	0.19	0.50	0.21
KWTPP	0.50	0.51	0.50	0.18
ABVTPP	0.50	2.34	0.50	0.82

3.8 Transit Loss

CSPGCL's Submission

CSPGCL has submitted the transit loss as shown in the following Table:

Table 3-13: Transit loss as submitted by CSPGCL for FY 2016-17 and FY 2017-18

Station	FY 2016-17	FY 2017-18
KTPS	1.13%	1.15%
HTPS	0.19%	0.19%
DSPM	0.13%	0.13%
KWTPP	0.19%	0.19%
ABVTPP	0.63%	0.23%

Commission's View

The actual transit loss for FY 2016-17 and FY 2017-18 has been considered as submitted by CSPGCL for the purpose of sharing of efficiency gains and losses. Accordingly, the normative transit loss for FY 2016-17 and FY 2017-18 has been considered for computation of normative fuel cost, as shown in the Table below:

Table 3-14: Approved Transit loss for FY 2016-17 and FY 2017-18

Station	FY 2016-17		FY 2017-18	
	Normative	Actual	Normative	Actual
KTPS	1.15%	1.13%	1.15%	1.15%
HTPS	0.20%	0.19%	0.20%	0.19%
DSPM	0.20%	0.13%	0.20%	0.13%
KWTPP	0.20%	0.19%	0.20%	0.19%
ABVTPP	0.80%	0.63%	0.80%	0.23%

3.9 Calorific Value and Price of Fuel

CSPGCL's Submission

CSPGCL submitted the actual calorific value and price of fuels for its thermal power stations for FY 2016-17 and FY 2017-18, as shown in the following Table:

Table 3-15: Actual Calorific Value and Price of fuels for FY 2016-17 and FY 2017-18

Station	FY 2016-17				FY 2017-18			
	Coal		Secondary Fuel		Coal		Secondary Fuel	
	Calorific Value (kcal/kg)	Actual Price of Fuel (Rs. /MT)	Calorific Value (kcal/kL)	Actual Price of Fuel (Rs. /kL)	Calorific Value (kcal/kg)	Actual Price of Fuel (Rs. /MT)	Calorific Value (kcal/kL)	Actual Price of Fuel (Rs. /kL)
KTPS	3266.71	2217.59	10,000	33,615.47	3134	1639.9	10,000	36291.4
HTPS	3378.6	1713.72	10,000	43,270.25	3494.09	1729.72	10,000	45,699.44
DSPM	3587.8	2039.11	10,000	50,758.17	3857.77	1959.35	10,000	48,687.93
KWTPP	3428.19	1713.72	10,000	43,270.25	3493.65	1729.72	10,000	45,699.44
ABVTPP	3525.44	2494.76	10,000	33,730.07	3659.13	2122.32	10,000	53,194.07

Commission's View

As per information available common facility is used for transportation of coal for HTPS and KWTPP. In view of this the Commission sought clarification from CSPGCL regarding methodology adopted/process followed for allocation of coal to these power plants during FY 2016-17 and FY 2017-18. CSPGCL clarified that the methodology adopted is same as settled by the Commission in previous year true-up. Accordingly, landed price of coal has been considered on integrated basis and the same rate has been used for computation of fuel cost for both the plants. The Commission accepts the submission of CSPGCL and accordingly considers the landed price of coal for HTPS and KWTPP.

In view of issue raised by one of Objector there is difference in GCV of coal as billed and as fired detailed justification was sought from CSPGCL. It has been submitted by CSPGCL that GCV on the basis of which classification of coal is made and prices are charged is defined as GCV on equilibrated basis or conditioned moisture basis. CSPGCL cited reference to the third-party sampling agreement with CIMFER (Central Institute for Mining and Fuel Research) an organization under Ministry of Science and Technology, Govt. of India. Regarding Definition and procedure of Equilibrated GCV, CSPGCL cited a reference to the IS 1350 (part 2 for determination of CV read with IS (1350 - part 1 for proximate analysis). As per the standard, the sample is conditioned / equilibrated at 40-degree centigrade temperature and 60% relative humidity though a 72 hours process and then the test is carried out in a standard laboratory. CIMFER also uses the same conditioning procedure. CSPGCL submitted a copy of the relevant portion of IS and a sample CIMFER report.

It was also submitted that as actual firing in boiler takes place under actual conditions, the Coal as fired contains surface moisture as well as inherent moisture. Hence the same needs to be corrected by application of a correction factor. It was further submitted that there is nothing specific to CSPGCL and it is a standard industry practice. It is pertinent to note that BHEL which is the biggest manufacturer of power plants in India, in its standard Performance Test Procedure/ report, adopts the same methodology. CSPGCL also submitted a copy of the relevant portion of BHEL PG Test Procedure / report. In this reference it was also submitted that as per a well-known CPRI report, drop in GCV due to surface moisture is about 145 Kcal/ kg per % of surface moisture. Once correction is applied then the issue of drop of GCV from loading point to firing end (Coal bunker) comes. As per CEA report the drop is in the range by 85-100 Kcal / kg for pit head stations and 105 to 120 Kcal/ kg for not pithead stations.

During FY 2016-17, there was coal crisis throughout India. During the year, the stock position normal only for 42 days and that too at the far end of the year, otherwise for most of the period, on daily basis, the stock was in ‘Supercritical” / “Critical” zone (Supercritical for 128 days and Critical for 65 days). The coal stock of HTPS became so low that CSPGCL had to feed the carpet coal too. Older the stock higher is the stacking losses. In this regard, CSPGCL has also referred NTPC R&D study and recent CEA report. This loss is under BAU condition and does not pertain to carpet coal. As far as carpet coal is concerned, with open storage on earthen soil, the carpet coal quality deteriorates further as it mixes with sand and soil and also absorbs considerable moisture from ground.

Further, in view of the coal shortages, SECL started supply of some of the coal from Surakachar mines. The average designated grade of Surakachar Mine is G-5. The FSA allows SECL to supply coal of any grade from any mine and refusal to accept coal may have severe repercussions. However, the G-5 grade coal is much costlier than the G-11 grade coal. As per coal price notification, rate and CV do not follow a linear relationship. Hence, it is not prudent to draw any inference on the basis of average rate and compare it with cost derived from CV. All payments have been made in accordance to the standard FSA terms.

It was further submitted that the coal bills are issued by the coal company on the basis of declared grade for that mine. As per FSA, the procurer is bound to pay the same. The grade of coal for a mine/ colliery is declared annually by the Coal Controller, an organization under Ministry of Coal, Government of India. The designation is done by the Coal Controller on the basis of a laid down sampling procedure. The samples are drawn randomly on at least 3 different dates spaced at a minimum interval of 7 days and grade is determined by taking the average of the samples. For any particular rake / lot against grade up / down, supplementary bill / credit note is issued by coal company on settlement. As and when a debit / credit note is realized, CSPGCL earnestly passes it on to the beneficiary through the bimonthly FCA bill itself. In FY 2016-17 itself, at HTPS alone, 38 credit claims have succeeded, realized and have been passed in the subsequent FCA bills. In case of grade slippages only the difference in basic price and not the tax portion on the original bill, is reimbursed by the Coal India. CSPGCL has raised this issue at all possible forums, even up to the Committee of Alternate Dispute Resolution Mechanism (ADRM) Ministry of Coal. However, the order of Committee as communicated by Shri R P Gupta, Joint Secretary to The Government of India (Ministry of Coal), (received on 04.2016) acknowledges "*It is not possible for CIL to account for difference in taxes*." As such even when grade slippage is established, claim is lodged and it succeeds, under the provisions of law (the order by Committee of Alternate Dispute Resolution Mechanism, assumes the force of law), the recovery is limited to basic price only and is not applicable on tax portion.

After perusal of the submission of CSPGCL, there appears merit in the submission of CSPGCL regarding the difference of GCV as billed and as fired. For the purpose of this Order, the Commission accepts the submission of CSPGCL regarding GCV of Coal.

The details of month-wise Gross Calorific Value (GCV) for each Generating Station for FY 2016-17 and FY 2017-18 were scrutinised. The calorific values of fuels for FY 2016-17 and FY 2017-18 have been considered as submitted by CSPGCL. The actual prices of Secondary Fuel Oil for FY 2016-17and FY 2017-18 have been considered as submitted by CSPGCL. The landed price of coal has been re-computed considering the approved transit and handling loss, for computation of normative Fuel Cost.

The calorific value of fuel and price of fuel considered by the Commission for computation of normative fuel cost for FY 2016-17 and FY 2017-18 is shown in the following Table:

Table 3-16: Approved Calorific Value and Price of fuels for FY 2016-17 and FY 2017-18

Station	FY 2016-17				FY 2017-18			
	Coal		Secondary Fuel		Coal		Secondary Fuel	
	Calorific Value (kcal/kg)	Actual Price of Fuel (Rs. /MT)	Calorific Value (kcal/kL)	Actual Price of Fuel (Rs. /kL)	Calorific Value (kcal/kg)	Actual Price of Fuel (Rs. /MT)	Calorific Value (kcal/kL)	Actual Price of Fuel (Rs. /kL)
KTPS	3266.71	2217.59	10,000	33,615.47	3134	1639.9	10,000	36291.4
HTPS	3378.6	1713.72	10,000	43,270.25	3494.09	1729.72	10,000	45,699.44
DSPM	3587.8	2039.11	10,000	50,758.17	3857.77	1959.35	10,000	48,687.93
KWTPP	3428.19	1713.72	10,000	43,270.25	3493.65	1729.72	10,000	45,699.44
ABVTPP	3525.44	2494.76	10,000	33,730.07	3659.13	2122.32	10,000	53,194.07

3.10 Fuel Cost

Commission's Views

Based on the approved performance parameters, calorific values of fuels and fuel prices, the normative and actual fuel cost has been computed for FY 2016-17 and FY 2017-18 as shown in the Table below:

Table 3-17: Approved Fuel Cost for FY 2016-17 and FY 2017-18

Station	FY 2016-17		FY 2017-18	
	Normative	Actual	Normative	Actual
KTPS	505.81	505.45	379.64	293.93
HTPS	819.41	817.87	780.89	709.30
DSPM	537.77	554.72	481.20	503.51
KWTPP	428.02	420.78	445.39	476.24
ABVTPP	711.30	432.19	858.77	813.68

3.11 Annual Fixed Charges for CSPGCL

Regulation 35 of the CSERC MYT Regulations, 2015 specifies the components of Annual Fixed Charges (AFC) for CSPGCL as under:

(a) Return on Equity;

(b) Interest and Finance charges;

(c) Interest on Working Capital;

(d) Operation and Maintenance Expenses and;

Less:

(e) Non-Tariff Income

In addition to the above, the Commission has approved the Contribution to Pension Fund as a part of AFC in the MYT Order for Control Period from FY 2016-17 to FY 2020-21.

3.12 Capital Cost and Additional Capitalisation

CSPGCL's Submission

CSPGCL has considered the opening capital cost and capital structure of existing Thermal and Hydro Stations same as the closing values for FY 2015-16 as approved in True-up Order. The additional capitalization for both years i.e., FY 2016-17 and FY 2017-18 has been considered for the schemes approved in Capital Investment Plan. CSPGCL has segregated the capital expenses and R&M expenses, in compliance with the directives of the Commission and in line with the approach adopted by the Commission in Order dated June 12, 2014 and subsequent letter No. 1705 dated October 27, 2014.Further, CSPGCL has also considered de-capitalisation towards recoveries/reconciliation of certain sub-components, which were already capitalised, instead of considering under Other Income. CSPGCL stated that additional capitalisation of Rs. 8.81 crore was done towards Rail Infra PMC got erroneously booked for ABVTPP instead of DSPM during FY 2016-17, which needs to be rectified in the final accounts. The overall capitalisation of the project till date is Rs. 3,588.52 crore, which is within the approved project cost of Rs. 3,719.37 crore. Further, an income from advance to contractor amounting Rs. 2.075 crore appeared in account for FY 2016-17 for ABVTPP. In accordance to settled regulatory practice, the same has been considered for reduction from capital cost.

Commission's Views

The station-wise additional capitalisation submitted by CSPGCL and additional capitalisation incurred have been duly scrutinised. The Commission has considered the additional capitalisation for KTPS, HTPS, DSPM and Hasdeo Bango as after due prudence check.

The capitalisation of KWTPP has been scrutinized in line with the capital expenditure approved in Order dated September 22, 2015. The actual additional capitalisation for KWTPP was Rs. 26.55 crore during FY 2016-17. The Commission has approved additional capitalisation of Rs. 12.81 crore for KWTPP, after reversal of the interest on advance to contractor of Rs. 13.74 crore. As regards the correction entry in GFA relating to migration of accounting software, the Commission has not considered any adjustment in FY 2016-17 as it has already been considered in true-up for FY 2015-16.

The additional capitalisation approved for FY 2016-17 and FY 2017-18 is shown in the following Table:

Table 3-18: Approved Additional Capitalisation in true up for FY 2016-17 and FY 2017-18

(Rs. crore)

Station	FY 2016-17			FY 2017-18		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
KTPS	7.00	6.86	6.86	47.00	0.66	0.66
HTPS	11.30	32.00	32.00	227.58	6.44	6.44
DSPM	3.96	2.07	2.07	0.75	-	-
HBPS	-	-	-	-	-	-
KWTPP	-	12.81	12.81	53.58	7.90	7.90
ABVTPP		306.63*	306.63*	68.93	68.93	68.93
Total	**22.26**	**360.37**	**360.37**	**397.84**	**83.93**	**83.93**

** In case of ABVTPP, total capitalisation during the year was Rs. 306.63crore, out of which Rs. 61.71 crore was towards Unit 1. Unit 2 commenced operation on July 31, 2017.*

3.13 Means of Finance for Additional Capitalisation

CSPGCL's submission

CSPGCL submitted that the actual equity addition towards additional capitalisation is higher than 30%, except for ABVTPP. However, in line with the provision of Regulations 17.1 and 17.3 of the MYT Regulations, 2015, debt: equity ratio of 70:30 has been considered for the additional capitalisation in FY 2016-17 and FY 2017-18 for all generating stations except ABVTPP.

Commission's Views

As regards the funding of additional capitalisation, the Commission notes that the actual equity addition is more than 30% as per the audited accounts for FY 2016-17 and provisional accounts for FY 2017-18 for all generating stations, except for KWTPP and ABVTPP. The Commission has considered the normative debt: equity ratio of 70:30 in accordance with provisions of CSERC MYT Regulations, 2015 for all generating stations except ABVTPP. The equity in excess of 30% of capitalisation has been considered as normative loan.

For KWTPP and ABVTPP, it was observed that the actual equity addition was less than 30% of the additional capitalisation incurred during FY 2016-17 and FY 2017-18. Accordingly, the Commission has considered actual debt: equity ratio for ABVTPP.

The means of finance for additional capitalisation for FY 2016-17and FY 2017-18 as approved is shown in the following Tables:

Table 3-19: Approved Means of Finance for existing stations for FY 2016-17

(Rs. crore)

Station	CSPGCL Petition			Approved		
	Equity	Debt	Total	Equity	Debt	Total
KTPS	2.06	4.8	6.86	2.06	4.8	6.86
HTPS	9.6	22.4	32	9.6	22.4	32
DSPM	0.62	1.45	2.07	0.62	1.45	2.07
HBPS			-			-
KWTPP	2.2	10.61	12.81	2.2	10.61	12.81
ABVTPP up to 30 July, 2016	7.67	54.03	61.71	7.67	54.03	61.71
ABVTPP after July 30, 2016	30.46	214.46	244.92	30.46	214.46	244.92
Total	**52.61**	**307.75**	**360.37**	**52.61**	**307.75**	**360.37**

Table 3-20: Approved Means of Finance for existing stations for FY 2017-18

(Rs. crore)

Station	CSPGCL Petition			Approved		
	Equity	Debt	Total	Equity	Debt	Total
KTPS	0.20	0.46	0.66	0.20	0.46	0.66
HTPS	1.93	4.51	6.44	1.93	4.51	6.44
DSPM	-	-	-	-	-	-
HBPS			-			-
KWTPP	1.36	6.55	7.90	1.36	6.55	7.90
ABVTPP	8.57	60.36	68.93	8.57	60.36	68.93
Total	**12.06**	**71.88**	**83.93**	**12.06**	**71.88**	**83.93**

3.14 Depreciation

CSPGCL's Submission

As regards DSPM and KWTTP, CSPGCL submitted that the depreciation has been computed by applying the weighted average depreciation rate on the average regulatory GFA during the year. The weighted average depreciation rate has been computed by applying the category-wise scheduled rates specified in Regulation 24.4 of the CSERC MYT Regulations, 2015. The deprecation submitted by CSPGCL for DSPM is shown in the following Table:

Table 3-21: Depreciation for DSPM for FY 2016-17and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Particulars	DSPM			
	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
Opening GFA	2335.24	2333.70	2339.20	2,335.77
Additional Capitalization	3.96	2.07	0.75	0.00
Closing GFA	2339.20	2335.77	2,339.95	2,335.77
Average GFA	2337.22	2334.73	2,339.58	2,335.77
Weighted Average Rate of Depreciation	5.50%	5.49%	5.50%	5.49%
Depreciation	**128.53**	**128.15**	**128.66**	**128.17**

The deprecation submitted by CSPGCL for KWTPP is shown in the following Table:

Table 3-22: Depreciation for KWTPP for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Particulars	KWTTP			
	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
Opening GFA	3665.79	3561.97	3665.79	3574.78
Additional Capitalization	0.00	12.81	53.58	7.90
Closing GFA	3665.79	3574.78	3719.37	3582.68
Average GFA	3665.79	3568.37	3692.58	3578.73
Weighted Average Rate of Depreciation	5.17%	5.17%	5.17%	5.16%
Depreciation	**189.68**	**184.38**	**191.07**	**184.70**

As regards HTPS, CSPGCL has computed the average depreciation rate on assets added after April 1, 2010 as per CSERC MYT Regulations, 2015.The depreciation for assets capitalized after April 1, 2010 has been calculated as shown in the following Table:

Table 3-23: Depreciation for HTPS for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Particulars	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
Opening GFA on additional capitalization from FY 2010-11 onwards	346.64	348.3	357.94	380.3
Additional Capitalization during the year	11.3	32	227.58	6.44
Closing GFA	357.94	380.3	585.52	386.74
Average GFA	352.29	364.3	471.73	383.52
Depreciation rate (%)	5.38%	5.33%	5.38%	5.33%
Depreciation for the year	**18.95**	**19.43**	**25.38**	**20.44**

As regards KTPS, CSPGCL submitted that 90% of the closing GFA has been reduced by accumulated depreciation till previous year. The balance depreciation has been divided by the balance useful life to compute the depreciation for FY 2016-17 and FY 2017-18 as per methodology adopted by Commission in the MYT Order, as shown in the Table below:

Table 3-24: Depreciation for KTPS for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Particulars	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
Opening GFA as per Order	671.63	668.32	678.63	675.18
Additional Capitalisation	7.00	6.86	47.00	0.66
Closing GFA	678.63	675.18	725.63	675.84
90% of GFA	610.77	607.66	653.06	534.17
Accumulated Depreciation up to FY 2015-16	363.59	363.92	413.02	412.67
Balanced Depreciable value	247.18	243.74	240.04	193.82
Balance useful life	5.00	5.00	4.00	4.00
Depreciation for the year	**49.43**	**48.75**	**60.01**	**48.45**

As regards Hasdeo Bango, CSPGCL has computed the depreciation in accordance with the first proviso of Regulation 24.4 and in line with the methodology adopted in the MYT Order, by spreading the balance depreciable value over the balance useful life, as shown in the Table below:

Table 3-25: Depreciation for HBPS for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Particulars	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
Opening GFA	109.90	109.90	109.90	109.90
Additional Capitalisation	-	-	-	-
Closing GFA	109.90	109.90	109.90	109.90
Accumulated Depreciation up to last year	61.78	61.78	61.78	61.78
90% of GFA excluding land	98.91	98.91	98.91	98.91
Balance amount to be depreciated	37.13	37.13	34.48	34.48
Remaining Useful Life	14.00	14.00	13.00	13.00
Depreciation for the year	**2.65**	**2.65**	**2.65**	**2.65**

Further, CSPGCL submitted the depreciation for ABVTPP for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 3-26: Depreciation for ABVTPP as submitted by CSPGCL for FY 2016-17 and FY 2017-18

Particulars	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
Opening GFA	-	8019.25	-	8,264.17
Additional Capitalization	-	244.92	-	68.93
Closing GFA	-	8264.17	-	8,333.10
Average GFA	-	8141.71	-	8,298.64
Weighted Average Rate of Depreciation	-	5.29%	-	5.49%
Depreciation	**-**	**362.90**	**-**	**440.79**

Commission's Views

The Commission has detailed the methodology for computation of depreciation for existing Generating Stations in the MYT Order. CSPGCL has clarified that during FY 2016-17 and FY 2017-18 no asset had been retired as per accounts pertaining to plants under consideration.

For KTPS, the Commission was allowing the depreciation for KTPS based on scheduled depreciation rate as specified in CSERC MYT Regulations till FY 2015-16. However, in MYT Order, the Commission has changed the methodology and approved Depreciation over the balance useful life of the Units (till FY 2020-21) by considering the anticipated closure of 50 MW Units. As per retirement schedule considered in MYT Order, Unit 3 was proposed to be retired in June 2016, Unit 1 in March 2017, Unit 2 in December 2017 and Unit 4 in June 2018. However, the Commission notes that none of the 50 MW Units retired during FY 2016-17. CSPGCL submitted that 2 nos. of 50 MW Units were due for retirement in FY 2016-17 in compliance of the closure notice received from Chhattisgarh Environmental Conservation Board. However, pending appeal before the Hon'ble Green Tribunal, plant was kept in operation. Moreover, CSPGCL confirmed that the retirement of plant would be in FY 2020-21. Since, it is presumed that all Units of KTPS will be retired by FY 2020-21 as per original schedule, the Commission has not considered any deviation in methodology for allowing depreciation.

In view of the above, the Commission continues with the methodology of depreciation as approved in MYT Order and approves the depreciation over balance useful life of the plant for FY 2016-17 and FY 2017-18.

For HTPS, the Commission in its Order dated June 12, 2014, adopted a methodology wherein the balance depreciable value of original capital cost of the asset is depreciated over balance useful life of assets, i.e., up to FY 2015-16. Hence, no balance depreciation value for original capital cost has been considered from FY 2016-17 onwards, since it has already been allowed till FY 2015-16. For the additional capitalisation after 2010, the depreciation on average GFA and depreciation rate based on scheduled depreciation rate of 5.31% for FY 2016-17 and 5.32% for FY 2017-18 has been considered.

For DSPM, the Commission has computed depreciation based on scheduled rates specified in the MYT Regulations, 2015,Depreciation has been computed by applying the weighted average depreciation rate of 5.49% on average GFA In case of KWTPP, the depreciation rate has been considered based on the actual depreciation reported in the accounts for FY 2016-17 and FY 2017-18, which has been applied on the revised opening GFA and asset addition during the year approved in this Order.

For Hasdeo Bango, the depreciation has been considered over the balance useful life of the plant, as per methodology adopted in past Orders.

For ABVTPP, the depreciation rate has been considered based on the actual depreciation reported in accounts, which has been applied on the revised opening GFA and asset addition during the year approved in this Order. Further, for FY 2016-17, the depreciation has been computed considering the COD of each Unit and in line with the provisions of MYT Regulations, 2015.

In view of the above, the Commission approves the Depreciation for FY 2016-17 after final true-up, as shown in the following Table:

Table 3-27: Depreciation approved for CSPGCL for FY 2016-17 (Rs. crore)

Particulars	KTPS	HTPS	DSPM TPS	Hasdeo Bango	KWTPP	ABVTPP		
						Unit 1 (01.04.2016 to 30.07.2019)	**Unit 1&2**(31.07.2019 to 31.03.2017)	**Total**
Opening GFA	668.32	348.30*	2,333.70	109.90	3,561.97	4,227.31	8,019.25	
Additional Capitalization	6.86	32.00	2.07	-	12.81	61.71	244.25	
Closing GFA	675.18	380.31	2,335.77	109.90	3,574.78	4,289.02	8264.17	
Average Rate of Depreciation	-	5.31%	5.49%	-	5.17%	5.29%	5.29%	
Depreciation	**48.75**	19.34	**128.15**	**2.65**	**184.38**	**74.74**	**288.16**	**362.90**

**Note – Opening GFA on additional capitalisation from FY 2010-11 onwards*

Table 3-28: Depreciation approved for CSPGCL for FY 2017-18 (Rs. crore)

Particulars	KTPS	HTPS	DSPM TPS	Hasdeo Bango	KWTPP	ABVTPP
Opening GFA	675.18	380.31	2,335.77	109.90	3574.78	8264.17
Additional Capitalization	0.66	6.44	0.00	-	7.90	68.93
Closing GFA	675.84	386.74	2,335.77	109.90	3582.68	8333.10
Average GFA		383.52	2,335.77		3578.73	8298.64
Average Rate of Depreciation	-	5.32%	5.49%	-	5.16%	5.31%
Depreciation	**48.75**	**20.41**	**128.17**	**2.65**	**184.70**	**440.79**

3.15 Return on Equity

CSPGCL's submission

CSPGCL has computed Return on Equity (RoE) as per Regulation 22 of the MYT Regulations, 2015 for FY 2016-17 and FY 2017-18. RoE has been computed on pre-tax basis at the base rate of 15.50% for existing Thermal and Hydel Power Plants on permissible equity for FY 2016-17. Since, no actual Income Tax has been paid during FY 2016-17, no grossing up with applicable Tax rate has been considered. CSPGCL submitted that in case any Income Tax liability for FY 2016-17 is raised by the Income Tax authorities during the final assessment, the same may be allowed in the future True-up Order. CSPGCL, in the instant petitions has preferred gross up limited to actual tax recovery only. As under BAU (Business as Usual) scenario (i.e. without relaxation) Marwa TPP and KTPS have incurred losses during the period, hence tax loading has been considered on ROE of HTPS, DSPM TPS and KWTPP only. For a tax recovery of 41.64%, the effective tax rate has been computed to 13.75% for FY 2017-18. CSPGCL submitted that in case any Income Tax liability for FY 2017-18 is raised by the Income Tax authorities during the final assessment, the same may be allowed in the future True-up Order.

CSPGCL submitted the station-wise RoE for FY 2016-17as shown in the following Table:

Table 3-29: Return on Equity for FY 2016-17 as submitted by CSPGCL (Rs. crore)

Particulars	FY 2016-17					
	KTPS	**HTPS**	**DSPM**	**Hasdeo Bango**	**KWTPP**	**ABVTPP**
Permissible Equity in Opening GFA	207.08	360.78	694.89	37.72	610.58	
Equity addition during the year	2.06	9.60	0.62	0.00	2.20	
Permissible Equity in Closing GFA	209.14	370.38	695.51	37.72	612.78	
Rate of return on Equity	15.50 %	15.50%	15.50%	15.50%	15.50%	
Return on Equity	**32.26**	**56.67**	**107.76**	**5.85**	**94.81**	**132.13**

CSPGCL submitted the station-wise RoE for FY 2017-18 as shown in the following Table:

Table 3-30: Return on Equity for FY 2017-18 as submitted by CSPGCL (Rs. crore)

Particulars	FY 2017-18					
	KTPS	**HTPS**	**DSPM**	**Hasdeo Bango**	**KWTPP**	**ABVTPP**
Permissible Equity in Opening GFA	387.53	370.38	695.51	37.72	612.78	1,027.82
Equity addition during the year	0.20	1.93	0.00	0.00	1.36	8.57
Permissible Equity in Closing GFA	209.34	372.32	695.51	37.72	614.14	1,036.39
Rate of return on Equity	15.50%	17.98%	17.98%	15.50%	17.98%	15.50%
Return on Equity	**28.57**	**66.76**	**125.04**	**5.85**	**110.29**	**159.98**

Commission's View

Regulation 22 of the MYT Regulations, 2015 specifies as under:

*"**22. RETURN ON EQUITY***

22.1 Generation and Transmission: Return on Equity shall be computed in rupee terms on the equity base determined in accordance with Regulation 17. Return on equity shall be computed on pre-tax basis at the base rate of maximum 15.5 % to be grossed up as per Regulation 22.3 of these Regulations.

…

22.3 The rate of return on equity for each year of the control period shall be computed by grossing up the base rate with the prevailing MAT rate of the base year: Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee or distribution licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the Control Period shall be trued up separately for each year of the Control Period. In case, no tax is payable during the financial year, the tax rate for the purpose of truing up shall be taken as nil.…"

The RoE for FY 2016-17 and FY 2017-18 has been approved in the MYT Order dated April 30, 2016.

For existing stations, the closing equity approved in true-up for FY 2015-16 has been considered as the opening equity for FY 2016-17. The addition of equity has been considered equivalent to equity amount approved towards additional capitalisation. RoE has been computed as per Regulation 22 of the MYT Regulations, 2015.

The grossing up of base rate of RoE with the applicable tax rate has not been considered. The base rate of RoE of 15.50% has been considered as specified in the MYT Regulations, 2015. As regards the prayer of CSPGCL to allow the Income Tax liability for FY 2017-18 on actual basis, an appropriate view regarding the same shall be taken based on submissions of CSPGCL in this regard at the time of final true-up for FY 2017-18, when audited accounts for FY 2017-18 are available.

For KTPS, effective plant capacity for FY 2017-18 was 387.53 MW out of 400 MW due to retirement of retirement of units. Therefore, the effective average normative equity for calculation of RoE has been adjusted accordingly.

For ABVTPP, ROE has been considered based on the COD of Unit 1 and Unit 2 during FY 2016-17 and approved capital cost of each unit in Order dated July 7, 2018.

RoE approved for FY 2016-17 and FY 2017-18 is shown in the following tables:

Table 3-31: Approved Return on Equity for FY 2016-17 (Rs. crore)

Particulars	**KTPS**	**HTPS**	**DSPM**	**Hasdeo Bango**	**KWTPP**	**ABVTPP**		
						Unit 1 (01.04.2016 to 30.07.2019)	**Unit 1&2** (31.07.2019 to 31.03.2017)	**Total**
Opening Equity	207.08	360.78	694.89	37.72	610.58	525.75	997.35	
Equity addition during the year	2.06	9.60	0.62	0.00	2.20	7.67	30.46	
Closing Equity	209.14	370.38	695.51	37.72	612.78	533.42	1,027.81	
Rate of return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	
Return on Equity	**32.26**	**56.67**	**107.76**	**5.85**	**94.81**	**27.21**	**104.92**	**132.13**

Table 3-32: Approved Return on Equity for FY 2017-18 (Rs. crore)

Particulars	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP	ABVTPP
Opening Equity	209.14	370.38	695.51	37.72	612.78	1,027.81
Equity addition during the year	0.20	1.93	0.00	0.00	1.36	8.57
Closing Equity	209.34	372.32	695.51	37.72	614.14	1,036.39
Rate of return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	**28.57**	**57.56**	**107.80**	**5.85**	**95.09**	**159.98**

3.16 Interest and Finance Charges

CSPGCL's submission

CSPGCL submitted that Interest and Finance charges have been computed as per Regulation 23 of the MYT Regulations, 2015 for FY 2016-17 and FY 2017-18. The repayment for the year has been deemed to be equal to the depreciation for the year and normative interest on loan has been calculated on the normative average loan during the year by applying the weighted average rate of interest of actual loan portfolio at the beginning of the year.

CSPGCL added that depreciation is deemed as repayment as per philosophy adopted in the MYT Regulations and the MYT Order, while the repayment of State Government Loan has been notionally considered as matured and no interest charges against the same is included.

CSPGCL submitted that the loan for KWTPP was obtained from PFC and REC on April 1, 2015 at rate of interest of 13% and 12.25%, respectively. Further, CSPGCL has opted for loan refinancing. The offer from State Bank of India was received for refinancing of loan of KWTPP and DSPM at concessional rate. However, it involved upfront closure /commitment cost. As against this, PFC made a counter offer to refinance the same at the rates 10.30% and 10.25% for KWTPP and DSPM, respectively, without any front-end cost. As per Regulation 23.8 of CSERC MYT Regulations, 2015, the benefit of such restructuring is to be shared between beneficiaries and CSPGCL in the ratio 2:1. Accordingly, CSPGCL has calculated the effective rate of interest of 10.92% for DSPM and 11.20% for KWTPP after refinancing for FY 2016-17.

The Interest and Finance charges submitted by CSPGCL for FY 2016-17 are shown in the following Table:

Table 3-33: Interest & Finance Charges as submitted by CGPGCL for FY 2016-17

(Rs. crore)

Particulars	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP	ABVTPP
Opening Normative loan	97.31	100.72	754.10	10.38	2514.54	
Repayment during the period	48.75	19.43	128.15	2.65	184.38	
Debt Addition during the year	4.80	22.40	1.45	-	10.61	
Closing Net Normative Loan	53.37	103.69	627.40	7.73	2340.78	
Weighted Average Interest Rate (%)	13%	12%	10%	10%	10%	
Interest Expense for the Period	9.43	12.45	70.80	0.91	245.58	
Sharing of net savings for re-financing			5.00		21.23	
Financing and Other Charges	0.05	0.00	0.00	-	0.00	
Total Interest Expenses	**9.49**	**12.46**	**75.80**	**0.91**	**266.82**	**683.97**

Similarly, the Interest and Finance charges submitted by CSPGCL for FY 2017-18 are shown in the following Table:

Table 3-34: Interest & Finance Charges as submitted by CGPGCL for FY 2017-18

(Rs. crore)

Particulars	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP	ABVTPP
Opening Normative loan	53.37	103.69	627.40	7.73	2340.78	6871.98
Repayment during the period	48.45	20.44	128.17	2.65	184.70	440.79
Debt Addition during the year	0.66	4.49	-	-	6.55	60.36
Closing Net Normative Loan	5.38	87.75	499.23	5.07	2162.62	6491.55
Weighted Average Interest Rate (%)	11.22%	11.27%	10.25%	9.93%	9.90%	9.90%
Interest Expense for the Period	3.26	10.78	57.74	0.64	222.92	661.49
Sharing of net savings for re-financing			4.07		21.32	61.47
Financing and Other Charges	0.06	0.09	0.05	0.00	0.05	0.10
Total Interest Expenses	**3.32**	**10.87**	**61.87**	**0.64**	**244.29**	**723.07**

Commission's Views

The Commission has computed Interest and Finance charges as per Regulation 23 of CSERC MYT Regulations, 2015 for FY 2016-17 and FY 2017-18.

For existing stations, the closing net normative loan balance approved for FY 2015-16 after True-up has been considered as opening net normative loan balance for FY 2016-17. The debt addition has been considered equal to debt amount approved in this Order towards additional capitalisation for FY 2016-17 and FY 2017-18. The deprecation has been considered as repayment during the year.

The actual weighted average interest rate as on April 1, 2016 and April 1, 2017 have been re-computed as per accounts and documentary evidences submitted by CSPGCL. Accordingly, the station-wise revised weighted average rate of interest has been considered for FY 2016-17 and FY 2017-18.

As regards the re-financing of existing loans for KWTPP and DSPM, the Commission sought the details of offer submitted by State Bank of India and counter offer submitted by M/s. PFC and M/s. REC. CSPGCL submitted that in case the offer of SBI would have been accepted, then prepayment charges were 2.50% and 2.75% as per terms and conditions of existing lender, PFC and REC, respectively. At discounted rate over the balance loan term, the effective loading was about to 0.55%. Further, SBI offer was at monthly rest, while existing lender’s offers were at quarterly rest, which practically implies 0.1% additional discounting on PFC and REC rates. Hence, re-financing from PFC and REC was found to be beneficial and accordingly, the same was adopted. The Commission has examined the offer of PFC and REC which has been adopted by CSPGCL for re-financing of loan for KWTPP and DSPM. The Commission observes that the offer accepted by CSPGCL is more beneficial. The Commission accepted the revision of rate of interest for DSPM loan from 12.42% to 10.25% and for KWTPP loan from 12.99% to 10.37%. This led to reduction in interest rate of 2.17% for DSPM and 2.62% for KWTPP. The cost of re-financing has been considered as Nil.

Further, as regards the re-financing of existing loan for ABVTPP, the Commission sought details of documentary evidences from CSPGCL. The Commission accepted the revision of rate of interest for ABVTPP loan from 12.66% to 9.90%. The cost of re-financing has been considered as Nil.

Further, as per Regulation 23.8 of the MYT Regulations, 2015, the savings of re-financing shall be shared between the beneficiaries, i.e., CSPDCL, and CSPGCL in the ratio of 2:1. The Commission in past Tariff Order, while undertaking provisional true-up for FY 2016-17 has adopted the methodology for sharing the savings of re-financing. The same methodology has been continued in the present Order. Accordingly, net savings have been computed separately and allowed in addition to Interest and finance charges. Further, the Commission notes that CSPGCL confirmed that no additional cost has been incurred by CSPGCL for re-financing of loan, hence, the same has not been considered.

In view of the above, the Interest and Finance charges approved by the Commission for FY 2016-17 and FY 2017-18 is shown in the following Tables:

Table 3-35: Interest & Finance Charges approved for FY 2016-17 (Rs. crore)

Particulars	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP	ABVTPP		Total
						Unit 1 (01.04.2016 to 30.07.2019)	Unit 1&2 (31.07.2019 to 31.03.2017)	
Opening Net Normative Loan	97.31	100.72	754.10	10.38	2,514.54	3,700.94	6,946.54	
Repayment during the period	48.75	19.43	128.15	2.65	184.38	74.74	288.16	
Debt Addition during the year	4.80	22.40	1.45	-	10.61	54.03	214.46	
Closing Net Normative Loan	53.37	103.69	627.40	7.73	2,340.78	3,680.24	6,872.84	
Weighted Average Interest Rate (%)	12.52%	12.18%	10.25%	10.10%	10.12%	12.66%	10.76%*	
Interest Expense for the Period	9.43	12.45	70.80	0.91	245.58	154.87	496.98	
Add: Sharing of net savings for re-financing	-	-	5.00	-	21.23	-	29.24	
Add: Financing and Other Charges	0.05	0.00	0.00	-	0.00	-	-	
Total Interest Expenses	**9.49**	**12.46**	**75.80**	**0.91**	**266.82**	**154.87**	**526.22**	**681.09**

**Interest rate of 10.76% has been computed on weighted average basis considering the effective date of re-financing of existing loan.*

Table 3-36: Interest & Finance Charges approved for FY 2017-18 (Rs. crore)

Particulars	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP	ABVTPP
Opening Net Normative Loan	53.37	103.69	627.40	7.73	2,340.78	6,872.84
Repayment during the period	48.45	20.44	128.17	2.65	184.70	440.79
Debt Addition during the year	0.46	4.50	-	-	6.55	60.36
Closing Net Normative Loan	5.38	87.75	499.23	5.07	2,162.62	6,492.40
Weighted Average Interest Rate (%)	11.22%	11.27%	10.25%	9.93%	9.90%	9.90%
Interest Expense for the Period	3.26	10.78	57.74	0.64	222.92	661.58
Add: Sharing of net savings for re-financing	-	-	4.07	-	21.32	61.45
Add: Financing and Other Charges	0.06	0.09	0.05	0.00	0.05	-
Total Interest Expenses	**3.32**	**10.87**	**61.87**	**0.64**	**244.29**	**723.03**

3.17 Normative Operation and Maintenance (O&M) expenses

CSPGCL's Submission

CSPGCL submitted the O&M Expenses (excluding water charges) for existing thermal and hydel power plants in accordance with Regulation 38.5 of MYT Regulations, 2015.

Further, CSPGCL submitted that as per the methodology adopted in earlier Orders, O&M Expense in the support functions such as Head Office, CAU, etc., are allocated among the thermal power plants and Hasdeo Bango HEP, based on their installed capacities. In the MYT order, in FY 16-17 retirement of two units of the 50 MW at KTPS was considered. Accordingly, in the order, the normative O&M was allowed considering average capacity during the year as 402 MW, however actually full 440 MW capacity remained in operation. In the Provisional order, on this issue specific leave was granted by the Commission. CSPGCL added that it has computed the normative O&M cost in the similar manner as approved in the MYT Order and previous True up Order. For the purpose of normalization of O&M expenses for FY 2016-17 and FY 2017-18, CSPGCL has considered WPI variation and CPI variation as 3.67% and 4.12%, respectively. For FY 2016-17 WPI variation of 2.92% and CPI variation of 3.08% was considered. CSPGCL further submitted that the normative O&M Expenses for KWTPP, whose COD was later than April 1, 2010, have been computed as per the Regulation 38.5.1.1 of MYT Regulations,2015, normalizing the same with actual weighted average rate of inflation.

CSPGCL submitted that it has not considered the productivity incentive as the part of employee expense for the regulatory purpose, as per the methodology settled in the previous Order. Further, leave encashment expenses have been settled against the provision made in the previous year. CSPGCL has only considered the actual payment of Interim relief as per methodology followed by previous Orders. In the accounts, the actual leave encashment expenses have been settled against the provision made in the previous year. In the previous orders the Commission has taken a view that, for the true-up purpose, instead of provisions, only actual expenses/income shall be considered. Accordingly, actual leave encashment during the FY 2017-18 has been considered as part of employee cost within O&M Expenses. The cost incurred on coal transport has been reduced from the O&M Expenses and added to the fuel cost.

CSPGCL further submitted that as per Regulations Contribution to the Pension Trust as part of O&M expenses has not been considered in MYT order and CSPGCL has followed the same approach. Further, as per the methodology adopted in earlier Orders, the cost incurred on coal transport has been reduced from the O&M Expense and added to the fuel cost. Similarly, CSPGCL has not considered donations as part of A&G Expenses.

The O&M Expenses submitted by CSPGCL for FY 2016-17 and FY 2017-18 is shown in the following Table:

Table 3-37: O&M Expenses for FY 2016-17and FY 2017-18 submitted by CSPGCL

(Rs. crore)

Station	FY 2016-17		FY 2017-18	
	MYT Order	Petition	MYT Order	Petition
KTPS	218.92	238.89	242.22	222.85
HTPS	327.81	291.09	358.99	299.89
DSPM	167.9	150.2	179	154.69
HBPS	14.02	12.41	110.15	12.78
KWTPP	0	88.31	15.53	90.97
MARWA	-	147.34	-	181.94
Total	**728.65**	**928.24**	**905.89**	**963.12**

Commission's Views

As regards O&M Expenses, Regulation 38.5 of the MYT Regulations, 2015 specifies as under:

"38.5 Operation and Maintenance expenses

… … …

Employee Cost

c) *The employee cost, excluding pension fund contribution, impact of pay revision arrears and any other expense of non-recurring nature, for the base year i.e. FY 2015-16, shall be derived on the basis of the normalized average of the actual employee expenses excluding pension fund contribution, impact of pay revision arrears and any other expense of non-recurring nature, available in the accounts for the previous five (5) years immediately preceding the base year FY 2015-16, subject to prudence check by the Commission.*

d) *The normalization shall be done by applying last five year average increase in Consumer Price Index (CPI) on year to year basis. The average of normalized net present value for FY 2010-11 to FY 15, shall* *then be used to project base year value for FY 16. The base year value so arrived, shall be escalated by the above inflation rate to estimate the employee expense (excluding impact of pension fund contribution and pay revision, if any) for each year of the Control Period.*

At the time of true up, the employee costs shall be considered after taking into account the actual increase in CPI during the year instead of projected inflation for that period.

Provided further that impact of pay revision (including arrears) and pension fund contribution shall be allowed on actual during the true-up as per accounts, subject to prudence check and any other factor considered appropriate by the Commission.

A&G Expenses and R&M Expenses

e) The administrative and general expenses(excluding water charges) and repair and maintenance expenses, for the base year i.e. FY 2015-16, shall be derived on the basis of the normalized average of the actual administrative and general expenses (excluding water charges) and repair and maintenance expenses, respectively available in the accounts for the previous five (5) years immediately preceding the base year FY 2015-16, subject to prudence check by the Commission. Any expense of non-recurring nature shall be excluded while determining normalized average for the previous five (5) years.

f) The normalization shall be done by applying last five year average increase in Wholesale Price Index (WPI) on year to year basis. The average of normalized net present value for FY 2010-11 to FY 15, shall then be used to project base year value for FY 2015-16. The base year value so arrived, shall be escalated by the above inflation rate to estimate the administrative and general expense and repair and maintenance expenses for each year of the Control Period.

At the time of true up, the administrative and general expenses and repair and maintenance expenses shall be considered after taking into account the actual inflation instead of projected inflation for that period.

Provided that water charges shall be pass-through in tariff on reimbursement basis." (emphasis added)

In the MYT Order, the Commission has determined the O&M Expenses for the Control Period from FY 2016-17 to FY 2020-21 in accordance with the above Regulations.

The above Regulations specifies that at the time of truing up, the O&M Expenses shall be considered after taking into account the actual inflation instead of projected inflation for that period. The Regulation does not mandate to revise the base O&M expenses as approved in the MYT Order.

Accordingly, the Commission has computed the normative O&M expenses for FY 2016-17 and FY 2017-18 by applying the actual inflation of respective years on base O&M expenses for FY 2015-16, as approved in the MYT Order by considering the actual inflation of CPI and WPI levels for FY 2016-17 over CPI and WPI levels of FY 2015-16. For FY 2016-17, The Commission has considered escalation factor of 4.12% for employee expenses and 1.73% for R&M expenses and A&G Expenses. For FY 2017-18 the Commission has considered escalation factor of 3.08% for employee expenses and 2.92% for R&M expenses and A&G Expenses Further, as regards KWTPP and ABVTPP, the normative O&M expenses has been determined in accordance with the norms specified in the MYT Regulations, 2015.

Accordingly, the normative O&M Expenses computed for FY 2016-17 and FY 2017-18 are as shown in the following Table:

Table 3-38: Approved Normative O&M Expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Particulars	FY 2015-16	FY 2016-17		FY 2017-18	
	Base Year Normative Expenses	MYT Order	Revised Normative Expenses	MYT Order	Revised Normative Expenses
KTPS	229.77	234.23	237.42	218.92	221.52
HTPS	280.03	302.97	289.05	327.81	297.78
DSPM	144.61	155.81	148.60	167.90	153.04
KWTPP	-	97.03	87.65	104.92	90.29
HB	11.93	12.93	12.34	14.02	12.72
ABVTPP			146.24		180.58

For the purpose of truing up for respective years, the Commission approves the normative O&M Expenses as shown in the table above. In view of retirement schedule of KTPS, for FY 2017-18, the Commission has continued with its earlier approach adopted in MYT Order for reduction in O&M expenses. The Commission may review the normative O&M expenses at the time of final Truing up.

The Commission has undertaken sharing of gains and losses as per MYT Regulations, 2015, between normative expenses vis-à-vis provisional expenses as per Provisional Accounts.

As regards the sharing of gains and losses, the following provision has been inserted in Regulation 13.1 by the First Amendment to the MYT Regulations, 2015 on June 16, 2017:

> *"Provided further that employee cost shall not be factored in for sharing of gains or losses on account of operations and maintenance expenses, … …"*

Accordingly, the Commission approves the actual Employee Expenses as per audited Accounts for FY 2016-17 and provisional accounts for FY 2017-18, and Employee cost is not factored for sharing of gains or losses. The sharing of gains and losses has been undertaken in subsequent Section of this Chapter.

In this Order, the Commission approves the O&M expenses based on audited accounts for FY 2016-17 and provisional accounts for FY 2017-18. The final approval of O&M Expenses for FY 2017-18 shall be accorded at time of truing up based on audited accounts for FY 2017-18.

Further, the Commission notes that CSPGCL submitted the impact of wage revision separately over and above the O&M expenses claimed. The Commission notes that as per the Regulations the impact of wage revision is allowed on actual pay-out basis. On details sought by the Commission of impact of wage revision, CSPGCL submitted the following details for FY 2016-17:

Table 3-39: Details of Impact of Wage Revision for FY 2016-17 as submitted by CSPGCL (Rs. crore)

Particulars	KTPS	HTPS (incl. HB)	DSPM	KWTPP	ABVTPP
Actual Payment made against provision for FY 2015-16 (not considered in previous year True-up)	3.63	4.98	1.47	0.92	1.48
Payment made for FY 2016-17 (on Basic + Addl. Pay)	3.51	4.68	1.44	0.86	1.53
Payment made for FY 2016-17 (on DA + HRA @7.5%)	5.91	7.72	2.37	1.43	2.50
Total Actual IR paid during FY 2016-17	13.05	17.39	5.28	3.20	5.51
Allocation CAU	0.66	1.25	0.75	0.75	1.24
Total Impact of Wage Revision	**13.70**	**18.64**	**6.02**	**3.95**	**6.76**

The Commission, for the purpose of final truing up, has considered the impact of wage revision for FY 2016-17 as submitted by CSPGCL, over and above the approved O&M Expenses.

For FY 2017-18, the Commission notes that CSPGCL has not submitted any impact of Wage Revision based on the provisional accounts. The same shall be considered, if any, at time of final truing up based on audited accounts for FY 2017-18.

3.18 Interest on Working Capital

CSPGCL's Submission

CSPGCL submitted that the Interest on Working Capital (IoWC) for FY 2016-17 and FY 2017-18 has been computed in accordance with Regulation 25 of the MYT Regulations, 2015, considering the interest rate equal to the applicable Base Rate of State Bank of India as on April 1, 2016 plus 350 basis points, i.e., 12.80%. Similarly, for April 1, 2017 plus 350 basis points, i.e. 12.60% for FY 2017-18. CSPGCL submitted the interest on working capital as per the following table:

Table 3-40: IoWC for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Station	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
KTPS	18.18	22.74	15.97	16.29
HTPS	27.91	33.38	28.03	30.77
DSPM	22.36	25.50	23.74	22.08
HBPS	0.56	0.86	0.59	0.86
KWTPP	17.58	20.63	17.60	20.81
ABVTPP	---	27.48	---	43.72
Total	**86.59**	**130.59**	**85.93**	**134.53**

Commission's Views

The Commission has computed the IoWC for FY 2016-17 and FY 2017-18 as per Regulation 25 of the MYT Regulations, 2015. The rate of interest has been considered as 12.80% for FY 2016-17 and 12.60% for FY 2017-18, as per the provisions of MYT Regulations, 2015. The revised normative O&M expenses have been considered for computation of Working Capital requirement. The actual revenue billed including past Revenue Gap/(Surplus) has been considered as receivables for computation of working capital requirement. Further, in line with the approach adopted in the past Orders, DSPM has been considered as a pithead station, and one-month cost of coal has been considered. Accordingly, the IoWC approved by the Commission after provisional Truing up for FY 2016-17 is shown in the following Table:

Table 3-41: Approved IoWC for CSPGCL for FY 2016-17 and FY 2017-18 (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
KTPS	18.18	22.74	22.70	15.97	16.29	16.22
HTPS	27.91	33.38	33.20	28.03	30.77	30.61
DSPM	22.36	25.50	25.41	23.74	22.08	22.00
HB	0.56	0.86	0.86	0.59	0.86	0.86
KWTPP	17.58	20.63	20.51	17.60	20.81	20.51
ABVTPP	-	27.48	26.96	-	43.68	43.60

3.19 Pension and Gratuity Contribution

CSPGCL's Submission

CSPGCL submitted that as per MYT Order, CSPGCL's share of Pension and Gratuity Contribution for FY 2016-17 was determined as Rs. 130.83 crore and for FY 2017-18 Rs. 142.67 crore. CSPGCL further submitted the plant-wise allocations considered.

Table 3-42: Pension and Gratuity Contribution for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Station	FY 2016-17		FY 2017-18	
	MYT Order	CSPGCL's Petition	MYT Order	CSPGCL's Petition
KTPS	46.39	46.39	50.59	50.59
HTPS	48.03	48.03	52.37	52.37
DSPM	7.89	7.89	8.60	8.60
HBPS	3.21	3.21	3.50	3.50
KWTPP	7.77	7.77	8.47	8.47
ABVTPP	17.54	17.54	19.13	19.13
Total	**130.83**	**130.83**	**142.66**	**142.66**

Commission's Views

The actual pension fund contribution of Rs. 130.83 crore, including contribution for ABVTPP, has been approved for CSPGCL for FY 2016-17, for the purpose of the final Truing up. Also, the contribution of Rs. 142.66 crore as approved by the Commission for FY 2017-18 in MYT Order has been considered for the purpose of provisional true-up for FY 2017-18 and the final view may be taken at time of final true-up.

3.20 Non-Tariff Income

CSPGCL's submission

CSPGCL submitted the Non-Tariff Income as per Regulation 38.6 of MYT Regulations, 2015 for FY 2016-17 and FY 2017-18 for its existing Stations. Delayed Payment Surcharge has not been taken into account while determining the Non-Tariff Income for FY 2016-17 and FY 2017-18 as per well-settled principle in previous Orders. The Station specific income has been booked to the respective Station, and income appearing against HO & CAU has been allocated to Generating Stations on the basis of installed capacity.

In previous True-up Petition, CSPGCL submitted that lease rent received against Rail Corridor from SRCPL and income from Fixed Deposit receipts is not incidental to the business of CSPGCL. This income should not be considered as the part of Non-Tariff Income of CSPGCL. Further, CSPGCL submitted that in the Tariff Order dated March 31, 2017, the Commission held as under:

> *"...As regards the income received from SRCPL, the Commission notes that at this stage the income received from SRCPL is not incidental since, the facility is not owned nor being used by any existing plants for which the ARR was approved for FY 2015-16. Hence, for the purpose of True-up for FY 2015-16, the Commission has not considered this income received from SRCPL..."*

Further, CSPGCL submitted that the facility is not being used by any of the existing plants covered in the true up and no commercial utilisation has been made by CSPGCL. Further, no new directives from Government of Chhattisgarh were received regarding the same. Further, CSPGCL has not claimed any expenses on this account in the current Petition and maintained the status quo.

Table 3-43: Non-Tariff Income for FY 2016-17 and FY 2017-18 as submitted by CSPGCL (Rs. crore)

Station	FY 2016-17		FY 2017-18	
	Provisional Order	Petition	MYT Order	Petition
KTPS	1.17	1.18	8.12	1.83
HTPS	3.20	3.41	15.91	3.83
DSPM	2.13	2.14	9.21	1.81
HBPS	0.00	0.00	0.00	0.00
KWTPP	2.03	1.70	4.32	2.08
Marwa TPP	2.46	2.46	0.00	8.27
Total	**10.99**	**10.89**	**37.56**	**17.82**

The receipts from SRCPL were not used by CSPGCL for its existing business and have been kept as separate Fixed Deposit Receipts so that, in case of any Government Directives, the same may be complied without any difficulty. Thus, income from lease deed is not incidental to the business of the CSPGCL. Hence, CSPGCL requested the Commission that in view of no change in factual matrix and the status quo, the view taken by the Commission in the previous Order should be maintained.

Commission's View

In MYT Order the Commission has approved the Non-Tariff income of Rs. 35.19 crore and Rs. 37.56 crore for CSPGCL for FY 2016-17 and FY 2017-18, respectively.

The Commission notes that Accounts for FY 2016-17reflects the Non-Tariff Income of Rs. 46.98 crore. This includes the amount of Rs. 2.75 crore towards lease rent from SRCPL pertaining to common rail corridor. Further, CSPGCL submitted the details of Rs. 1.51 crore towards the income of FDRs for SRCPL and Rs. 15.38 crore towards FDRs for coal-block. The Commission notes the submission of CSPGCL regarding the modalities of lease rent agreement for Rail Corridor from SRCPL and maintains the status-quo as per True-up Order for FY 2015-16. Accordingly, the Commission has not considered the income of Rs. 19.65 crore for truing up for FY 2016-17.

Non-Tariff Income of Rs. 2.70 crore allocated to ABVTPP has not been considered for truing up of FY 2016-17 since it has been adjusted in capital cost. Further, the Commission notes that audited accounts of FY 2016-17 include the amount of Rs. 13.74 crore towards interest income on advances to contractor for KWTPP. However, CSPGCL has considered the same amount for reducing the capital asset instead of considering under Non-Tariff income. The Commission has also considered the same approach as discussed in earlier Section.

Regarding Non-tariff income for FY 2017-18, the Commission has considered station-wise Non-tariff income for FY 2017-18 as submitted by CSPGCL and the final view shall be taken based on audited annual accounts. during final true-up

In view of the above, the Commission approves the Station-wise Non-Tariff income for the purpose of Truing up for FY 2016-17 and provisional truing up of FY 2017-18, as shown in the following Table:

Table 3-44: Approved Non-Tariff Income in True-up for FY 2016-17and FY 2017-18 (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
KTPS	1.17	1.18	1.18	8.12	1.83	1.83
HTPS	3.20	3.41	3.41	15.91	3.83	3.83
DSPM	2.13	2.14	2.14	9.21	1.81	1.81
KWTPP	0.00	0.00	0.00	0.00	0.00	0.00
HB	2.03	1.70	1.70	4.32	2.08	2.08
ABVTPP	2.46	2.46	2.46	0.00	8.27	8.27
Total	**10.99**	**10.89**	**10.89**	**37.56**	**17.82**	**17.82**

3.21 Prior Period Items

CSPGCL's Submission

CSPGCL has considered the prior period (income)/expenses on the basis of the principles and practices adopted by the Commission in the previous Order. CSPGCL has not considered other excess provision (for ED and Cess and coal cost rectification), and provision / reversal of provision for interim relief and other charges for the Prior Period (income)/expenditure. Similarly, CSPGCL has not considered depreciation and interest on finance charges relating to previous years, as the same has been computed differently and was approved accordingly during the respective True-up. Further, CSPGCL submitted that no contingent liability / claim has been included in the current Petition and such liability / claims shall be submitted on their settlement, as the case may be. Except for the above exclusions, CSPGCL has considered remaining prior period (income)/expenditure. The prior period expenses against HO & CAU in Final Accounts of FY 2016-17 and Provisional accounts of FY 2017-18 have been allocated to the existing thermal plants based on their installed capacity.

Commission's Views

The Commission has considered the approach adopted in the previous Tariff Orders. Accordingly, the Commission has not considered any prior period expenses /(income) for the purpose of final true-up for FY 2016-17 and provisional true-up for FY 2017-18. The Commission will revisit prior period expenses /(income) for FY 2017-18 as per audited accounts of FY 2017-18.

3.22 Statutory Charges

CSPGCL's Submission

CSPGCL submitted that as per MYT Regulations, 2015, the Water Charges for FY 2016-17 are on reimbursement basis, and the same has been recovered accordingly. Further, CSPGCL has claimed the SLDC charges as pass through element separately. CSPGCL submitted that Rs. 118.98 crore as Water Charges and SLDC Charges have been recovered and no deficit/(surplus) has been claimed for FY 2016-17 and Rs. 212.15 Crores as Water Charges and SLDC Charges have been recovered and no deficit/(surplus) has been claimed for FY 2017-18.

Further, CSPGCL has reduced expenses of Rs. 0.28 crore and Rs. 0.42 crore incurred towards Petition filing and publication expenses in FY 2016-17 and FY 2017-18, respectively, from O&M expenses and has claimed them separately. CSPGCL submitted that during FY 2016-17, Rs. 514.30 crore towards impact of Hon'ble APTEL Judgement and Revenue Gap were recovered as per Commission's Order and Rs. 329.45 Crores for FY 2017-18.

Commission's Views

For the purpose of the final truing up for FY 2016-17, the Commission has considered Statutory Charges as submitted by CSPGCL and based on audited accounts for FY 2016-17. The Commission has separately considered the amount of Rs. 0.28 crore towards Petition filing and publication expenses and Rs. 119.30 crore towards water charges. Further, the impact of Hon'ble APTEL Judgment of Rs. 514.30 crore (Rs. 310.46 crore + Rs. 203.84 crore) has also been separately considered as expenses.

For the purpose of the provisional truing up for FY 2017-18, the Commission has considered the statutory charges based on provisional accounts for FY 2017-18. The Commission has separately considered the amount of Rs. 0.42 crore towards Petition filing fee, Rs. 212.28 crore towards Water Charges including charges for ABVTPP. Further, the amount of Rs. 329.45 crore has also been considered separately towards past revenue gaps. The final view in this regard shall be taken at time of Final truing up for FY 2017-18.

3.23 Aggregate Revenue Requirement for CSPGCL for FY 2016-17 and FY 2017-18

The Summary of ARR for KTPS, HTPS, DSPM, HBPS and KWTPP for FY 2016-17 and FY 2017-18 is shown in the following Table:

Table 3-45: Approved ARR for CSPGCL's Generating Stations for FY 2016-17 (Rs. crore)

Particulars	KTPS			HTPS			DSPM			KWTPP			Hasdeo Bango			ABVTPP		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Depreciation	49.43	48.75	48.75	18.95	19.43	19.34	128.53	128.15	128.15	189.68	184.38	184.38	2.65	2.65	2.65	--	362.90	362.90
Interest & Finance Charges	9.88	9.49	9.49	11.80	12.46	12.46	84.77	75.80	75.80	331.34	266.82	266.82	1.15	0.91	0.91	--	683.97	681.09
Return on Equity	29.65	32.26	32.26	56.11	56.67	56.67	107.87	107.76	107.76	90.96	94.81	94.81	5.85	5.85	5.85	--	132.13	132.13
O&M Expenses	234.23	199.06	199.06	302.97	255.73	255.73	155.81	108.02	108.02	97.03	51.80	51.80	12.93	10.28	10.28	--	82.18	82.18
Impact of Wage Revision	9.61	13.70	13.70	24.81	18.45	18.45	4.19	6.02	6.02	2.68	3.95	3.95	0.99	0.19	0.19	--	0.00	-
Additional R&M Expenses	0.42	0.05	0.05	1.47	0.20	0.20	-	-	-	-	-	-	-	-	-	--	0.00	-
Interest on Working Capital	18.18	22.74	22.70	27.90	33.38	33.20	23.36	25.50	25.41	17.58	20.63	20.51	0.56	0.86	0.86	--	31.13	26.96
Less: Non-Tariff Income	7.61	1.18	1.18	14.90	3.41	3.41	8.63	2.14	2.14	4.05	1.70	1.70		-	-	--	2.46	2.46
Total Annual Capacity Charge	**343.79**	**324.88**	**324.84**	**429.11**	**392.89**	**392.63**	**495.90**	**449.12**	**449.03**	**725.22**	**620.69**	**620.57**	**24.13**	**20.75**	**20.74**	**--**	**1,289.85**	**1,282.81**
Cost of Coal	340.50	493.18	493.18	622.59	802.13	802.13	432.04	550.82	550.82	340.44	413.41	413.41	-	-	-	--	413.41	413.41
Cost of Oil	15.01	12.27	12.27	19.02	15.75	15.75	6.01	3.90	3.90	7.24	7.37	7.37	-	-	-	--	18.78	18.78
Total Energy Charges	**355.51**	**505.45**	**505.45**	**641.61**	**817.87**	**817.87**	**438.05**	**554.72**	**554.72**	**347.68**	**420.78**	**420.78**	**-**	**-**	**-**	**--**	**432.19**	**432.19**
Pension and Gratuity Contribution	46.39	46.39	46.39	48.03	48.03	48.03	7.89	7.89	7.89	7.77	7.77	7.77	3.21	3.21	3.21	--	17.54	17.54
Net prior period (income)/expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	0.00	0.00
Aggregate Revenue Requirement	**745.69**	**876.72**	**876.68**	**1,118.75**	**1,258.80**	**1,258.53**	**941.84**	**1,011.73**	**1,011.64**	**1,080.67**	**1,049.24**	**1,049.12**	**27.34**	**23.96**	**23.95**	**--**	**1,739.58**	**1,732.54**

Table 3-46: Approved ARR for CSPGCL's Generating Stations for FY 2017-18 (Rs. crore)

Particulars	KTPS			HTPS			DSPM			KWTPP			Hasdeo Bango			ABVTPP		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Depreciation	60.01	48.45	48.45	25.38	20.44	20.41	128.66	128.17	128.17	191.07	184.70	184.70	2.65	2.65	2.65	-	440.79	440.79
Interest & Finance Charges	5.30	3.32	3.32	19.55	10.87	10.87	69.22	61.87	61.87	309.73	244.29	244.29	0.82	0.64	0.64	-	723.07	723.03
Return on Equity	25.06	28.57	28.57	61.66	66.76	57.56	107.98	125.04	107.80	91.38	110.29	95.09	5.85	5.85	5.85	-	159.98	159.98
O&M Expenses	218.92	190.96	190.96	327.81	283.71	283.71	167.90	125.44	125.44	104.92	54.79	54.79	14.02	9.95	9.95	-	157.00	157.00
Impact of Wage Revision	10.48	-	-	27.06	-	-	4.57	-	-	2.92	-	-	1.08	-	-	-	0.00	--
Additional R&M Expenses	1.00	-	-	31.26	-	-	-	-	-	-	-	-	-	-	-	-	0.00	--
Interest on Working Capital	15.97	16.29	16.22	28.04	30.77	30.61	23.74	22.08	22.00	17.60	20.81	20.51	0.59	0.86	0.86	-	43.68	43.60
Less: Non-Tariff Income	8.12	1.83	1.83	15.91	3.83	3.83	9.21	1.81	1.81	4.32	2.08	2.08	-	-	-	-	8.27	8.27
Total Annual Capacity Charge	**328.62**	**285.76**	**285.69**	**504.86**	**408.73**	**399.33**	**492.86**	**460.79**	**443.46**	**713.30**	**612.80**	**597.30**	**25.00**	**19.94**	**19.94**	**-**	**1516.25**	**1,516.12**
Cost of Coal	282.79	283.57	283.57	557.48	694.69	694.69	432.04	499.46	499.46	340.44	472.93	472.93	-	-	-	-	788.68	788.68
Cost of Oil	12.46	10.36	10.36	21.30	14.61	14.61	6.01	4.05	4.05	7.24	3.30	3.30	-	-	-	-	25.00	25.00
Total Energy Charges	**295.25**	**293.93**	**293.93**	**578.78**	**709.30**	**709.30**	**438.05**	**503.51**	**503.51**	**347.68**	**476.24**	**476.24**	**-**	**-**	**-**	**-**	**813.68**	**813.68**
Pension and Gratuity Contribution	50.59	50.59	50.59	52.37	52.37	52.37	8.60	8.60	8.60	8.47	8.47	8.47	3.50	3.50	3.50	-	19.13	19.13
Net prior period (income)/expenses	-	-	-	-	-	-	-	0.43	-	-	-	-	-	-	-	-	0.00	0.00
Aggregate Revenue Requirement	**674.46**	**630.28**	**630.21**	**1,136.01**	**1,170.40**	**1,161.00**	**939.51**	**973.33**	**955.58**	**1,069.45**	**1,097.52**	**1,082.01**	**28.49**	**23.44**	**23.44**	**-**	**2349.06**	**2,348.93**

3.24 Revenue from Sale of Power

CSPGCL's Submission

CSPGCL submitted the revenue from sale of power for FY 2016-17 as Rs. 5,639.81 crore excluding the revenue of Rs. 118.94 crore on account of recovery of Water Charges and SLDC Charges and Rs. 514.30 crore as recovery of impact of Hon'ble APTEL's Judgment and Revenue Gap. The revenue from sale of power for FY 2017-18 as Rs. 6341.41 crore excluding the revenue of Rs. 212.15 crore on account of recovery of Water Charges and SLDC Charges and Rs. 329.45 crore as recovery of impact of Hon'ble APTEL's Judgment and Revenue Gap.

Commission's View

The Commission has considered the revenue from sale of power based on the audited accounts and provisional Accounts submitted by CSPGCL for FY 2016-17 and FY 2017-18 respectively.

Regarding billing of the firm power supplied by Unit 1 of ABV TPP, CSPGCL submitted that, for FY 2016-17, billing of the firm power from Unit I was done as per provisional tariff allowed by the Commission vide order April 30, 2016. The infirm power supplied by Unit 2, during the same duration had the billing rate of Rs 1 / unit. After COD of unit 2, the billing of firm power from Unit 2 was also done in accordance to the aforesaid order of the Commission

The Water Charges, Start-up power and SLDC Charges have been considered as Rs. 119.90 crore for FY 2016-17 and Rs. 212.28 crore for FY 2017-18 as per accounts for respective years. The impact of Hon'ble APTEL Judgment and past revenue gaps has been considered separately as Rs. 514.30 crore for FY 2016-17 and Rs. 329.45 crore for FY 2017-18. After excluding these two items, the revenue from sale of power for FY 2016-17 and FY 2017-18 has been considered as Rs. 6,274.01 crore and Rs. 6883.14 crore, respectively. The Commission has considered the revenue from DSM Charges of Rs. 6.02 crore for FY 2016-17 and Rs. 31.47 crore for FY 2017-18, which was not considered by CSPGCL, as the sharing of DSM Charges has been considered under Sharing of gains and losses.

3.25 Sharing of Gains and Losses

Regulation 11 of the MYT Regulations, 2015 specifies as under:

"11. CONTROLLABLE AND UN-CONTROLLABLE FACTORS

11.1 For the purpose of these Regulations, the term "uncontrollable factors" *shall comprise of the following factors, but not limited to, which were beyond the control of the applicant, and could not be mitigated by the applicant:*

(a) Force Majeure events;

(b) Change in law

... ...

11.2 For the purpose of these Regulations, the term "Controllable factors" shall comprise of the following:

...

(b) Generation Performance parameters like SHR, Auxiliary consumption, etc;

...

(f) Variation in Wires Availability and Supply Availibility"

Further, Regulation 12 of the MYT Regulations, 2015 specifies as under:

"12. MECHANISM FOR PASS THROUGH OF GAINS OR LOSSES ON ACCOUNT OF UNCONTROLLABLE FACTORS

The aggregate net gains / losses to the generating company or STU/transmission licensee or distribution licensee on account of uncontrollable items (as per the tariff order) over such period shall be passed on to beneficiaries/consumers through the next ARR or as may be specified in the Order of the Commission passed under these Regulations."

Regulation 13 of the MYT Regulations, 2015 specifies as under:

"13. MECHANISM FOR SHARING OF GAINS OR LOSSES ON ACCOUNT OF CONTROLLABLE FACTORS

The mechanism for sharing of aggregate net gain on account of over achievement in reference to the target set in tariff order for efficiency linked controllable items other than energy losses computed in accordance to Regulation 7l shall be passed on to the beneficiary / consumer(s) and retained by the generating company or the licensee or SLDC, as the case may be, in the ratio of 50:50 or as may be specified in the Order of the Commission passed under these Regulations.

Provided that the mechanism for sharing of aggregate net gain on account of over achievement in reference to the target set in tariff order for energy losses computed in accordance to Regulation 71 *shall be passed on to the consumer(s) and retained by the licensee, as the case may be, in the ratio of 2: 1 or as may be specified in the Order of the Commission passed under these Regulations.*

13.2. The mechanism for sharing of aggregate net loss on account of under achievement in reference to the target set in tariff order for efficiency linked controllable items shall be passed on to the beneficiary / consumer(s) and retained by the generating company or the licensee, as the case may be, in the ratio of 50:50 or as may be specified in the Order of the Commission passed under these Regulations."

CSPGCL's Submission

CSPGCL submitted that Regulation 13 specifies the method for sharing of gains and losses. Further, incompliance with Regulations 32 and 35 of MYT Regulations, 2015, CSPGCL has segregated the Pension Fund Contribution from AFC and considered it as a separate line item. Further, CSPGCL submitted that it has excluded Employee Cost from O&M Cost for the purpose of sharing of Gains / Losses as per Amendment to the MYT Regulations, 2015 dated June 16, 2017. Except for the same, CSPGCL submitted that it has followed the methodology followed in previous Orders for Sharing of Gains / Losses. CSPGCL has also submitted that in line with previous Order, DSM charges has been shared in the 50:50 ratio for both FY 2016-17 and FY 2017-18.

Commission's View

The sharing of gains and losses on account of controllable factors has been computed in accordance with the methodology submitted by CSPGCL. The contribution to Pension & Gratuity Fund and Employee Cost has been excluded from the calculations, and gains/losses have been shared in the ratio of 50:50 in accordance with the MYT Regulations, 2015. Further, sharing of gains and losses of DSM Charges has also been considered.

The sharing of gains and losses after final True-up for FY 2016-17 and provisional True-up for FY 2017-18 is as shown in the Table below:

Table 3-47: Sharing of Gains and Losses for final True-up for FY 2016-17 for CSPGCL's Generating Stations

Particulars	Units	FY 2016-17				
		KTPS	HTPS	DSPM	KWTPP	ABVTPP
Fixed Charges @ NPAF						
Installed capacity	MW	440	840	500	500	834
NPAF	%	60.52%	81.00%	85.00%	81.00%	57.38%
Actual PAF achieved (billed)	%	58.27%	80.63%	93.10%	76.50%	33.24%
Normative aux. consumption	%	11.25%	9.76%	9.00%	5.25%	5.25%
Actual aux cons	%	12.65%	9.76%	7.78%	5.00%	8.97%
Normative aux. consumption	MU	262.43	581.57	335.07	186.26	220.13
Actual aux cons	MU	289.71	578.86	309.73	166.13	213.45
Normative Net Generation	MU	2070.26	5378.73	3387.93	3361.54	3972.83
Actual net generation	MU	2000.85	5353.65	3672.68	3155.96	2165.30
Total generation available for Fuel Cost recovery	**MU**	**2000.85**	**5353.65**	**3672.68**	**3155.96**	**2165.30**
Fixed Cost (norm-wise)						
Depreciation	Rs Cr	48.75	19.43	128.15	184.38	362.90
Interest on Loan and Finance charges	Rs Cr	9.49	12.46	75.8	266.82	681.09
Return on Equity	Rs Cr	32.26	56.67	107.76	94.94	132.13
Interest on Working Capital	Rs Cr	22.47	33.38	25.5	20.63	26.96
O & M Expenses	Rs Cr	237.42	289.05	148.60	87.65	146.24
Less - Non-Tariff Income	Rs Cr	1.18	3.41	2.13	1.7	2.46
Fixed Cost allowed on Normative Basis	**Rs Cr**	**349.43**	**407.30**	**483.59**	**652.47**	**1346.86**
Fixed cost expenditure excluding O&M	Rs Cr	112.02	118.25	334.99	564.82	1200.62
Normative Fixed Cost (Cr. Rs/% of PAF) excluding O&M	Rs Cr./%PAF	1.85	1.46	3.94	6.97	20.93
Pro-rata Fixed cost allowable from Actual PAF	Rs Cr	107.85	117.71	366.91	533.44	695.58
Fixed cost gain from normative cost	**Rs Cr**	**(4.16)**	**(0.53)**	**31.93**	**(31.38)**	**(505.05)**
Total Gain/(Loss)	**Rs Cr**	**(509.19)**				
R&M and A&G expenses						
Normative R&M and A&G Cost allowed	Rs crore	77.51	107.15	83.85	49.96	83.36
Normative R&M and A&G Cost (Cr. Rs/% of PAF)	Rs Cr./%PAF	1.28	1.32	0.99	0.62	1.45
Pro-rata R&M and A&G cost allowable from actual PAF	Rs crore	74.63	106.66	91.84	47.18	48.29
Actual R&M and A&G expenditure	Rs crore	66.92	82.77	48.06	20.34	22.09

Particulars	Units	FY 2016-17				
		KTPS	HTPS	DSPM	KWTPP	ABVTPP
Difference of recovery and expenditure	**Rs Cr**	**7.71**	**23.89**	**43.78**	**26.84**	**26.20**
Total Gain/(Loss)	**Rs Cr**	**128.42**				
Secondary Fuel Cost						
Normative SFC	Rs Cr	15.68	20.63	9.45	7.68	7.07
Normative SF Cost derived from NPLF	Rs/kwh	0.08	0.04	0.03	0.02	0.02
Secondary fuel cost recovery from actual generation	Rs Cr	15.16	20.52	10.24	7.21	3.85
Actual SFC incurred	Rs Cr	12.27	15.75	3.90	7.37	18.78
Savings due to performance improvement	**Rs Cr**	**2.89**	**4.78**	**6.34**	**(0.16)**	**(14.93)**
Total Impact of Savings/Excess Expenditure due to SFC	**Rs Cr**	**(1.08)**				
Coal Cost (primary fuel)						
Normative Coal Cost	Rs Cr	490.13	798.78	528.32	420.34	704.23
Normative ECR (Coal)	Rs/kwh	2.37	1.48	1.56	1.25	1.77
Normative fuel cost on actual sent out	Rs Cr	473.70	794.55	572.73	394.64	383.82
Actual fuel cost	Rs Cr	493.18	802.13	550.82	413.41	413.41
Coal Cost Surplus/(deficit)	**Rs Cr**	**(19.48)**	**(7.58)**	**21.91**	**(18.78)**	**(29.58)**
Total Impact of Savings/Excess Expenditure due to Coal	**Rs Cr**	**(53.51)**				
Total plant wise impact of gain/ loss	**Rs Cr**	**(13.05)**	**20.55**	**103.96**	**(23.47)**	**(523.36)**
Total Impact of Savings/Excess Expenditure	Rs Cr	**(435.37)**				
Gains/(Losses) for Hasdeo Bango of FY 2016-17	**Rs Cr**	**0.08**				
Plant-wise impact of DSM Charges	**Rs Cr**	2.41	6.19	2.26	1.51	(6.34)
Total Impact of DSM Charges	**Rs Cr**	**6.03**				
Net total Impact Savings/Excess Expenditure	**Rs Cr**	**(429.26)**				
Net applicable Gain/(Loss) to CSPGCL on 50:50 basis	**Rs Cr**	**(214.63)**				

Table 3-48: Sharing of Gains and Losses for provisional True-up for FY 2017-18 for CSPGCL's Generating Stations

Particulars	Units	FY 2017-18				
		KTPS	HTPS	DSPM	KWTPP	ABVTPP
Fixed Charges @ NPAF						
Installed capacity	MW	387.53	840	500	500	1000
NPAF	%	66.19%	78.69%	85.00%	85.00%	69.47%
Actual PAF achieved (billed)	%	51.82%	75.49%	96.30%	92.10%	65.31%
Normative aux. consumption	%	11.25%	9.90%	9.00%	5.25%	5.25%
Actual aux cons	%	13.23%	9.90%	7.92%	4.41%	6.61%
Normative aux. consumption	MU	252.8	572.96	335.07	195.46	319.51
Actual aux cons	MU	236.49	524.2	320.13	175.62	377.83
Normative Net Generation	MU	1994.32	5217.37	3387.93	3527.54	5766.43
Actual net generation	MU	1551.3	4773.37	3722.87	3810.45	5342.17
Total generation available for Fuel Cost recovery	**MU**	**1551.3**	**4773.37**	**3722.87**	**3810.45**	**5342.17**
Fixed Cost (norm-wise)						
Depreciation	Rs Cr	48.45	20.41	128.17	184.70	440.79
Interest on Loan and Finance charges	Rs Cr	3.32	10.87	61.87	244.29	723.03
Return on Equity	Rs Cr	28.57	57.56	107.80	95.09	159.98
Interest on Working Capital	Rs Cr	16.22	30.61	22.00	20.51	43.60
O & M Expenses	Rs Cr	221.52	297.78	153.04	90.29	180.58
Less - Non-Tariff Income	Rs Cr	1.83	3.83	1.81	2.08	8.27
Fixed Cost allowed on Normative Basis	**Rs Cr**	**316.26**	**413.40**	**471.07**	**632.80**	**1539.71**
Fixed cost expenditure excluding O&M	Rs Cr	94.73	115.61	318.03	542.51	1359.12
Normative Fixed Cost (Cr. Rs/% of PAF) excluding O&M	Rs Cr./%PAF	1.43	1.47	3.74	6.38	19.56
Pro-rata Fixed cost allowable from Actual PAF	Rs Cr	74.17	110.92	360.31	587.85	1277.64
Fixed cost gain from normative cost	**Rs Cr**	**(20.57)**	**(4.69)**	**42.28**	**45.34**	**(81.48)**
Total Gain/(Loss)	**Rs Cr**	**(19.12)**				
R&M and A&G expenses						
Normative R&M and A&G Cost allowed	Rs crore	69.88	110.27	86.30	51.47	102.93
Normative R&M and A&G Cost (Cr. Rs/% of PAF)	Rs Cr./%PAF	1.06	1.40	1.02	0.61	1.48
Pro-rata R&M and A&G cost allowable from actual PAF	Rs crore	54.71	105.80	97.77	55.77	96.76

Particulars	Units	FY 2017-18				
		KTPS	HTPS	DSPM	KWTPP	ABVTPP
Actual R&M and A&G expenditure	Rs crore	66.45	99.15	60.98	20.50	71.78
Difference of recovery and expenditure	**Rs Cr**	**(11.74)**	**6.65**	**36.79**	**35.27**	**24.98**
Total Gain/(Loss)	**Rs Cr**	**91.95**				
Secondary Fuel Cost						
Normative SFC	Rs Cr	16.31	23.82	9.06	8.51	16.19
Normative SF Cost derived from NPLF	Rs/kwh	0.08	0.05	0.03	0.02	0.03
Secondary fuel cost recovery from actual generation	Rs Cr	12.69	21.74	9.96	9.19	15.00
Actual SFC incurred	Rs Cr	10.36	14.61	4.05	3.30	25.00
Savings due to performance improvement	**Rs Cr**	**2.32**	**7.14**	**5.91**	**5.88**	**(10.00)**
Total Impact of Savings/Excess Expenditure due to SFC	**Rs Cr**	**11.25**				
Coal Cost (primary fuel)						
Normative Coal Cost	Rs Cr	363.33	757.07	472.14	436.88	842.58
Normative ECR (Coal)	Rs/kwh	1.82	1.45	1.39	1.24	1.46
Normative fuel cost on actual sent out	Rs Cr	282.62	691.15	518.81	471.92	780.59
Actual fuel cost	Rs Cr	283.57	694.69	499.46	472.93	788.68
Coal Cost Surplus/(deficit)	**Rs Cr**	**(0.95)**	**(3.54)**	**19.35**	**(1.02)**	**(8.09)**
Total Impact of Savings/Excess Expenditure due to Coal	**Rs Cr**	**5.75**				
Total plant wise impact of gain/ loss	**Rs Cr**	**(30.94)**	**5.54**	**104.33**	**85.48**	**(74.59)**
Total Impact of Savings/Excess Expenditure	**Rs Cr**	**89.82**				
Gains/(Losses) for Hasdeo Bango of FY 2016-17	**Rs Cr**	**0.54**				
Plant-wise impact of DSM Charges	**Rs Cr**	1.04	14	3.13	12.05	1.26
Total Impact of DSM Charges	**Rs Cr**	**31.48**				
Net total Impact Savings/Excess Expenditure	**Rs Cr**	**121.84**				
Net applicable Gain/(Loss) to CSPGCL on 50:50 basis	**Rs Cr**	**60.92**				

From the above table, it is seen that CSPGCL has earned a loss of Rs. 429.26crore in FY 2016-17 and gain of Rs. 121.84crore in FY 2017-18. As per the provisions of the Regulations, 50% of this gain has to be retained by CSPGCL and remaining 50% will be passed on to the consumers of the State.

Accordingly, the Commission approves the loss of Rs. 214.63 crore for FY 2016-17 and gain of Rs. 60.92crore for FY 2017-18, after undertaking the sharing of gains and losses.

3.26 Revenue Gap/(Surplus) for CSPGCL for FY 2016-17 and FY 2017-18

Commission's view

In view of the above, the Revenue Gap/(Surplus) for CSPGCL for FY 2016-17 after final truing up and for FY 2017-18 after provisional truing up has been approved as shown in the following Table:

Table 3-49: Revenue Gap/(Surplus) after Provisional True-up for FY 2016-17 and FY 2017-18 for CSPGCL (Rs. crore)

Particulars	FY 2016-17	FY 2017-18
	Final True-up	Provisional True-up
ARR for KTPS	876.68	630.21
ARR for HTPS	1,258.53	1,161.00
ARR for DSPM TPS	1,010.11	955.58
ARR for KWTPP	1,049.12	1,082.01
ARR for ABVTPP	1,732.54	2,348.93
ARR for Hasdeo Bango	23.95	23.44
Total ARR for Generating Stations of CSPGCL	**5,952.46**	**6,201.16**
Sharing of Gain/(Losses)	(214.63)	60.92
Petition Filing Fee	0.28	0.42
Impact of APTEL Judgement and Revenue Gap	514.30	329.45
Water and SLDC Charges	119.90	212.28
Total ARR for FY 2016-17	**6,372.31**	**6,804.28**
Revenue from Sale of Power	5,639.81	6,341.41
Revenue from recovery of Water and SLDC Charges	119.90	212.28
Recovery of Impact of APTEL Judgement and Revenue Gap	514.30	329.45
Total Revenue	**6,274.01**	**6,883.14**
Revenue Gap/(Surplus)	**98.30**	**(78.86)**

The Commission approves Standalone Gap of Rs. 98.30 crore after Final Truing-up of FY 2016-17 and Standalone surplus of Rs. 78.86crore after provisional Truing-up of FY 2017-18.

The Commission has considered carrying cost on the Revenue Gap arrived after final Truing-up of FY 2016-17 and Provisional Truing-up of FY 2017-18. The Commission has considered the interest rates as Base rates plus 350 basis points for respective years as specified in the Regulations. The Commission, at time of provisional true-up for FY 2016-17, has approved standalone revenue surplus of Rs. 219.64 crore and the after taking into account the carrying cost on the same, the revenue surplus of Rs. 279.52 crore has been adjusted in ARR for FY 2018-19. For the computation of cumulative revenue gap, the Commission has considered the amount of Rs. 279.52 crore in FY 2018-19, since the same amount has already been recovered through revised tariff for FY 2018-19.

The Commission approves the recovery of this cumulative revenue gap through twelve equal monthly instalments. Hence, after applying the carrying cost for 3 years, i.e., from mid-point of FY 2016-17 to mid-point of FY 2019-20 on Revenue Gap for FY 2016-17 arising after final true-up, the total amount which is required to be factored in the revenue requirement of CSPDCL for FY 2019-20 works out to Rs. 455.39 crore.

Similarly, after applying the carrying cost for 2 years, i.e., from mid-point of FY 2017-18 to mid-point of FY 2019-20 on revenue surplus of Rs. 78.86crore for FY 2017-18 arising after provisional true-up, the total surplus which is required to be factored in revenue requirement of CSPDCL for FY 2019-20 works out as Rs. 106.63 crore.

Hence, after undertaking final true-up for FY 2016-17 and provisional true-up for FY 2017-18, the net revenue gap, which is required to be factored in the revenue requirement of CSPDCL for FY 2019-20, works out to Rs. 348.76 crore.

The Commission approves cumulative revenue gap of Rs. 348.76 crore up to FY 2019-20 for CSPGCL. This revenue gap has been adjusted in ARR of CSPDCL for FY 2019-20 as discussed in subsequent chapter.

3.27 Revised ARR and billing mechanism for FY 2019-20

The annual fixed cost of CSPGCL power stations for FY 2019-20 has been revised. The revision is on account of realignment of O&M cost due to revision of inflation projection and the revision of capital investment plan submitted by CSPGCL. When utility itself has revised its capitalization projection to lower than what was considered in the previous order, there is no reason to continue with higher loading in tariff. Further, pension fund contribution has also been rationalized. The revision of AFC and the ARR has been dealt in the chapter-7 of this Order. During the instant true-up, the relaxation in NAPAF norm for HTPS has been reduced to half from the previously allowed relaxation. The reduction in relaxation is on account of spread of capital works such as ESP up-gradation over a longer period. As such the revised NAPAF of 78.69% shall be applicable for FY 2019-20 also.

The Commission directs CSPGCL to ensure billing in accordance to the revised AFC / ARR, as per provisions of Regulation 41 of MYT Regulations, 2015.

4 FINAL TRUE-UP OF ARR FOR FY 2016-17 AND PROVISIONAL TRUE-UP OF ARR FOR FY 2017-18 FOR CSPTCL

4.1 Background

The Commission notified the CSERC MYT Regulations, 2015 for the third MYT Control Period from FY 2016-17 to FY 2020-21 on September 9, 2015. Subsequently, the Commission notified the First Amendment to CSERC MYT Regulations on June 16, 2017. The Commission issued the MYT Order on April 30, 2016 approving the ARR of CSPTCL for the Control Period from FY 2016-17 to FY 2020-21 and Transmission tariff for FY 2016-17.

Subsequently, in the Tariff Order dated March 26, 2018, the Commission undertook provisional true-up for FY 2016-17 for CSPTCL based on provisional accounts for FY 2016-17. Now, CSPTCL submitted the Petition for final true-up of ARR for FY 2016-17 based on audited accounts of FY 2016-17 and provisional true-up for FY 2017-18 based on the provisional accounts for FY 2017-18, along with determination of Transmission Tariff for FY 2019-20.

Regulation 10.3 of the CSERC MYT Regulations, 2015 specifies as under:

> *"10.3. In case the audited accounts are not available, the provisional true-up shall be done on the basis of un-audited/ provisional account and shall be subject to further final true-up, as soon as the audited accounts is available."*

In accordance with the above Regulation, the Commission has undertaken final true-up of FY 2016-17 based on audited Accounts for FY 2016-17 and provisional true-up for FY 2017-18 based on unaudited/provisional Accounts for FY 2017-18 submitted by CSPTCL.

In this Chapter, the Commission has analysed all the elements of actual expenditure and revenue of CSPTCL for FY 2016-17 and FY 2017-18 and undertaken the final true-up and provisional true-up, respectively, of expenses and revenue in accordance with Regulation 10 of the CSERC MYT Regulations, 2015. The Commission has approved the sharing of gains and losses on account of controllable factors between CSPTCL and its beneficiaries, in accordance with Regulation 13 of the CSERC MYT Regulations, 2015.

4.2 Transmission System of CSPTCL

The physical status of transmission system of CSPTCL as on March 31, 2017 and March 31, 2018, as submitted by CSPTCL, is shown in the Table below:

Table-4-1: Physical Status of Transmission System of CSPTCL as on March 31, 2017 and March 31, 2018

Particulars	Units	As on March 31, 2017	As on March 31, 2018
A. EHV Transmission Lines			
400 kV	ckt. km.	1,915.52	1,915.52
220 kV	ckt. km.	3,478.51	3,518.00
132 kV	ckt. km.	5,753.38	6,078.00
+/-100kV HVDC	ckt. km	360.00	360.00
B. EHV Substations			
400 kV	No.	2	3
220 kV	No.	20	20
132 kV	No.	73	75
+/-100kV HVDC	No.	1	1
C. Transformation Capacity of EHV Substations			
400/220 kV	MVA	1,575	1,890
220/132 kV	MVA	6,350	6,670
132/33kV	MVA	6,576	6,583
+/-100kV HVDC	MVA	243	243

4.3 Transmission Losses

CSPTCL's Submission

CSPTCL submitted that various factors contribute to transmission losses, such as increase in energy demand in the State along with the increase in short-term open access consumers, change in spatial distribution in the load within the State, change in quality, load cycle, operating temperature and frequency of the system. CSPTCL submitted that it is making continuous efforts to reduce transmission losses by installation of capacitor banks of optimum capacity, double circuiting of EHV lines and taking up other system improvement works wherever required, and by construction of new EHV sub-stations and lines with the approval of the Commission.

CSPTCL submitted that based on the actual reading of the energy meters installed at the various points of the State's periphery, the actual Transmission Loss for FY 2016-17 and FY 2017-18 was 2.81% and 3.05%, respectively, as against the Transmission Loss of 3.22% approved in the MYT Order dated April 30, 2016. The computation of the Transmission Losses submitted by CSPTCL is shown in the Table below:

Table 4-2: Transmission Losses for FY 2016-17 and FY 2017-18 as submitted by CSPTCL

Sr. No.	Particulars	FY 2016-17	FY 2017-18
1	State Generation Ex-Bus at 132 kV and above (MU)	16,712.97	19,425.19
2a	Import from CTU Grid at CG Periphery at 132 kV and above (MU)	15,777.58	16,293.16
2b	Export to CTU Grid at CG Periphery at 132 kV and above (MU)	10,689.26	11,964.52
2	Net Drawal from CTU Grid at State Periphery at 132 kV and above (MU)	5,088.33	4,328.64
3	IPPs/CPP Injection in CSPTCL System at 132 kV and above (MU)	1,481.31	1,126.98
4	Total Injection at State Grid of STU (MU) (1+2+3)	23,282.61	24,880.81
5	EHV Sales from Sub Station (MU)	2,387.85	2,454.87
6	Net Output to DISCOM (MU)	20,240.04	21,667.68
7	Total Output from CSPTCL System (MU) (5+6)	22,627.89	24,122.55
8	Transmission Loss (MU) (4-7)	654.72	758.26
9	Transmission Loss (%) (8/4*100)	2.81%	3.05%

Commission's View

The Commission, in the MYT Order dated April 30, 2016, approved the Transmission Losses as 3.22% for each year of the Control Period. The Commission has gone through details of source-wise actual injection of energy, actual EHV sales and JMR readings. Further, the Commission observes that there is difference between the EHV sales considered by CSPTCL and CSPDCL. In its clarification, CSPTCL submitted the reconciliation and stated that due to incorporation of Bhilai Steel Plant (BSP) export and import in drawal of CTU grid to Chhattisgarh system, BSP consumption and BSP Oxygen Plant consumption is being deducted from EHV sales while determining the transmission losses. Also, the energy sales from 2x500 MW Marwa Plant to CSPDCL is being deducted from EHV sales, as CSPDCL purchases electricity generated on ex-bus basis and hence the electricity so injected into grid can flow anywhere to the grid. Hence, the same has not been considered for computation of transmission losses.

Further, as regards the difference observed against total output from CSPTCL system, CSPTCL submitted that it has taken 33 kV output of 132/33 kV power transformer for computation of transmission loss, while CSPDCL has taken the reading of energy export from 33 kV feeders connected to 33 kV bus of EHV substation for computation of distribution loss.

The Commission notes the submission of CSPTCL and is of view that the methodology adopted by both CSPTCL and CSPDCL for computation of transmission losses and distribution losses, respectively, is correct. Hence, for the final truing-up of FY 2016-17 and, the Commission approves the transmission loss as submitted by CSPTCL. However, for FY 2017-18, the Commission has observed an increase in transmission loss over FY 2016-17, which is not desirable. Therefore, for provisional truing-up of FY 2017-18, the Commission has capped the transmission loss at 3%.

4.4 Operations and Maintenance (O&M) Expenses

CSPTCL's Submission

CSPTCL submitted that the gross employee expenses (after reducing employee expenses on account of CSLDC) was Rs.168.12 crore for FY 2016-17 based on the audited accounts and Rs. 178.74 crore for FY 2017-18 based on provisional accounts, as against the employee expenses of Rs. 155.59 crore and Rs. 169.67 crore (after excluding interim wage relief amount and Terminal Benefits), respectively, approved in the MYT Order. CSPTCL submitted the details as shown in the following Table:

Table 4-3: Gross Employee Expenses for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17	FY 2017-18
		Actual	Provisional
1	Gross Employee Expenses (CSPTCL + SLDC) excluding terminal benefits*	175.66	187.24
2	Less: SLDC Employee Expenses (including interim wage relief)	7.54	8.51
3	CSPTCL Gross Employee Expenses	168.12	178.74

** Includes 7.5% Interim Relief paid to the employees during FY 2016-17*

Further, the provision of arrears of Rs. 22.93 crore to be paid to employees on account of wage revision due from April 1, 2014 to March 31, 2017 has been made in the audited accounts for FY 2016-17. CSPTCL submitted that this amount is being paid from FY 2017-18 onwards and requested the Commission to consider the same as per actuals in future years.

The capitalisation of employee expenses has been considered as Rs. 13.79 crore for FY 2016-17 and Rs. 15.30 for FY 2017-18. CSPTCL requested the Commission to approve net employee expenses of Rs. 154.33 crore for FY 2016-17 and Rs. 163.44 crore (net of capitalization) for FY 2017-18, respectively, based on the audited accounts and provisional accounts of respective years.

CSPTCL submitted the details of sanctioned employee strength, current employee strength, and vacant positions for different class of employees, as on March 31, 2017 and March 31, 2018, as shown in the Table below:

Table 4-4: Employee strength at CSPTCL as on 31st March 2017 and 31st March 2018

Sr. No.	Particular	Sanctioned	Working		Vacant	
			As on 31st March2017	As on 31st March2018	As on 31st March2017	As on 31st March2018
CSPTCL						
1	Class I	131	105	108	26	23
2	Class II	235	159	147	76	89
3	Class III	1448	720	691	728	757
4	Class IV	1491	681	631	810	860
5	**Total**	3305	1665	1577	1640	1729
SLDC						
1	Class I	20	14	17	6	3
2	Class II	24	19	17	5	7
3	Class III	21	17	15	4	6
4	Class IV	8	3	5	5	3
5	**Total**	73	53	54	20	19
CSPTCL + SLDC						
1	Class I	151	119	125	32	266
2	Class II	259	178	164	81	96
3	Class III	1469	737	706	732	763
4	Class IV	1499	684	636	815	863
5	**Total**	3378	1718	1631	1660	1748

CSPTCL submitted that the vacant positions will be filled in the near future and employee expenses will increase, making it difficult to manage at the level approved by the Commission. CSPTCL further submitted that the Wage Revision Committee has recommended that the pay scale needs to be revised when the Seventh Central Pay Commission recommendations are available and implemented by GOI for their employees. The salary structure has been recommended to be aligned to Central Govt.

Pay scale from the date from which Central Govt. revises the pay scale of their employees including merger of DA with salary. CSPTCL requested the Commission to allow the same when the effect takes place.

CSPTCL submitted the A&G expenses and R&M expenses (excluding expenses on account of SLDC) for FY 2016-17 and FY 2017-18, as shown in the Table below:

Table 4-5: Gross R&M expenses and A&G expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	FY 2016-17	FY 2017-18
		Actual	Provisional
1	Gross A&G Expenses	40.53	44.31
2	Less: SLDC Expenses	1.13	1.67
3	**CSPTCL Gross A&G Expenses**	**39.40**	**42.64**
4	Gross R&M Expenses	33.40	39.85
5	Less: SLDC Expenses	1.32	0.61
6	**CSPTCL Gross R&M Expenses**	**32.08**	**39.24**

CSPTCL considered the capitalisation of A&G expenses as Rs. 1.81 crore for FY 2016-17 and Rs. 0.004 crore for FY 2017-18. Further, CSPTCL submitted the comparison of actual O&M expenses vis-a-vis O&M expenses approved in MYT Order, as shown in the following Table:

Table 4-6: O&M Expenses as submitted by CSPTCL for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particular	FY 2016-17		FY 2017-18	
		MYT Order	Petition	MYT Order	Petition
1	Gross Employee Expenses	155.59	168.12	169.67	178.74
2	Gross A&G Expenses	28.96	39.40	30.92	42.64
3	Gross R&M Expenses	29.68	32.08	31.69	39.24
4	Interim Wage Relief amount	11.75	0.00	12.81	0.00
5	**Gross O&M Expenses (excluding SLDC)**	**225.98**	**239.60**	**245.09**	**260.62**
6	Employee expenses capitalized	-	13.79	-	15.30
7	A&G Expenses capitalized	-	1.81	-	0.00
8	**Net O&M Expenses (excluding SLDC)**	**225.98**	**223.99**	**245.09**	**245.31**

Computation of Normative O&M Expenses

CSPTCL submitted that CSERC MYT Regulations, 2015 allows incentive/disincentive for better/under performance in operational norms so that such efforts are appropriately recognized and promoted, thereby, ensuring improved efficiency on a sustainable basis. Regulation 13.1 of CSERC MYT Regulations, 2015, as per amendment dated June 16, 2017 specifies as under:

> *"Provided further that employee cost shall not be factored in for sharing of gains or losses on account of operation & maintenance expenses,"*

Accordingly, the employee expenses for FY 2016-17 have been considered based on actual sand have not been subjected to sharing of gains or losses. CSPTCL requested the Commission to approve Rs. 168.12 crore and Rs.178.74 crore towards gross employee expenses, and Rs. 13.79 crore and Rs. 15.30 crore towards capitalisation of employee expenses for FY 2016-17 and FY 2017-18, respectively.

CSPTCL submitted that the normative A&G expenses and R&M expenses for FY 2016-17 and FY 2017-18have been computed as per the Regulations.

<u>Additional O&M Expenses</u>

CSPTCL submitted that as per Regulation 47.5(g) of CSERC MYT Regulations 2015, claim for additional O&M expenses on new transmission lines/substations commissioned after March 31, 2016 is permissible. However, practically, it is not possible to isolate the actual O&M Expenses specifically on new transmission lines / substations commissioned after March 31, 2016.

CSPTCL submitted that in Tariff Order dated March 26, 2018, the Commission had benchmarked the approved GFA with the base O&M Expenses allowed for FY 2015-16, and allowed additional O&M expenses in the same proportion for corresponding increase in GFA. CSPTCL submitted that it has adopted the same methodology to compute additional A&G expenses and R&M Expenses for FY 2016-17 and FY 2017-18 on account of new transmission lines and sub-stations commissioned during FY 2016-17 and FY 2017-18, as shown in the Table below:

Table 4-7: Additional Normative O&M Expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	Formula	FY 2016-17	FY 2017-18
1	Average of opening and closing GFA for previous FY	A	3,501.95	3,759.33
2	Average of opening and closing GFA for current FY	B	3,759.33	3,997.18
3	Increase in GFA (%)	C= (B-A)/A*100	7.35%	6.33%
4	Normative A&G Expenses	D	28.12	31.07
5	Normative R&M Expenses	E	28.82	31.84
6	**Additional A&G Expenses on account of increase in GFA**	F = D * C	**2.07**	**1.97**
7	**Additional R&M Expenses on account of increase in GFA**	G = E * C	**2.12**	**2.01**

CSPTCL has computed the normative A&G Expenses and R&M Expenses for FY 2017-18 by escalating the normative A&G Expenses and R&M Expenses of Rs. 30.19 crore and Rs. 30.94 crore (including additional A&G Expenses and R&M Expenses on account of new lines and sub-stations) for FY 2016-17, by increase of 2.92% in WPI, as shown in the Table below:

Table 4-8: Normative A&G Expenses and R&M Expenses for 2017-18 (Rs. crore)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Normative A&G (net of capitalization)	27.12	30.19	33.03
Normative R&M (net of capitalization)	27.80	30.94	33.86

The net A&G Expenses and R&M Expenses as per audited accounts for FY 2016-17 are Rs. 37.59 crore and Rs. 32.08 crore. The same have been considered for sharing of gain/(loss) for FY 2016-17 as shown in the following Table:

Table 4-9: Sharing of gain/(loss) on A&G Expenses and R&M expenses for FY 2016-17

(Rs. crore)

Sr. No.	Particulars	Normative	Actual	Gain/(Loss)
a	Net A&G expenses	30.19	37.59	(7.40)
b	Net R&M expenses	30.94	32.08	(1.14)
c	Total Gain/(Loss)			(8.54)
d	**CSPTCL share (1/2 of Total Gain/(Loss))**			**(4.27)**

The actual net A&G expenses and R&M expenses as per the provisional accounts for FY 2017-18 are Rs. 42.63 crore and Rs. 39.24 crore, respectively. The same have been considered for sharing of gain/(loss) for FY 2017-18 as shown in the following Table:

Table 4-10:Sharing of gain/(loss) on A&G expenses and R&M expenses for FY 2017-18

(Rs. crore)

Sr. No.	Particulars	Normative Expense	Actual	Gain/(Loss)
a	Net A&G expenses	33.03	42.63	(9.60)
b	Net R&M expenses	33.86	39.24	(5.39)
c	Total Gain/(Loss)			(14.99)
d	**CSPTCL share (1/2 of Total Gain/(Loss))**			**(7.49)**

CSPTCL submitted that the prevalent norms for calculation of R&M expenses based on WPI alone are not sufficient and should be linked with the growth in the asset base of the utility, besides inflationary increase. As per the infrastructure increase in the licensed area, it would be pertinent to link R&M expenses and A&G expenses to GFA in the future.

Commission's View

As regards O&M Expenses, Regulation 47.5 of the CSERC MYT Regulations, 2015 specifies as under:

"47.5 Operation and Maintenance expenses

Employee Cost

g) The employee cost, excluding pension fund contribution and impact of pay revision arrears for the base year i.e. FY 16, shall be derived on the basis of the normalized average of the actual employee expenses excluding pension fund contribution and impact of pay revision arrears available in the accounts for the previous five (5) years immediately preceding the base year FY 16, subject to prudence check by the Commission. Any other expense of nonrecurring nature shall also be excluded while determining normalized average for the previous five (5) years.

h) The normalization shall be done by applying last five year average increase in Consumer Price Index (CPI) on year to year basis. The average of normalized net present value for FY 2010-11 to FY 15, shall then be used to project base year value for FY 16. The base year value so arrived, shall be escalated by the above inflation rate to estimate the employee expense (excluding impact of pension fund contribution and pay revision, if any) for each year of the Control period.

At the time of true up, the employee costs shall be considered after taking into account the actual increase in CPI during the year instead of projected inflation for that period.

Provided further that impact of pay revision (including arrears) and pension fund contribution shall be allowed on actual during the true-up as per accounts, subject to prudence check and any other factor considered appropriate by the Commission.

A&G Expenses and R&M Expenses

i) The administrative and general expenses and repair and maintenance expenses, for the base year i.e. FY 16, shall be derived on the basis of the normalized average of the actual administrative and general expenses and repair and maintenance expenses, respectively available in the accounts for the previous five (5) years immediately preceding the base year FY 16, subject to prudence check by the Commission. Any expense of non-recurring nature shall be excluded while determining normalized average for the previous five (5) years.

j) The normalization shall be done by applying last five year average increase in Wholesale Price Index (WPI) on year to year basis. The average of normalized net present value for FY 2010-11 to FY 15, shall then be used to project base year value for FY 16. The base year value so arrived, shall be escalated by the above inflation rate to estimate the administrative and general expense and repair and maintenance expenses for each year of the Control period.

At the time of true up, the administrative and general expenses and repair and maintenance expenses shall be considered after taking into account the actual inflation instead of projected inflation for that period.

k) ***The additional O&M Expenses on account of new transmission lines/ substations commissioned after March 31, 2016 shall be allowed by the Commission subject to prudence check at the time of true-up exercise." (emphasis added)***

In accordance with the above said Regulations O&M Expenses had been approved In the MYT Order for the Control Period. The above Regulations specify that at the time of truing up, the O&M Expenses shall be considered after taking into account the actual inflation instead of projected inflation for that period. The Regulation does not require to revise base O&M expenses as approved in the MYT Order.

Accordingly, the Commission has computed the revised normative O&M expenses for FY 2016-17 by applying the actual inflation of FY 2016-17 on base O&M expenses, as approved in the MYT Order. Further, for FY 2017-18, Commission has computed the revised normative O&M Expenses by escalating the revised normative O&M expenses for FY 2016-17 by applying the actual inflation for FY 2017-18. The Commission has considered escalation factor of 4.12% for employee expenses and

1.73% for R&M expenses and A&G Expenses for FY 2016-17. Similarly, the Commission has considered escalation factor of 3.08% for employee expenses and 2.92% for R&M expenses and A&G Expenses for FY 2017-18. Accordingly, the normative O&M Expenses computed for FY 2016-17 and FY 2017-18 are as shown in the Table below:

Table 4-11: Approved Normative O&M Expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Particulars	FY 2015-16	FY 2016-17		FY 2017-18	
	Base Year	MYT Order	Revised	MYT Order	Revised
Employee Expenses	142.68	155.59	148.56	169.67	153.13
A&G Expenses	27.12	28.96	27.59	30.92	28.40
R&M Expenses	27.80	29.68	28.28	31.69	29.11
Grand total	**197.60**	**214.23**	**204.43**	**232.28**	**210.64**

Further, Regulation 47.5 (g) of the CSERC MYT Regulations, 2015, specifies to consider the additional O&M expenses on account of new transmission lines/sub-stations commissioned after March 31, 2016. In line with the methodology adopted by the Commission in previous order for provisional true-up of FY 2016-17, the Commission has computed the additional O&M expenses by considering approved GFA with the base O&M expenses allowed for the previous year and in the same proportion for corresponding increase in GFA. The additional normative A&G expenses and R&M expenses on account of new transmission lines and sub-stations for FY 2016-17 and FY 2017-18 are computed as shown in the Table below:

Table 4-12: Computation of Additional A&G expenses and R&M expenses for FY 2016-17 and FY 2017-18 (Rs. crore)

Particulars	Legend/Formula	FY 2016-17	FY 2017-18
Average of Opening and Closing GFA for FY Previous FY	A	3501.95	3759.33
Average of Opening and Closing GFA for current FY	B	3759.33	3997.18
Increase in GFA (%)	C=(B-A)/A x 100	7.35%	6.33%
Normative A&G Expenses approved for FY	D	27.59	28.40
Normative R&M Expenses approved for FY	E	28.28	29.11
Additional A&G Expenses on account of increase in GFA for FY	F=D x C	2.03	1.80
Additional R&M Expenses on account of increase in GFA for FY	G = E x C	2.08	1.84

For the purpose of true-up for FY 2016-17 and provisional true-up for FY 2017-18, the Commission approves the normative A&G expenses and R&M Expenses including additional A&G expenses and R&M expenses on account of new transmission lines/sub-stations. The Commission has undertaken sharing of gains and losses of normative expenses vis-à-vis actual expenses for FY 2016-17 and FY 2017-18, as per CSERC MYT Regulations, 2015.

The actual Employee expenses has been approved based on accounts and clarifications sought from CSPTCL which is as shown in the Table below:

Table 4-13: Approved Actual Gross Employee Expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
1	Gross Employee Expenses (CSPTCL + SLDC) excluding terminal benefits	175.66	175.66	187.24	187.24
2	Less: SLDC Employee Expenses	7.54	7.54	8.51	8.99
3	Gross Employee Expenses (excluding SLDC)	168.12	168.12	178.74	178.25
4	Less: Employee Cost Capitalized	13.79	13.79	15.30	15.30
5	**Net Employee Expenses**	**154.33**	**154.33**	**163.44**	**162.95**

Further, the Commission has approved the actual A&G expenses and R&M Expenses for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 4-14: Approved Actual A&G Expenses and R&M Expenses for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
1	Gross A&G Expenses	40.53	39.99	44.31	44.31
2	Less: SLDC Expenses	1.13	1.13	1.67	0.95
3	**Gross A&G Expenses (Excluding SLDC)**	**39.40**	**38.87**	**42.64**	**43.35**
4	A&G Expenses Capitalized	1.81	1.81	0.004	0.004

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
5	**Net A&G Expenses**	**37.59**	37.05	42.63	43.35
6	Gross R&M Expenses	33.40	33.40	39.85	39.85
7	Less: SLDC Expenses	1.32	1.32	0.61	0.61
8	**Gross R&M Expenses (Excluding SLDC)**	**32.08**	**32.08**	**39.24**	**39.24**
9	R&M Expenses Capitalized	-	-	-	-
10	**Net R&M Expenses**	**32.08**	**32.08**	**39.24**	**39.24**

As regards the sharing of gains and losses, the following provision has been inserted in Regulation 13.1 by the First Amendment to the CSERC MYT Regulations, 2015 on June 16, 2017:

> *"Provided further that employee cost shall not be factored in for sharing of gains or losses on account of operations and maintenance expenses, … …"*

Accordingly, the Commission approves the Employee Expenses at actuals for FY 2016-17 and FY 2017-18.

Further, the Commission notes that CSPTCL in its subsequent submission, has requested the Commission to consider expenses of outsourcing and sub-contracting manpower as a separate line item instead of R&M Expenses and not subject the same to sharing of efficiency gains or losses. In reply to the clarifications sought by the Commission, CSPTCL submitted that it has incurred expenditure of Rs. 13.08 crore for FY 2016-17 and Rs. 18.06 crore for FY 2017-18, towards outsourced employees for carrying out R&M works for EHV sub-stations. Since, there was no separate account head for booking expenditure incurred towards outsourced employees, the same had clubbed under R&M expenses. CSPTCL submitted that these wages are required for outsourced employees against the vacant posts of CSPTCL for day to day operation and maintenance of existing/new EHV substations /offices, etc., and are similar to employee expenses in nature.

The Commission is of the view that expenses incurred by CSPTCL (or any other Licensee) towards outsourcing have to be considered under A&G expenses, and cannot be notionally considered under employee expenses. Also, it is noted that CSPTCL has not made the submission of consideration of outsourcing expenses in its original Petition. Further, the Commission sought copy of the outsourcing contract given in this regard. It is observed that the outsourcing contract includes costing towards operation work, watch & ward work, substation cleanliness work, fixed charges for administrative and supervision charges, etc. From these activities, it is amply clear that these works are related to substation maintenance. The Commission is of view that such expenses cannot be part of employee expenses, and being a service contract in nature, these expenses shall be booked under A&G expenses, instead of R&M Expenses.

Accordingly, the sharing of gains and losses in O&M expenses, computed after final true-up for FY 2016-17 is shown in the following Table:

Table 4-15: Approved Sharing of Gains and Losses in O&M Expenses for FY 2016-17

(Rs. crore)

Particulars	Revised Normative O&M Expenses	Actual based on Audited Accounts	Gains/ (Losses)	Sharing of Gains / (Losses) at 50:50	Net Entitlement of O&M Expenses
Employee Expenses	148.56	154.33	-	-	154.33
A&G Expenses	29.62	37.05	(7.43)	(3.72)	33.34
R&M Expenses	30.36	32.08	(1.72)	(0.86)	31.22
Total O&M expenses	**208.54**	**223.46**	**(9.15)**	**(4.58)**	**218.89**

The sharing of gains and losses in O&M expenses, computed after provisional true-up for FY 2017-18, is shown in the following Table:

Table 4-16: Approved Sharing of Gains and Losses in O&M expenses for FY 2017-18

(Rs. crore)

Particulars	Revised Normative O&M Expenses	Actual based on Audited Accounts	Gains/ (Losses)	Sharing of Gains / (Losses) at 50:50	Net Entitlement of O&M Expenses
Employee Expenses	153.13	162.95	-	-	162.95
A&G Expenses	30.19	43.35	(13.15)	(6.58)	36.77
R&M Expenses	30.95	39.24	(8.29)	(4.15)	35.10
Total O&M expenses	**214.28**	**245.54**	**(21.45)**	**(10.72)**	**234.82**

In this Order, the Commission approves the O&M expenses based on audited accounts for FY 2016-17 and provisional accounts for FY 2017-18. The final approval of O&M Expenses for FY 2017-18 shall be accorded at time of truing up based on audited accounts for FY 2017-18.

4.5 Contribution to Pension and Gratuity Fund

CSPTCL's Submission

CSPTCL submitted that the Commission, in the MYT Order, had allowed contribution to Pension and Gratuity (P&G) fund of Rs. 49.16 crore and Rs. 53.61 crore for FY 2016-17 and FY 2017-18, respectively. CSPTCL has considered the actual contribution towards Pension and Gratuity of Rs. 49.16 crore and Rs. 53.61 crore, net of SLDC, for FY 2016-17 and FY 2017-18, respectively.

Commission's View

The Commission approves the actual Contribution to Pension and Gratuity Fund for FY 2016-17 and FY 2017-18 based on audited and provisional accounts, respectively, as submitted by CSPTCL, as shown in the following Table:

Table 4-17: Contribution to P&G Fund for FY 2016-17 and FY 2017-18 as approved by the Commission (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Contribution to Pension & Gratuity Fund	49.16	49.16	49.16	53.61	53.61	53.61

4.6 Gross Fixed Assets

CSPTCL's Submission

CSPTCL submitted that the Commission, in the MYT Order, had approved the methodology for determination of capital structure into Consumer Contribution, debt and equity. The capital structure for FY 2016-17 and FY 2017-18 has been done as follows:

- CSPTCL submitted that opening Capital Works in Progress (CWIP) for FY 2016-17 and FY 2017-18 has been considered equal to the closing CWIP of previous year, as per true up of ARR of respective years
- For FY 2016-17, closing CWIP of Rs. 747.90 crore has been considered as per the audited accounts and actual loan addition is considered as Nil. For FY 2017-18,

closing CWIP of Rs. 577.84 crore and the loan addition of Rs. 119.21 crore have been considered as per the provisional accounts.

- GFA addition of Rs. 208.62 crore for FY 2016-17 and Rs. 267.08 crore for FY 2017-18 (net of GFA addition for SLDC) have been considered as per audited/provisional accounts for respective years.
- Assets generated on account of consumer contribution has been taken as Nil, considering their value as Rs.1 only as per Accounting Standard for both years.
- The normative debt: equity ratio has been considered as 70:30 for additional capitalisation during the year as per the CSERC MYT Regulations, 2015 for both years.

CSPTCL submitted the Capital Structure for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 4-18: Capital Structure submitted by CSPTCL for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	FY 2015-16 True-up Order dated 31.03.2017	FY 2016-17 (Based on audited accounts)	FY 2017-18 (Based on provisional accounts)
A	**GROSS FIXED ASSETS (GFA)**			
1	Opening GFA	3348.88	3655.02	3,863.64
2	Opening CWIP	564.63	564.47	747.90
3	Opening Capex	3913.51	4219.49	4,611.54
4	Capitalization during the year	306.14	208.62	267.08
5	Closing GFA	3655.02	3,863.64	4,130.72
6	Closing CWIP	564.47	747.90	577.84
7	Closing Capex	4219.50	4,611.54	4,708.56
B	**GRANTS & CONSUMER CONTRIBUTION**			
1	Opening Grant and Contribution	101.56	101.56	101.56
2	Consumer Contribution/Grants during the Year	-	-	
3	Closing Consumer Contribution	101.56	101.56	101.56
4	Consumer Contribution in Opening GFA	46.06	46.06	46.06
5	Consumer Contribution in Closing GFA	46.06	46.06	46.06
C	**LOAN BORROWED**			
1	Opening Borrowed Loan	1,969.43	2,144.62	2,144.62
2	Loan Borrowed during the Year	175.19	-	119.21

Sr. No.	Particulars	FY 2015-16 True-up Order dated 31.03.2017	FY 2016-17 (Based on audited accounts)	FY 2017-18 (Based on provisional accounts)
3	Closing Borrowed Loan	2,144.62	2,144.62	2,263.83
4	Borrowed Loan in Opening GFA	2,077.83	2,322.74	2,468.78
5	Borrowed Loan in Closing GFA	2,322.74	2,468.78	2,655.73
D	**Equity**			
1	Opening Gross Equity	1,842.52	1973.32	2,365.36
2	Equity addition during the Year	130.80	392.04	-
3	Closing Gross Equity	1973.32	2,365.36	2,343.17
4	Gross Equity in Opening GFA	1,224.99	1,286.22	1,348.80
5	Gross Equity in Closing GFA	1,286.22	1,348.80	1,428.93
6	Average Gross Equity during the year	1,255.61	1,317.51	1,388.87
E	**PERMISSIBLE EQUITY**			
1	Permissible Equity in Opening GFA	847.87	909.10	971.68
2	Permissible Equity in Closing GFA	909.10	971.68	1,051.81
3	Average Gross Permissible Equity during the year	878.48	940.39	1,011.75
F	**NORMATIVE LOAN**			
1	Opening Normative Loan	377.12	377.12	377.12
2	Closing Normative Loan	377.12	377.12	377.12
3	Average Normative Loan	377.12	377.12	377.12

CSPTCL submitted the means of finance for GFA addition at normative debt: equity ratio of 70:30. Accordingly, CSPTCL submitted the debt amount of Rs. 146.03 crore and Rs. 186.96 crore; and Equity amount of Rs. 62.59 crore and Rs. 80.12 crore for FY 2016-17 and FY 2017-18, respectively. CSPTCL requested the Commission to approve the capital structure and means of finance including GFA addition for FY 2016-17 and FY 2017-18 as per its submissions.

Commission's View

In the Order dated March 31, 2017,the Commission has approved the closing GFA for FY 2015-16 as Rs. 3655.02 crore after True-up. The Commission has accordingly considered the same amount as Opening GFA for FY 2016-17. The Closing GFA approved for FY 2016-17 after true-up in this Order has been considered as the Opening GFA for FY 2017-18. The Commission notes that audited accounts for FY 2016-17 indicate the capitalisation of Rs. 209.36 crore. Out of this, the amount of Rs. 0.74 crore is pertaining to CSLDC. Accordingly, the Commission has considered the capitalisation of Rs. 208.62 crore (net of GFA addition of CSLDC) for FY 2016-17. Similarly, the Commission has considered the capitalisation of Rs. 267.08 crore (net of GFA addition of Rs. 0.74 crore for CSLDC) for FY 2017-18 based on provisional accounts.

As regards the funding of capitalisation, the Commission has not considered any grants or consumer contribution utilised for funding of capitalisation. Further, normative Debt: Equity ratio of 70:30 has been considered as per Regulation 17 of the CSERC MYT Regulations, 2015.

The Commission approves the GFA addition and its funding for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 4-19: Approved GFA Addition and Means of Finance for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
1	GFA Addition	208.08	208.62	267.08	267.08
	Means of Finance				
2	Consumer Contribution	-	-	-	-
3	Equity	62.5	62.59	80.12	80.12
4	Debt	146.03	146.03	186.96	186.96
5	**Total Capitalisation**	**208.08**	**208.62**	**267.08**	**267.08**

4.7 Depreciation

CSPTCL's Submission

CSPTCL submitted that it has computed depreciation of Rs. 175.04 crore and Rs. 186.57 crore for FY 2016-17 and FY 2017-18, respectively, in accordance with Regulation 24 of the CSERC MYT Regulations, 2015. CSPTCL requested the Commission to approve the same after final true-up of ARR for FY 2016-17 and provisional true-up of ARR for FY 2017-18, respectively.

Commission's View

The Commission has approved the depreciation in accordance with the approach adopted in the past Orders. The closing GFA for FY 2015-16, as approved in the true up for FY 2015-16, has been considered as the opening GFA for FY 2016-17. The GFA addition has been considered as approved by the Commission earlier in this Chapter. The addition of Grants and consumer contribution in GFA has been considered as Nil for both years. The weighted average depreciation rate of 5.26%, computed on the basis of deprecation rates specified in the CSERC MYT Regulations, 2015, has been considered for FY 2016-17 and FY 2017-18. In true-up Order for FY 2015-16the depreciation on fully depreciated assets up to FY 2015-16 was computed as Rs. 19.79 crore. CSPTCL submitted the details of depreciation on fully depreciated assets as Rs. 0.31 crore for FY 2016-17 and Rs. 1.02 crore for FY 2017-18. Accordingly, in the present Order, the Commission has disallowed the deprecation on fully depreciated assets up to FY 2016-17as Rs. 20.10 crore and up to FY 2017-18 as Rs. 21.12 crore. The depreciation computed by the Commission for FY 2016-17 and FY 2017-18 is shown in the following Table:

Table 4-20: Approved Depreciation for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Opening GFA excluding CSLDC	3,666.31	3,655.02	3,655.02	4,100.02	3,863.64	3,863.64
2	Add: Capitalization during the year	433.71	208.62	208.62	569.38	267.08	267.08
3	GFA at the end of the year excluding CSLDC	4,100.02	3,863.64	3,863.64	4,669.40	4,130.72	4,130.72
4	Average GFA for the year	3,883.16	3,759.33	3,759.33	4,384.70	3,997.18	3,997.18
5	Depreciation Rate	5.25%	5.26%	5.26%	5.25%	5.26%	5.26%
6	Depreciation @ applicable rates as per Regulations	203.87	197.56	197.56	230.20	210.11	210.11
7	Opening Consumer Contribution	46.06	46.06	46.06	46.06	46.06	46.06
8	Addition: Consumer Contribution during the year	-	-	-	-	-	
9	Closing Consumer Contribution	46.06	46.06	46.06	46.06	46.06	46.06
10	Average Consumer Contribution	46.06	46.06	46.06	46.06	46.06	46.06
11	Less: Depreciation on Consumer Contribution on live assets	2.42	2.42	2.42	2.42	2.42	2.42
12	Less: Depreciation on fully depreciated assets	19.79	20.10	20.10	20.10	21.12	21.12
13	**Net Depreciation**	**181.66**	**175.04**	**175.03**	**207.68**	**186.57**	**186.57**

4.8 Interest on Loan

CSPTCL's Submission

CSPDCL submitted that it has calculated interest and finance charges as per Regulation 23 of the CSERC MYT Regulations, 2015. CSPTCL has submitted details of actual loan for FY 2016-17 as per the audited accounts and for FY 2017-18 as per provisional accounts. CSPTCL has considered the approved closing normative loan balance for FY 2015-16 as per the true-up Order, as the opening normative loan balance for FY 2016-17. The debt component of 70% of GFA addition during FY 2016-17and FY 2017-18 has been considered as the normative loan addition during respective years. The allowable depreciation for FY 2016-17 and FY 2017-18 has been considered as the normative repayment for respective years. The rate of interest has been computed in accordance with Regulation 23.5. The actual weighted average interest rates of 10.95%for FY 2016-17 and 9.86%for FY 2017-18 have been considered for computation of the interest on loan. CSPTCL requested to approve Interest on Loan of Rs. 192.55 crore for FY 2016-17 and Rs. 171.97 crore for FY 2017-18.

Commission's View

The Commission has approved interest on loan capital for FY 2016-17 and FY 2017-18 as per Regulation 23 of the CSERC MYT Regulations, 2015.

The Commission has considered the closing net normative loan balance for FY 2015-16, as approved after True-up, as the opening net normative loan balance for FY 2016-17. The addition of normative loan for FY 2016-17 and FY 2017-18 has been considered based on debt component towards the actual capitalisation of respective years, as considered earlier in this Chapter. The repayment has been considered equal to net depreciation approved for FY 2016-17 and FY 2017-18 in this Order.

The Commission notes that CSPTCL has considered the weighted average rate of interest during the year. However, Regulation 23.5 of the CSERC MYT Regulations, 2015 specifies to consider the rate of interest based on actual loan portfolio at the beginning of the year. Accordingly, the Commission has computed the weighted average rate of interest of 11.13% for FY 2016-17and 10.06%for FY 2017-18, as per Regulation 23.5 of the CSERC MYT Regulations, 2015. The interest on loan approved for FY 2016-17 and FY 2017-18is shown in the Table below:

Table 4-21: Approved Interest on Loan for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Total Opening Net Loan	1,782.12	1,772.71	1,772.71	1904.69	1,743.71	1,743.71
2	Repayment during the period	181.03	175.04	175.03	207.05	186.57	186.57
3	Additional Capitalization of Borrowed Loan during the year	303.60	146.03	146.03	398.56	186.96	186.96
4	Total Closing Net Loan	1,904.69	1,743.71	1,743.71	2096.21	1,744.10	1,744.10
5	Average Loan during the year	1,843.40	1,758.21	1,758.21	2000.45	1,743.91	1,743.91
6	Weighted Average Interest Rate	12.20%	10.95%	11.13%	12.20%	9.86%	10.06%
7	**Interest Expenses**	**224.71**	**192.55**	**195.65**	**244.06**	**171.97**	**175.50**

4.9 Return on Equity (RoE) and Income Tax

CSPTCL's Submission

CSPTCL has computed Return on Equity (RoE) as per Regulation 22 of the CSERC MYT Regulations, 2015, using the base rate of Return on Equity of 15.50% (without grossing up by MAT rate of 20.9605%). The Income Tax has been separately claimed based on actual Income Tax paid during the year. CSPTCL claimed the Income Tax of Rs. 14.38 crore for FY 2016-17 and Rs. 12.97 crore for FY 2017-18. CSPTCL has considered the closing permissible equity balance of FY 2015-16, as approved in the true-up Order, as the opening permissible equity balance for FY 2016-17. The equity addition has been considered as 30% of the actual capitalisation during the respective years. CSPTCL requested the Commission to approve RoE of Rs. 146.76 crore for FY 2016-17 and Rs. 156.82 crore for FY 2017-18. It also requested the Commission to consider the similar approach for CSPTCL for computation of RoE by grossing up return on equity with MAT rate of 20.96%, if adopted for CSPGCL and CSPDCL.

Commission's View

Regulation 22 of the MYT Regulations, 2015 specifies that RoE shall be computed by grossing up the base rate with the prevailing MAT rate of the base year for projection purposes. CSPTCL has paid actual Income Tax of Rs. 14.38 crore for FY 2016-17 and Rs. 12.97 crore for FY 2017-18. The Commission notes that CSPTCL has requested for separate approval of actual Income Tax paid. The Commission has accepted the submission of CSPTCL. Accordingly, the Commission has approved

RoE at base rate of 15.50% as per Regulation 22 of the CSERC MYT Regulations, 2015 and allowed the Income Tax separately.

For computation of RoE, the closing equity as approved for FY 2015-16 after True-up has been considered as opening equity for FY 2016-17. The equity addition has been considered based on the actual capitalisation as approved earlier in this Order. The Commission approves the RoE for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 4-22: Approved Return on Equity for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Permissible Equity in Opening GFA	911.36	909.10	909.10	1,041.47	971.68	971.68
2	Addition of Permissible Equity during the year	130.11	62.59	62.59	170.81	80.12	80.12
3	Permissible Equity in Closing GFA	1,041.47	971.68	971.68	1212.28	1,051.81	1,051.81
4	Average Gross Permissible Equity during the year	976.42	940.39	940.39	1,126.88	1,011.75	1,011.75
5	Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
6	**Return on Equity**	**151.34**	**145.76**	**145.76**	**174.67**	**156.82**	**156.82**

As regards Income Tax, CSPTCL was asked to submit the detailed computation of Income Tax and related documentary evidence for actual Income Tax paid for FY 2016-17 and FY 2017-18. CSPTCL submitted the Income Tax challans for FY 2016-17 and FY 2017-18. Further, CSPTCL clarified that no adjustment towards MAT credit has been made during FY 2016-17 and FY 2017-18. Based on the scrutiny of the documentary evidences submitted by CSPTCL and actual Income Tax paid, the Commission approves Income Tax of Rs. 14.38 crore for FY 2016-17 and Rs. 12.97 crore for FY 2017-18.

4.10 Interest on Working Capital

CSPTCL's Submission

For computation of Interest on Working Capital (IoWC) for FY 2016-17 and FY 2017-18, CSPTCL has considered one month of actual O&M Expenses, maintenance spares at 40% of actual R&M expenses and receivables equivalent to one month of fixed cost for computing the working capital requirement. CSPTCL has considered the interest rate of 12.80% (i.e., 9.30% - SBI Base Rate on 1st April 2016 plus 350 basis points)for FY 2016-17,and 12.60% (i.e., 9.10% - SBI Base Rate on 1st April 2017 plus 350 basis points) for FY 2017-18. CSPTCL requested the Commission to approve IoWC of Rs. 13.77 crore for FY 2016-17 and Rs. 13.10 crore for FY 2017-18.

Commission's View

The Commission has computed IoWC in accordance with Regulation 25 of the MYT Regulations, 2015. For computation of working capital requirement as per the formula specified in the CSERC MYT Regulations, 2015, the Commission has considered the revised normative value of O&M expenses as approved in this Order. Further, the receivables have been considered based on the actual revenue billed by CSPTCL including past revenue gaps during FY 2016-17 and FY 2017-18. The interest rate has been considered as per Regulation 25.4 of the MYT Regulations, 2015, i.e., 12.80% for FY 2016-17 and 12.60% for FY 2017-18. The normative IoWC approved by the Commission is shown in the Table below:

Table 4-23: Approved Interest on Working Capital for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	O&M expenses for One Month	17.85	18.67	17.38	19.36	20.44	17.86
2	Maintenance Spares @ 40% of R&M Expenses	11.87	12.83	12.14	12.68	15.70	12.38
3	Receivables @ 1 Month	68.62	76.12	76.12	76.40	67.80	67.80
4	Total Working Capital requirement	98.34	107.61	105.64	108.43	103.94	98.04
5	Less: Security Deposit from Transmission Users	-	-	-	-	-	-
6	Net Working Capital Requirement	98.34	107.61	105.64	108.43	103.94	98.04
7	Rate of Interest on WC	13.20%	12.80%	12.80%	13.20%	12.60%	12.60%
8	**Net Interest on Working Capital**	**12.98**	**13.77**	**13.52**	**14.31**	**13.10**	**12.35**

4.11 Prior Period (Income)/Expenses

CSPTCL's Submission

CSPTCL has submitted net prior period (income)/expenses for FY 2016-17 as NIL as per the audited accounts of FY 2016-17. CSPTCL has submitted the net prior period (income)/expenses of Rs. (11.49) crore for FY 2017-18 as per provisional accounts of FY 2017-18.

Commission's View

The Commission sought the year-wise details of each head of prior period (income)/expenses. The prior period (income)/expense for each head have been allowed based on the treatment of expenses approved by the Commission in the true-up for the respective year.

The prior period income for FY 2016-17 is nil. Prior period income for FY 2017-18 includes the amount pertaining to Other Income for FY 2012-13. CSPTCL submitted that such income was allowed by the Commission in its true-up of FY 2012-13as per the audited accounts of FY 2012-13. and the prior period income has been considered in full.

Further, prior period expense for FY 2017-18 includes the employee cost of Rs. 0.0001 crore for FY 2015-16. The Commission has approved the sharing of gain for FY 2015-16 after true-up. Hence the Commission has considered only 50% of the prior period employee expenses for FY 2017-18. Thus, the net prior period (income)/expense approved for FY 2016-17 and FY 2017-18, is shown in the Table below:

Table 4-24: Approved Prior Period (Income)/Expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
1	**Prior Period (Income)**				
1.1	Other Income related to previous year	-	-	11.49	11.49
1.2	**Sub-total**	**-**	**-**	**11.49**	**11.49**
2	**Prior Period Expense**				
2.1	Employee Costs	-	-	0.0001	0.00005
2.2	**Sub-total**	**-**	**-**	**0.0001**	**0.00005**
3	**Net Prior Period (Income)/Expense**	**-**	**-**	**(11.49)**	**(11.49)**

4.12 Non-Tariff Income

CSPTCL's Submission

CSPTCL submitted the Non-Tariff Income of Rs. 27.29 crore for FY 2016-17 and Rs. 31.15 crore for FY 2017-18 based on audited and provisional accounts for respective years. CSPTCL has excluded the Non-Tariff Income of Rs. 1.13Crore for FY 2016-17 and Rs. 0.03 crore for FY 2017-18 for CSLDC. CSPTCL further clarified that it has not considered income from Delayed Payment Surcharge as a part of Non-Tariff Income.

Commission's View

For the purpose of true-up for FY 2016-17 and provisional true-up for FY 2017-18, the Commission has considered the Non-Tariff Income for Transmission Business as per segmental notes of accounts for FY 2016-17 and FY 2017-18. The Commission observed that Non-Tariff Income of Rs. 27.29 crore for FY 2016-17 includes Rs. 0.75 crore towards provisions written back, which has been subtracted from Non-Tariff Income for FY 2016-17 for the purpose of true-up. Accordingly, the Commission considers Non-Tariff income of Rs. 26.54 crore for Transmission and Rs. 1.13 crore for CSLDC for FY 2016-17. Also, the Commission considers Non-Tariff Income of Rs. 31.15 crore for Transmission and Rs. 1.14 crore for CSLDC for FY 2017-18.

The Non-Tariff Income approved in True-up for FY 2016-17 and provisional True-up for FY 2017-18 is shown in the Table below:

Table 4-25: Approved Non-Tariff Income for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Non-Tariff Income	22.35	27.29	26.54	22.35	31.15	31.15

4.13 Incentive/Penalty on Transmission System Availability Factor (TSAF)

CSPTCL's Submission

CSPTCL submitted that Target Availability of the transmission system is specified in Regulation 51 of the CSERC MYT Regulations, 2015, for incentive/penalty payable/levied to a Transmission Licensee. In the MYT Order, the Commission has approved the annual Target Availability factor for incentive/penalty as 99% and stipulated the modalities for computation of incentive/penalty on account of actual Transmission Availability factor.

CSPTCL submitted that it has achieved Transmission System Availability Factor (TSAF) of 99.93% for FY 2016-17 and 99.89% for FY 2017-18, as computed in the Table below:

Table 4-26: Annual average Transmission System Availability Factor for FY 2016-17 and FY 2017-18 as given by CSPTCL

Sr. No.	Particular	Normative (%)	Voltage Level	FY 2016-17	FY 2017-18
1	Transmission System Availability Factor (TSAF)	99 %	400 kV	99.93%	99.81%
			220 kV	99.92%	99.91%
			132 kV	99.93%	99.96%
			Average	**99.93%**	**99.89%**

Accordingly, CSPTCL has claimed the incentive of Rs. 3.03 crore for FY 2016-17 and Rs. 3.00 crore for FY 2017-18.

Commission's View

As regards Incentive/Penalty calculation related to the TSAF, the Commission in the MYT Order has stipulated as under:

*"**10.3.11 Incentive/Penalty Calculation***

A. As per Clause 51 of the MYT Regulations, 2015, target availability of transmission system has to be specified for the control period for incentive/penalty payable/levied to a transmission licensee.

B. Annual target availability factor for incentive/penalty consideration shall be 99% for entire MYT Control period from FY 2016-17 to FY 2020-21:

Provided further that no incentive/penalty shall be payable for availability beyond 99.75%:

C. The transmission licensee shall be entitled to incentive/penalty on achieving the annual availability beyond/lower than the target availability in accordance with the following formula:

Incentive/Penalty = Annual Fixed Charges for that year x (Annual availability achieved – Target availability) / Target availability

D. Incentive/Penalty shall be shared equally (50:50) between the transmission licensee and beneficiaries."

In this order, the Incentive/Penalty has been allowed in accordance with the above said principle specified in the Regulations.

The Commission notes that the actual TSAF duly certified by CSLDC for FY 2016-17 and FY 2017-18 is 99.86% and 99.89%, respectively, which is higher than the Target TSAF. Hence, CSPTCL is entitled for incentive.

Accordingly, the Commission approves the Incentive on account of Transmission System Availability Factor for FY 2016-17 and FY 2017-18 as shown in the Table below:

Table 4-27: Approved Incentive for Higher Transmission System Availability for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
1	Annual TSAF (%)	99.93%	99.86%	99.89%	99.89%
2	Target TSAF (%)	99.00%	99.00%	99.00%	99.00%
3	Maximum TSAF that can be considered for incentive	99.75%	99.75%	99.75%	99.75%
4	Net ARR	786.07	788.85	793.22	793.01
5	Incentive/(Penalty)	5.96	5.98	6.01	6.01
6	**Sharing of gain/(loss) (50%)**	**2.98**	**2.99**	**3.00**	**3.00**

4.14 Aggregate Revenue Requirement (ARR)

Based on the above, the ARR approved after true-up for FY 2016-17 and provisional true-up for FY 2017-18 is shown in the Table below:

Table 4-28: Approved ARR after true-up for FY 2016-17 and provisional true-up for FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Employee Expenses	155.59	168.12	168.12	169.67	178.74	178.25
2	A&G Expenses	28.96	39.40	38.87	30.92	42.64	43.35
3	R&M Expenses	29.68	32.08	32.08	31.69	39.24	39.24
4	Terminal Benefits	49.16	49.16	49.16	53.61	53.61	53.61
5	Interim Wage Relief	11.75	-	0.00	12.81		
6	Less: Capitalization of Employee, R&M and A&G Expenses	-	15.60	15.60	-	15.30	15.30
7	Depreciation	181.66	175.04	175.03	207.68	186.57	186.57
8	Interest on Loan	224.71	192.55	195.65	243.79	171.97	175.50
9	Interest on Working capital	12.98	13.77	13.52	14.31	13.10	12.35
10	Prior Period (Income) / Expenses	-	-	-	-	(11.49)	(11.49)
11	Return on Equity	151.34	145.76	145.76	174.67	156.82	156.82
12	Gain/(Loss) on sharing O&M efficiency	-	(4.27)	(4.58)	-	(7.49)	(10.72)
13	Incentive on Transmission Availability	-	2.98	2.99		3.00	3.00
14	Income Tax	-	14.38	14.38		12.97	12.97
15	Less: Non-Tariff Income	22.35	27.29	26.54	22.35	31.15	31.15
16	**Aggregate Revenue Requirement (ARR)**	**823.49**	**786.07**	**788.85**	**916.80**	**793.22**	**793.01**

4.15 Transmission Income

CSPTCL's Submission

CSPTCL submitted the transmission income of Rs. 913.39 crore as per audited accounts for FY 2016-17 and Rs. 813.59 crore as per provisional accounts for FY 2017-18. The break-up of transmission income is shown in the following Table:

Table 4-29: Revenue break-up for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particular	FY 2016-17	FY 2017-18
		Audited	Provisional
1	AFC as approved in MYT Order	823.49	916.80
2	Gap/(Surplus) of FY 2014-15 with carrying cost up to FY 2016-17 as approved in MYT Order	(0.36)	-
3	Gap/(Surplus) of FY 2015-16 with carrying cost up to FY 2017-18 as approved in Tariff Order dated 31.03.2017 (corrigendum dt. 13.04.2017)	-	(103.21)
4	Impact due to compliance of APTEL Judgment in Appeal no. 308/2013	90.27	-
5	**Total annual transmission charges billed**	**913.39**	**813.59**

Commission's View

Based on audited accounts CSPTCL has considered the revenue of Rs. 913.39 crore for FY 2016-17. For FY 2017-18, CSPTCL has considered Rs. 813.59 crore on the basis of provisional accounts. The Commission notes that CSPTCL has considered the revenue towards the past gaps approved in the previous Orders for respective years. CSPTCL has not considered past gaps in the Net ARR. However, the Commission has considered the past gaps approved in the previous Orders for FY 2016-17 and FY 2017-18 in the ARR as well as in the revenue of respective years. Further, the Commission sought the consumer-wise break-up of actual revenue billed in FY 2016-17 and FY 2017-18 from CSPTCL, which was submitted by CSPTCL as under:

Table 4-30: Revenue billed by CSPTCL during FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17	FY 2017-18
1	Revenue from CSPDCL	836.52	792.26
2	Revenue from CSPTrdCL	-	15.28
3	MTOA Charges/Revenue from Others	57.20	-
4	STOA- Revenue from CSPDCL	19.67	6.06
5	**Grand Total**	**913.39**	**813.59**

The Commission notes that CSPTCL has billed total revenue of Rs. 836.52 crore and Rs. 792.26 crore to CSPDCL during FY 2016-17 and FY 2017-18, respectively. The same amount has been considered in power purchase expenses of CSPDCL for respective years, for the purpose of the true-up of FY 2016-17 and provisional true-up of FY 2017-18.

In view of the above, the Commission has considered the revenue of Rs. 913.39 crore for FY 2016-17 for the purpose of true-up and Rs. 813.59 crore for FY 2017-18 for the purpose of provisional true-up.

4.16 Revenue Gap/(Surplus) for FY 2016-17 and FY 2017-18

CSPTCL's Submission

CSPTCL submitted the Revenue Gap/(Surplus) for FY 2016-17, as shown in the following Table:

Table 4-31: Revenue Gap/(Surplus) submitted by CSPTCL for FY 2016-17 (Rs. crore)

Sr. No.	Particulars	FY 2016-17 True-up
1	Aggregate Revenue Requirement	786.07
2	Less: Transmission Income allowed as AFC for FY 2016-17	823.49
3	Standalone Revenue Gap/(Surplus)	**(37.42)**

CSPTCL further submitted that the surplus of FY 2014-15 along with carrying cost has been adjusted against the revenue recovery allowed in FY 2016-17. Similarly, the Revenue Gap of Rs. 90.27 crore, towards the impact of Hon'ble APTEL Judgment in Appeal No. 308 of 2013, has also been adjusted against the revenue recovery allowed during FY 2016-17. Hence, there is no past gap or surplus carried forward for FY 2016-17. CSPTCL requested the Commission to approve revenue surplus of Rs. 37.42 crore for FY 2016-17 for final true-up.

Further, CSPTCL submitted the standalone Revenue Gap/(Surplus) for FY 2017-18 as shown in the following Table:

Table 4-32: Revenue Gap/(Surplus) submitted by CSPTCL for FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2017-18
		Provisional True up
1	Aggregate Revenue Requirement	793.22
2	Less: Transmission Income	813.59
3	**Revenue Gap/(Surplus)**	**(20.37)**
4	Opening Revenue Gap/(Surplus) for FY 2015-16	(103.21)
5	**Total Revenue Gap/(Surplus)for FY 2017-18**	**(123.58)**

CSPTCL requested the Commission to approve the Revenue Surplus of Rs. 123.58 crore for FY 2017-18, along with applicable carrying cost, to be adjusted in the revenue requirement for CSPDCL for FY 2019-20. Accordingly, CSPTCL submitted cumulative Revenue Surplus, including holding cost to be adjusted in the ARR for CSPDCL for FY 2019-20, as shown in the Table below:

Table 4-33: Cumulative Revenue Surplus to be adjusted in CSPDCL Tariff of FY 2019-20 as submitted by CSPTCL (Rs. crore)

Sr. No.	Particular	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	Opening Surplus	-	39.82	176.10	168.13
2	Stand-alone Surplus	37.42	123.58	-	-
3	**Closing Surplus**	**37.42**	**163.39**	**176.10**	**168.13**
4	Interest rate	12.80%	12.50%	12.50%	12.50%
5	**Holding Cost**	**2.39**	**12.70**	**22.01**	**10.51**
6	**Total Closing Surplus**	**39.82**	**176.10**	**198.11**	**178.64**
7	Past adjustment already carried out in T.O. dated 26.03.2018	**-**	**-**	29.98	**-**
8	**Final Closing Surplus**	**39.82**	**176.10**	**168.13**	**178.64**

Further, CSPTCL submitted that as per the CERC Tariff Order dated February 16, 2016 in Petition No. 245/TT/2013, it has executed RSA and Transmission Services Agreement (TSA) with PGCIL on August 2, 2017, for disbursement of transmission charges by PGCIL in CSPTCL account in respect of 220 kV Natural Inter-State Transmission Lines belonging to CSPTCL.

CSPTCL submitted that CERC issued the following directive in the aforementioned Order:

> *"The annual transmission charges allowed for the assets covered in the instant petition shall be considered in the YTC as per the sharing of Inter State Transmission Charges and Losses Regulation 2010 and shall be adjusted against the ARR of the Petitioner approved by the State Commission.''*

Accordingly, CSPTCL submitted that amount to be paid by CSPDCL after adjustment of POC charges received from PGCIL for the month of September 2017 to March 2018 against monthly bill issued to CSPDCL is Rs. 30.91 crore. CSPTCL requested the Commission to adjust in its ARR for FY 2017-18. CSPTCL submitted that Rs. 30.91 crore received from PGCIL towards POC Charges during FY 2017-18 has already been credited to CSPDCL.

Commission's View

The Commission has considered the past gaps approved in the previous Orders for respective years in the ARR as well as in the revenue of FY 2016-17 and FY 2017-18.

The Commission had approved net Revenue Surplus in the provisional true up of FY 2016-17. The Commission has computed the Revenue Gap/(Surplus) after true-up for FY 2016-17 for CSPTCL as shown in the Table below:

Table 4-34: Approved Revenue Gap / (Surplus) for FY 2016-17 (Rs. crore)

Sr. No.	Particulars	Approved
1	Aggregate Revenue Requirement	788.85
2	Add: Past Revenue Gaps approved in MYT Order	89.91
3	Net ARR	878.76
4	Less: Revenue from Transmission Charges	913.39
5	**Revenue Gap/(Surplus)**	**(34.63)**
6	Revenue Gap/(Surplus) approved in provisional True up	(23.56)
7	**Incremental Revenue Gap/(Surplus)**	**(11.07)**

The Commission hereby approves the Incremental Revenue Surplus after final true-up of FY 2016-17 as shown in the Table above.

Further, the Commission has computed the Revenue Gap/(Surplus) after provisional true-up for FY 2017-18 for CSPTCL as shown in the Table below:

Table 4-35: Approved Revenue Gap / (Surplus) for FY 2017-18 (Rs. crore)

Sr. No.	Particulars	Approved
1	Aggregate Revenue Requirement	793.01
2	Add: Past Revenue Gap / (Surplus)	(103.21)
3	Net ARR	689.80
4	Less: Revenue from Transmission Charges	813.59
5	**Revenue Gap/(Surplus)**	**(123.79)**

The Commission hereby approves the Revenue Surplus after provisional Truing-up of FY 2017-18 as shown in the Table above. As regards the adjustment of POC charges of Rs. 30.91 crore, the Commission shall take a final view in true-up for FY 2017-18 based on audited accounts.

The holding cost on the incremental Revenue Surplus approved in final True up for FY 2016-17 has been computed for three years, i.e., from mid-point of FY 2016-17 to mid-point of FY 2019-20. Further, holding cost on the Revenue Surplus approved in provisional True up for FY 2017-18 has been computed for two years, i.e., from mid-point of FY 2017-18 to mid-point of FY 2019-20. Accordingly, the Revenue Surplus including holding cost, which is required to be factored in the revenue requirement of CSPDCL for FY 2019-20 works out to Rs. 182.61Crore.

The Commission approves the cumulative Revenue Surplus of Rs. 182.61 crore for CSPTCL on account of true-up for FY 2016-17 and provisional true-up for FY 2017-18. The same Revenue Surplus has been adjusted in revenue requirement of CSPDCL for FY 2019-20, as discussed in subsequent Chapter of this Order.

4.17 Proposed STOA Charges for FY 2019-20

CSPTCL's Submission

CSPTCL submitted that the Commission has determined the Short-term Open Access (STOA) charges in the previous Tariff Orders based on CSERC (Connectivity & Intrastate Open Access) Regulations, 2011, as amended from time to time. For determining STOA Charges for FY 2019-20, CSPTCL has calculated energy handled by it by considering maximum unrestricted demand of 4640 MW (observed on 15thSeptember 2018).

CSPTCL submitted that the energy input to be handled by its system for FY 2019-20, considering the load factor of 70% on maximum demand met, is estimated as 28452 MU. The actual demand observed for FY 2018-19 shall be intimated to the Commission at the end of the financial year. CSPTCL submitted that the differential revenue surplus as arrived in the final true-up of ARR for FY 2016-17 and revenue surplus in provisional true-up of ARR for FY 2017-18 along with the respective year carrying costs has been adjusted in the revenue requirement for FY 2019-20, as shown in the Table below:

Table 4-36: STOA Charges submitted by CSPTCL for FY 2019-20

Sr. No.	Particulars	Amount
1	Net ARR approved in MYT Order (Rs. crore)	1026.62
2	Less: Surplus with holding cost till FY 2019-20 (Rs. crore)	178.64
3	**Total ARR for FY 2019-20 (Rs. crore)**	**847.98**
4	Maximum Demand Projected (MW)	4640.00
5	Energy Input considering 70% Load Factor (MU)	28452.48
6	**STOA Charges (Paise/kWh)**	**29.80**

CSPTCL further submitted that the long-term and medium-term open access customers including CSPDCL shall pay monthly transmission charges as per ARR and MW capacity as approved for the respective FY's of the Control Period.

Commission's View

Regulations 45.1 and 45.2 of the CSERC MYT Regulations, 2015 specify as under:

> *"45.1 Annual Transmission charges or each year of the control period: The Annual Transmission Charges for each financial year of the control period shall provide for the recovery of the Aggregate Revenue Requirement of the Transmission licensee/STU for the respective financial year of the Control period, reduced by the amount of Non-Tariff Income and from other business, as approved by the Commission:*
>
> *45.2. The annual Transmission Charges of the Transmission licensee shall be determined by the Commission on the basis of an application for determination of Aggregate Revenue Requirement made by the transmission licensee in accordance with chapter-2 of these Regulations."*

As per the CSERC MYT Regulations, 2015, the annual transmission charges (fixed cost) shall be recovered from the users of CSPTCL's system on a monthly basis as per the methodology specified in the CSERC Open Access Regulations. According to the CSERC (Connectivity and Intra-State Open Access) Regulations, 2011, the basis of sharing monthly transmission charge shall be maximum demand in MW served by CSPTCL's system in the previous financial year.

The Commission has revised the ARR for FY 2019-20 to Rs. 999.45 crore as against Rs. 1026.62 crore approved in MYT Order, on account of revised projection of Contribution towards Pension and Gratuity Fund and revised projection of O&M Expenses. The same has been detailed in Chapter-7 of this Order.

The Commission has considered Maximum Demand in the State for FY 2019-20 as 4640 MW, as projected by CSPTCL. The energy input to be handled by CSPTCL's system for FY 2019-20, considering the load factor of 70% on Maximum Demand met, is estimated as 28452.48 MU. Accordingly, the Transmission Charges for STOA for FY 2019-20 have been determined as shown in the Table below:

Table 4-37: Approved STOA Charges for FY 2019-20

Sr. No.	Particulars	FY 2019-20
1	ARR approved in MYT Order dated April 30, 2016 (Rs. crore)	999.45
2	Less: Surplus with holding cost till FY 2019-20 (Rs. crore)	182.61
3	**Total ARR for FY 2019-20 (Rs. crore)**	**816.84**
4	Maximum Demand Projected (MW)	4640.00
5	Energy Input considering 70% Load Factor (MU)	28452.48
6	**STOA Charges (Paise/kWh)**	**29.60**

5 FINAL TRUE-UP OF ARR FOR FY 2016-17 AND PROVISIONAL TRUE-UP OF ARR FOR FY 2017-18 FOR CSLDC

5.1 Background

The Commission, in the MYT Order, has approved the ARR for CSLDC for the Control Period from FY 2016-17 to FY 2020-21. Regulation 5.8 (b) of CSERC MYT Regulations, 2015 specifies as under:

> "*After first year of the control period and onwards, the yearly petition shall comprise of:*
>
> *i. Generation, Transmission and SLDC business – Truing up for preceding year(s).*
>
> *The STU/Transmission licensee shall also file proposal for determination of transmission charges for the short term open access customers along with the true-up petition.*
>
> *The SLDC along with the petition for truing-up shall also submit the details of year-wise capital expenditure including additional capital expenditure, sources of financing, operation and maintenance expenditure, etc incurred, duly audited and certified by the auditors. The fees and charges recovered for a year shall be trued-up and considered for determination of fees and charges for the next year, by the commission after prudence check.*
>
> *Where after the truing up, the fee and charges recovered by SLDC if exceeds/falls short of the amount approved by the commission under these regulations, the excess amount so recovered or short fall to be recovered, as the case may be shall be adjusted while determining the fee and charges for the next year or as decided by the Commission."*

Regulation 10.3 of CSERC MYT Regulations, 2015 however specifies as under:

> *"10.3 In case the audited accounts are not available, the provisional truing up shall be done on the basis of un-audited/provisional account and shall be subject to further final truing up, as soon as the audited accounts is available."*

Subsequently, in the Tariff Order dated March 26, 2018, the Commission undertook the provisional true-up of FY 2016-17 based on provisional accounts for FY 2016-17. Now, CSLDC submitted the present Petition for Final true-up of ARR for FY 2016-17 on the basis of the audited accounts and provisional true-up of FY 2017-18 on the basis of provisional accounts of FY 2017-18.

In accordance with the above Regulations, the Commission has undertaken final true-up of FY 2016-17 based on audited Accounts for FY 2016-17 and provisional true-up for FY 2017-18 based on unaudited/provisional Accounts for FY 2017-18 submitted by CSLDC.

5.2 Annual Charges for SLDC

Regulation 74.1 of the CSERC MYT Regulations, 2015 specifies the components of Annual Charges for SLDC as under:

(a) Return on Equity;

(b) Interest on loan capital;

(c) Depreciation;

(d) Operation and Maintenance Expenses;

(e) Interest on Working Capital and;

(f) Contribution to Pension Fund.

5.3 Operation and Maintenance (O&M) expenses

CSLDC's Submission

CSLDC has considered the O&M expenses based on the segmental notes to the audited accounts for FY 2016-17 and provisional accounts for FY 2017-18. Separate accounts are not being prepared between CSPTCL and CSLDC and the asset transfer scheme between CSLDC and CSPTCL has not been yet notified. CSLDC has considered O&M expenses for FY 2016-17 and FY 2017-18, as shown in the Table below:

Table 5-1: O&M Expenses for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17	FY 2017-18
		Final	Provisional
1	Gross Employee Expenses including interim wage relief amount	7.54	8.51
2	Gross A&G Expenses	1.13	1.67
3	Gross R&M Expenses	1.32	0.61
4	**Total O&M Expenses**	**9.99**	**10.78**

Further, CSLDC submitted that provision of arrears of Rs. 22.93 crore, to be paid to employees on account of wage revision due from April 1, 2014 to March 31, 2017, has been made in the audited accounts for FY 2016-17 (for CSPTCL and CSLDC), which is being paid from FY 2017-18 onwards and requested the Commission to consider the same as per actuals in future years.

CSLDC submitted the details of sanctioned employee strength, current employee strength, and vacant positions for different class of employees, as on March 31, 2017 and March 31, 2018, as shown in the Table below:

Table 5-2: Employee strength at CSPTCL as on 31st March 2017 and 31st March 2018

Sr. No.	Particular	Sanctioned	Working		Vacant	
			As on 31st March 2017	As on 31st March 2018	As on 31st March 2017	As on 31st March 2018
CSPTCL						
1	Class I	131	105	108	26	23
2	Class II	235	159	147	76	89
3	Class III	1448	720	691	728	757
4	Class IV	1491	681	631	810	860
5	**Total**	3305	1665	1577	1640	1729
SLDC						
1	Class I	20	14	17	6	3
2	Class II	24	19	17	5	7
3	Class III	21	17	15	4	6
4	Class IV	8	3	5	5	3
5	**Total**	73	53	54	20	19
CSPTCL + SLDC						
1	Class I	151	119	125	32	266
2	Class II	259	178	164	81	96
3	Class III	1469	737	706	732	763
4	Class IV	1499	684	636	815	863
5	**Total**	3378	1718	1631	1660	1748

CSLDC submitted that the vacant positions will be filled in the near future and employee expenses will increase. The Wage Revision Committee has recommended that the pay scale needs to be revised when the Seventh Central Pay Commission recommendations are available and implemented by GOI for their employees. The salary structure has been recommended to be aligned to Central Govt. Pay scale from the date from which Central Govt. revises the pay scale of their employees including merger of DA with salary. CSLDC requested the Commission to allow the same when the effect takes place. CSLDC submitted the reasons for the increase in employee expenses as under:

(a) The increase in number of employees on account of creation of the Backup SLDC at Khedamara, Bhilai, Chhattisgarh

(b) The arrears payable due to wage revision w.e.f. 01.04.2014.

The capitalisation of O&M expenses has been considered as NIL for FY 2016-17 and FY 2017-18. CSLDC requested the Commission to approve the employee expenses (including interim wage relief amount) of Rs. 7.54 crore for FY 2016-17 and Rs. 8.51 crore for FY 2017-18.

Sharing of gain and losses on account of O&M Expenses

CSLDC submitted that as per the CSERC MYT Regulations, 2015 and the subsequent amendment, the Employee expenses have been considered based on actuals and have not been subjected to sharing of gains or losses. A&G expenses and R&M expenses have been subjected to sharing of gains/losses as per Regulation 47.5 of the CSERC MYT Regulations, 2015.

Accordingly, CSLDC has computed the normative A&G expenses and R&M expenses for FY 2016-17 by applying escalation factor of 1.73%, on approved expenses for base year, i.e., FY 2015-16. Similarly, normative A&G and R&M expenses for FY 2017-18 have been arrived at by applying the WPI escalation factor of 2.92% over the normative A&G and R&M expenses for FY 2016-17. The normative A&G expenses and R&M for FY 2016-17 and FY 2017-18 submitted by CSLDC are shown in the Table below:

Table 5-3: Normative A&G Expenses for FY 2016-17 and FY 2017-18 as submitted by CSLDC (Rs. crore)

Sr. No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Normative A&G (net of capitalisation)	1.08	1.10	1.13
2	Normative R&M (net of capitalisation)	1.58	1.61	1.65

The normative A&G expenses and R&M expenditure so arrived at have been considered for the purpose of gain/loss calculation for FY 2016-17 and for FY 2017-18, as shown in the table below.

Table 5-4: Sharing of gain/ (loss) on A&G expenses and R&M expenses for FY 2016-17 and FY 2017-18 as submitted by CSLDC (Rs. crore)

Sr. No.	Particular	FY 2016-17			FY 2017-18		
		Normative Expense	Actual	Gain/ (Loss)	Normative Expense	Provisional	Gain/ (Loss)
1	Net A&G expenses	1.10	1.13	(0.03)	1.13	1.67	(0.54)
2	Net R&M expenses	1.61	1.32	0.28	1.65	0.61	1.04
3	Total Gain/(Loss)			0.26			0.51
4	**CSLDC share (1/2 of Total Gain/(Loss))**			**0.13**			**0.25**

CSLDC submitted the gain/(loss) of Rs. 0.13 crore and Rs. 0.25 crore on account of sharing of normative A&G expenses and R&M expenses vis-à-vis actual expenses for true-up of ARR for FY 2016-17 and provisional true up of FY 2017-18, respectively.

In compliance with the Order dated 03.07.2018 issued by CERC in the matter of Petition No 11/TT/2018 that includes "Item: Asset-1: SCADA/EMS systems for Main and backup SLDC of Chhattisgarh (CSPTCL)" in determining its tariff, which shall be recovered by PGCIL in due course. CSLDC also requested to allow normative R&M expenses of Rs. 1.92 crore as per the Tariff Order dated 30.04.2016 in Petition No P. No. 04/2016(T) while determining the ARR of CSLDC for the Control Period from FY 2016-17-FY 2020-21.

Commission's View

Regulation 47.5 of the MYT Regulations, 2015 specifies the basis for computation of normative O&M expenses and the method of sharing the efficiency gains/losses vis-à-vis actual O&M expenses, as reproduced in the earlier Chapter.

The Commission, in the MYT Order, had approved O&M Expenses for the Control Period in accordance with the said Regulations, which specify that at the time of truing up, the O&M expenses shall be considered after taking into account the actual inflation over the approved O&M expenses of base-year/previous year. However, the Regulations do not require any modification in base-year's O&M expenses. But, CSLDC has deviated from the above principle and submitted their proposal by modifying the O&M expenses of the base year itself.

Accordingly, the Commission has computed the revised normative O&M expenses for FY 2016-17 by applying the actual inflation of FY 2016-17 over base-year's approved O&M expenses. For FY 2017-18, Commission has computed the revised normative O&M Expenses by applying the actual inflation for FY 2017-18 over revised normative O&M expenses for FY 2016-17. The Commission has considered the WPI and CPI as per MYT Regulations and, accordingly, computed escalation factor of 4.12% for employee expenses and 1.73% for R&M expenses and A&G Expenses for FY 2016-17. Similarly, the Commission has computed escalation factor of 3.08% for employee expenses and 2.92% for R&M expenses and A&G Expenses for FY 2017-18. Accordingly, the normative O&M Expenses approved for FY 2016-17 and FY 2017-18 are as shown in the Table below:

Table 5-5: Approved Normative O&M Expenses for FY 2016-17 and FY 2017-18

(Rs. crore)

Particulars	FY 2015-16	FY 2016-17		FY 2017-18	
	Base Year Normative Expenses	Approved in MYT Order	Revised Normative Expenses	Approved in MYT Order	Revised Normative Expenses
Employee Expenses	5.67	6.19	5.90	6.75	6.09
A&G Expenses	1.08	1.16	1.10	1.23	1.13
R&M Expenses	1.58	1.69	1.61	1.80	1.65
Grand total	**8.33**	**9.04**	**8.61**	**9.78**	**8.87**

The Commission has undertaken sharing of gains and losses of normative expenses vis-à-vis actual expenses for FY 2016-17 and FY 2017-18, as per CSERC MYT Regulations, 2015.

The Commission has considered actual O&M expenses for FY 2016-17 as per audited accounts and for FY 2017-18 as per provisional accounts and subsequent clarifications and reconciliations submitted by CSLDC.

As regards provision of arrears of Rs. 22.93 crore towards payment to employees on account of wage revision due from April 1, 2014 to March 31, 2017, made in the audited accounts, CSLDC clarified that only Rs. 0.47 crore pertains to CSLDC. However, CSLDC has not considered the said amount in its present Petition. The Commission shall consider the interim relief as and when such expenditure is incurred.

As regards the sharing of gains and losses, the following provision has been inserted in Regulation 13.1 by the First Amendment to the CSERC MYT Regulations, 2015 on June 16, 2017:

> *"Provided further that employee cost shall not be factored in for sharing of gains or losses on account of operations and maintenance expenses, … …"*

Accordingly, the Commission approves the Employee Expenses at actuals for FY 2016-17 and FY 2017-18. The sharing of gains and losses in A&G expenses and R&M expenses, computed for FY 2016-17 is shown in the following Table:

Table 5-6: Sharing of Gains and Losses in A&G expenses and R&M expenses for FY 2016-17 as approved by the Commission (Rs. crore)

Particulars	Revised normative O&M expenses	Actual based on audited Accounts	Gains/ (Losses)	Sharing of Gains/ (Losses) at 50:50	Net Entitlement of O&M Expenses
Employee Expenses	5.90	7.54	-	-	7.54
A&G Expenses	1.10	1.13	(0.03)	(0.01)	1.11
R&M Expenses	1.61	1.32	0.28	0.14	1.47
Total O&M expenses	**8.61**	**9.99**	**0.26**	**0.13**	**10.12**

Similarly, the sharing of gains and losses in A&G expenses and R&M expenses for FY 2017-18 is shown in the following Table:

Table 5-7: Sharing of Gains and Losses in A&G and R&M expenses for FY 2017-18 as provisionally approved by the Commission (Rs. crore)

Particulars	Revised normative O&M expenses	Actual based on audited Accounts	Gains/ (Losses)	Sharing of Gains/ (Losses) at 50:50	Net Entitlement of O&M Expenses
Employee Expenses	6.09	8.99	-	-	8.99
A&G Expenses	1.13	0.95	0.18	0.09	1.04
R&M Expenses	1.65	0.61	1.04	0.52	1.13
Total O&M expenses	**8.87**	**10.55**	**1.22**	**0.61**	**11.16**

In this Order, the Commission approves the O&M expenses based on audited accounts for FY 2016-17 and provisional accounts for FY 2017-18. The final approval of O&M Expenses for FY 2017-18 shall be accorded at time of truing up based on audited accounts for FY 2017-18.

5.4 Contribution to Pension and Gratuity Fund

CSLDC's Submission

CSLDC submitted that the Commission, in the MYT Order, had allowed Contribution to Pension and Gratuity (P&G) fund of Rs. 1.21 crore for FY 2016-17 and Rs. 1.32 crore for FY 2017-18. CSLDC has considered the same amount as actual contribution to pension and gratuity for FY 2016-17 and FY 2017-18 and requested the Commission to approve the same.

Commission's View

The Commission approves the Contribution to Pension and Gratuity Fund FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 5-8: Approved Contribution to P&G Fund for FY 2016-17 and FY 2017-18

(Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Contribution to Pension & Gratuity Fund	1.21	1.21	1.21	1.32	1.32	1.32

5.5 Gross Fixed Assets and Means of Finance

CSLDC has considered the opening GFA for FY 2016-17 same as the closing GFA approved in the true-up order for FY 2015-16. It has considered GFA addition of Rs. 74 Lakh as the actual capitalisation each in FY 2016-17 and FY 2017-18. As per Regulation 17 of the CSERC MYT Regulations, 2015, the normative debt: equity ratio of 70:30 has been considered for funding of the additional capitalisation for the year. The additional capitalisation has not been funded by any grants.

Commission's View

The Commission has approved the closing GFA for FY 2015-16 as Rs. 14.39 crore after True-up in the Order dated March 31, 2017. The Commission has accordingly considered the same amount as Opening GFA for FY 2016-17. The Commission notes that CSPTCL's audited accounts for FY 2016-17 and provisional accounts for FY 2017-18 indicate the capitalisation of Rs. 209.36 crore and Rs. 267.82 crore during the respective years. Out of this, an amount of Rs. 0.74 crore pertains to CSLDC for both years. The Commission has considered the actual capitalisation of

Rs. 0.74 crore each for FY 2016-17 and FY 2017-18, based on reconciliation submitted with audited and provisional accounts.

As regards the funding of capitalisation, the Commission has not considered any grants for FY 2016-17 and FY 2017-18. Further, normative Debt: Equity ratio of 70:30 has been considered as per Regulation 17 of the CSERC MYT Regulations, 2015. Accordingly, the Commission approves the GFA and its funding for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 5-9: Approved Gross Fixed Assets and its Funding for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Approved	Petition	Approved
1	GFA Addition	0.74	0.74	0.74	0.74
	Means of Finance				
2	Consumer Contribution	-	-	-	-
3	Equity	0.22	0.22	0.22	0.22
4	Debt	0.52	0.52	0.52	0.52
5	**Total Capitalisation**	**0.74**	**0.74**	**0.74**	**0.74**

5.6 Depreciation

CSLDC's Submission

CSLDC submitted that its asset base comprises of SCADA system, computer terminals, equipment, building, etc. The closing GFA of Rs. 14.39 crore as approved in the true-up Order for FY 2015-16 is considered as the opening GFA for FY 2016-17. The asset base has been identified from the accounts of CSPTCL by Asset Segregation Ccommittee and the same has been considered in its computations. As the asset class-wise segregation of the CSLDC's asset base is not available, the weighted average depreciation rate considered for CSPTCL has been considered for CSLDC. Regulation 24.5 of CSERC MYT Regulations, 2015 specifies that till CSLDC is part of CSPTCL, the depreciation shall be calculated as applicable for CSPTCL. Since, CSLDC is not operating as a separate Company, the depreciation as applicable to CSPTCL has been considered. CSLDC requested the Commission to approve depreciation of Rs. 0.78 crore for FY 2016-17 and Rs. 0.81 crore for FY 2017-18.

Commission's View

The Commission has approved the depreciation for FY 2016-17 and FY 2017-18 in accordance with the approach adopted in the past Orders. The closing GFA approved in the true up for FY 2015-16, has been considered as the opening GFA for FY 2016-17. The GFA addition for FY 2016-17 and FY 2017-18 has been considered as approved earlier in this Chapter. The consumer contribution in GFA addition for FY 2016-17 and FY 2017-18 has been considered as Nil. The weighted average depreciation rate of 5.26%, computed for CSPTCL on the basis of deprecation rates specified in the CSERC MYT Regulations, 2015, has been considered for FY 2016-17 and FY 2017-18. The depreciation approved by the Commission for FY 2016-17 and FY 2017-18 is shown in the Table below:

Table 5-10: Approved Depreciation for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Opening GFA	16.58	14.39	14.39	19.23	15.13	15.13
2	Add: Additional capitalization during the year	2.65	0.74	0.74	1.95	0.74	0.74
3	GFA at the end of the year	19.23	15.13	15.13	21.18	15.87	15.87
4	Average GFA for the year	17.91	14.76	14.76	20.21	15.50	15.50
5	Depreciation Rate	5.25%	5.26%	5.26%	5.25%	5.26%	5.26%
6	**Depreciation**	**0.94**	**0.78**	**0.78**	**1.06**	**0.81**	**0.81**

5.7 Interest on Loan

CSLDC's Submission

CSLDC has calculated Interest and Finance Charges as per Regulation 23 of the CSERC MYT Regulations, 2015. CSLDC is not operating as a separate Company and, therefore, the actual loan as applicable to CSPTCL has been considered. CSLDC has considered the approved closing normative loan balance for FY 2015-16 as per the true-up Order, as the opening normative loan balance for FY 2016-17. The debt component of 70% of the GFA addition has been considered as the normative loan addition during the year for respective years. The allowable depreciation for the year has been considered as the normative repayment for the year. The rate of interest has been computed in accordance with Regulation 23.5. The actual weighted average interest rate of 10.95% for FY 2016-17 and 9.86% for FY 2017-18 has been considered by CSLDC for computation of the interest on loan. CSLDC requested the Commission to approve the Interest and Finance Charges of Rs. 0.46 crore for FY 2016-17 and Rs. 0.39 crore for FY 2017-18.

Commission's View

The Commission has approved interest on loan capital for FY 2016-17 as per Regulation 23 of the CSERC MYT Regulations, 2015. The Commission has considered the closing net normative loan balance for FY 2015-16, as approved after True-up, as the opening net normative loan balance for FY 2016-17. The addition of normative loan has been considered based on debt component towards additional capitalisation, as considered earlier in this Chapter. The repayment has been considered equal to net depreciation approved by the Commission in this Order for the respective years.

For computation of weighted average rate of interest, the Commission has considered the applicable rate of interest on the outstanding loan portfolio of CSPTCL at the beginning of the financial year as per the audited accounts of FY 2016-17 and provisional accounts of FY 2017-18, in absence of segregation of actual loan for CSLDC. However, the Commission notes that CSLDC, for computing applicable rate of interest, has considered the weighted average rate of interest on the actual loan during the year. However, Regulation 23.5 of the CSERC MYT Regulations, 2015 specifies the rate of interest based on actual loan portfolio at the beginning of the year. Accordingly, the Commission has computed the weighted average rate of interest of 11.13% for FY 2016-17 and 10.06% for FY 2017-18. The interest on loan approved for FY 2016-17 and FY 2017-18 is shown in the Table below:

Table 5-11: Approved Interest on Loan for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Total Opening Net Loan	5.72	4.34	4.34	6.63	4.08	4.08
2	Repayment during the period	0.94	0.78	0.78	1.06	0.81	0.81
3	Additional Capitalization of Borrowed Loan during the year	1.86	0.52	0.52	1.37	0.52	0.52
4	Total Closing Net Loan	6.63	4.08	4.08	6.93	3.78	3.78
5	Average Loan during the year	6.18	4.21	4.21	6.78	3.93	3.93
6	Weighted Average Interest Rate	12.20%	10.95%	11.13%	12.20%	9.86%	10.06%
7	**Interest Expenses**	**0.75**	**0.46**	**0.47**	**0.83**	**0.39**	**0.40**

5.8 Return on Equity (RoE) and Income Tax

CSLDC's Submission

CSLDC has computed Return on Equity (RoE) as per the Regulation 22 of the CSERC MYT Regulations, 2015. The closing equity balance of FY 2015-16, as approved in the true-up Order, has been considered as the opening equity balance for true-up of FY 2016-17. The equity addition during FY 2016-17 and FY 2017-18 has been considered as 30% of the capitalisation during the year for respective years. CSLDC has considered base rate of RoE of 15.50% (without grossing up by MAT rate). Since, CSLDC has not paid any Income Tax during FY 2016-17, no Tax has been considered for the year. CSLDC requested to approve RoE of Rs. 0.74 crore for FY 2016-17 and Rs. 0.78 crore for FY 2017-18.

Commission's View

Regulation 22 of the CSERC MYT Regulations, 2015 specifies that RoE shall be computed by grossing up the base rate with the prevailing MAT rate of the base year for projection purposes. The Commission notes that CSLDC has not paid any Income Tax separately, hence, rate of return of RoE has not been grossed up with the prevailing MAT rate. Accordingly, the Commission has approved RoE at rate of 15.50% as per Regulation 22 of the CSERC MYT Regulations, 2015.

For computation of RoE, the Commission has considered the closing equity as approved for FY 2015-16 after True-up, as opening equity for FY 2016-17. The equity addition for FY 2016-17 and FY 2017-18 has been considered based on the actual capitalisation as approved earlier in this Order. The Commission approves the RoE for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 5-12: Approved Return on Equity for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Permissible Equity in Opening GFA	5.37	4.68	4.68	6.17	4.90	4.90
2	Addition of Permissible Equity during the year	0.80	0.22	0.22	0.58	0.22	0.22
3	Permissible Equity in Closing GFA	6.17	4.90	4.90	6.75	5.12	5.12
4	Average Gross Permissible Equity during the year	5.77	4.79	4.79	6.46	5.01	5.01
5	Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
6	**Return on Equity**	**0.89**	**0.74**	**0.74**	**1.00**	**0.78**	**0.78**

5.9 Interest on Working Capital (IoWC)

CSLDC's Submission

CSLDC has considered IoWC as per Regulation 25 of the CSERC MYT Regulations, 2015. CSLDC has considered the interest rate of 12.80% for FY 2016-17 and 12.60% for FY 2017-18, being SBI Base Rate of April 1, plus 350 basis points, for computing the IoWC for both FY 2016-17 and FY 2017-18, respectively. CSLDC requested the Commission to approve IoWC of Rs. 0.31 crore for FY 2016-17 and 0.26 crore for FY 2017-18.

Commission's View

The Commission has computed IoWC in accordance with Regulation 25 of the CSERC MYT Regulations, 2015. For computation of working capital requirement as per the formula specified in the CSERC MYT Regulations, 2015, the Commission has considered the revised normative value of O&M expenses for FY 2016-17 and FY 2017-18, as approved earlier in this Order. Further, the receivables have been considered based on the actual revenue of CSLDC during FY 2016-17 and FY 2017-18. The interest rate of 12.80% and 12.60% has been considered for FY 2016-17 and FY 2017-17, respectively, as per Regulation 25.4 of the MYT Regulations, 2015. The normative IoWC approved for FY 2016-17 and FY 2017-18 is shown in the Table below:

Table 5-13: Approved IoWC for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	O&M expenses for One Month	0.78	0.83	0.72	0.84	0.90	0.74
2	Maintenance Spares @ 40% of R&M Expenses	0.67	0.53	0.64	0.72	0.24	0.66
3	Receivables @ 1 Month	1.03	1.05	1.05	1.14	0.91	0.91
4	**Total Working Capital requirement**	**2.48**	**2.41**	**2.41**	**2.70**	**2.06**	**2.31**
5	Less: Security Deposit from Transmission Users	-	-	-	-	-	-
6	**Net Working Capital Requirement**	**2.48**	**2.41**	**2.41**	**2.70**	**2.06**	**2.31**
7	Rate of Interest on WC	13.20 %	12.80%	12.80%	13.20%	12.60%	12.60%
8	**Net Interest on Working Capital**	**0.33**	**0.31**	**0.31**	**0.36**	**0.26**	**0.29**

5.10 Non-Tariff Income

CSLDC's Submission

CSLDC submitted the actual Non-Tariff income (NTI) of Rs. 1.13 crore for FY 2016-17 and Rs. 1.14 crore for FY 2017-18.

Commission's View

The Commission has considered NTI for CSLDC as per segmental notes of audited accounts of FY 2016-17 and provisional accounts of FY 2017-18. Accordingly, the Commission considers NTI of Rs. 1.13 crore for FY 2016-17 and Rs. 1.14 crore for FY 2017-18, which is the same value as submitted by CSLDC.

5.11 Aggregate Revenue Requirement (CSLDC Annual Charges)

Based on the above, the ARR approved for CSLDC for final truing-up for FY 2016-17 and provisional truing-up for FY 2017-18 is shown in the Table below:

Table 5-14: Approved Aggregate Revenue Requirement (ARR) for FY 2016-17 and FY 2017-18 (Rs. crore)

Sr. No.	Particulars	FY 2016-17			FY 2017-18		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
1	Employee Expense	6.19	7.54	7.54	6.75	8.51	8.99
2	A&G Expenses	1.16	1.13	1.13	1.23	1.67	0.95
3	R&M Expenses	1.69	1.32	1.32	1.80	0.61	0.61
4	Provision for Interim Wage Relief Impact	0.31	-	-	0.34	-	-
5	Sharing of Gain/(Loss) for O&M Efficiency	0.00	0.13	0.13	-	0.25	0.61
6	Contribution to P&G	1.21	1.21	1.21	1.32	1.32	1.32
7	Depreciation	0.94	0.78	0.78	1.06	0.81	0.81
8	Interest on Loan	0.75	0.46	0.47	0.83	0.39	0.40
9	Interest on Working Capital	0.33	0.31	0.31	0.36	0.26	0.29
10	Return on Equity	0.89	0.74	0.74	1.00	0.78	0.78
11	**Gross Aggregate Revenue Requirement**	**13.48**	**13.61**	**13.62**	**14.69**	**14.60**	**14.76**
12	Less: Non-Tariff Income	1.05	1.13	1.13	1.05	1.14	1.14
13	**Net Aggregate Revenue Requirement**	**12.41**	**12.49**	**12.49**	**13.64**	**13.45**	**13.62**

5.12 Revenue from CSLDC Charges

CSLDC's Submission

CSLDC submitted the revenue from CSLDC charges of Rs. 12.61 crore for FY 2016-17 and Rs.10.96 crore for FY 2017-18 based on the audited and provisional accounts, respectively. CSLDC requested to approve the same as revenue from SLDC charges for respective years.

Commission's View

The Commission has considered the revenue from CSLDC Charges of Rs. 12.61 crore for FY 2016-17 and Rs.10.96 crore for FY 2017-18 as submitted by CSLDC, after due verification with the audited and provisional accounts for those years.

5.13 Revenue Gap/(Surplus) for CSLDC

CSLDC's Submission

CSLDC submitted the Revenue Gap/(Surplus) for FY 2016-17, as shown in the following Table:

Table 5-15: Revenue Gap / (Surplus) for FY 2016-17 submitted by CSLDC (Rs. crore)

Sr. No.	Particulars	FY 2016-17
		True-up
1	Annual Revenue Requirement	12.49
2	*Less:* Revenue from SLDC Charges	12.61
3	Standalone Revenue Gap / (Surplus)	(0.13)
4	Past Gap / (Surplus)	0.54
5	Total Revenue Gap / (Surplus)	0.41

CSLDC submitted that the cumulative Revenue Gap works out to Rs. 0.41 crore. CSLDC further submitted that the Commission had approved Revenue Surplus of Rs. 0.94 crore during provisional true-up of ARR for FY 2016-17, which along with the carrying cost was adjusted in the tariff for FY 2018-19. The differential Revenue Gap of Rs. (0.46 + 0.94) = Rs. 1.21 crore, along with carrying cost for applicable period is to be adjusted in the revenue requirement of CSPDCL for FY 2019-20.

Further, CSLDC submitted the standalone Revenue Gap/(Surplus) for FY 2017-18 as shown in the following Table:

Table 5-16: Revenue Gap / (Surplus) for FY 2017-18 submitted by CSLDC (Rs. crore)

Sr. No.	Particulars	FY 2017-18
		Provisional
1	Aggregate Revenue Requirement	13.45
2	Less: Revenue from SLDC Charges	10.96
3	Standalone Revenue Gap/(Surplus)	2.50

The revenue deficit of Rs. 2.50 crore for FY 2017-18 with carrying cost for applicable period is to be adjusted in the revenue requirement of CSPDCL for FY 2019-20.

Commission's View

After undertaking the final true-up for FY 2016-17, the Commission has computed the Revenue Gap/(Surplus) for FY 2016-17, as shown in the following Table:

Table 5-17: Approved Revenue Gap/(Surplus) for FY 2016-17 for CSLDC (Rs. crore)

Sr. No.	Particulars	Petition	Approved
1	Annual Revenue Requirement	12.49	12.49
2	Less: Revenue from SLDC Charges	12.61	12.61
3	Standalone Revenue Gap / (Surplus)	(0.13)	(0.12)
4	Past Gap / (Surplus)	0.54	0.54
5	Total Revenue Gap / (Surplus)	0.41	0.42
6	Revenue Gap/(Surplus) approved in provisional True up		(0.94)
7	Incremental Revenue Gap / (Surplus)		1.36

The Commission has approved the total Revenue Gap of Rs. 0.42 crore after true-up for FY 2016-17, as against the Revenue Gap of Rs. 0.41 crore claimed by CSLDC. After considering the surplus of Rs. 0.94 crore approved at the time of provisional truing up of FY 2016-17, the incremental Revenue Gap for FY 2016-17 works out to Rs. 1.36 crore.

Further, after undertaking the provisional true-up for FY 2017-18, the Commission has computed the Revenue Gap/(Surplus) for CSLDC as shown in the Table below:

Table 5-18: Approved **Revenue Gap/(Surplus) for FY 2017-18 for CSLDC**

(Rs. crore)

Sr. No.	Particulars	Petition	Approved
1	Annual Revenue Requirement	13.45	13.62
2	Less: Revenue from SLDC Charges	10.96	10.96
3	Standalone Revenue Gap / (Surplus)	2.50	2.66
4	Past Gap / (Surplus)	-	-
5	**Total Revenue Gap / (Surplus)**	**2.50**	**2.66**

The Commission hereby approves the Revenue Gap of Rs. 2.66 crore after provisional true-up for FY 2017-18.

The Commission has considered the approved Revenue Gap for FY 2016-17 and FY 2017-18, along with the applicable carrying cost, in the ARR of CSPDCL for FY 2019-20. The carrying cost on the incremental Revenue Gap for FY 2016-17 has been computed for three years, i.e., from mid-point of FY 2016-17 to mid-point of FY 2019-20. Further, the carrying cost on the Revenue Gap for FY 2017-18 has been computed for two years, i.e., from mid-point of FY 2017-18 to mid-point of FY 2019-20. Accordingly, the Revenue Gap, including carrying cost, which is required to be factored in the revenue requirement of CSPDCL for FY 2019-20 works out to Rs. 5.33crore.

The Commission approves the cumulative Revenue Gap of Rs. 5.33crore for CSLDC on account of true-up for FY 2016-17 and provisional true-up for FY 2017-18. The same Revenue Gap has been adjusted in revenue requirement of CSPDCL for FY 2019-20, as discussed in subsequent Chapter of this Order.

6 FINAL TRUE-UP OF FY 2016-17 AND PROVISIONAL TRUE-UP OF FY 2017-18 FOR CSPDCL

6.1 Background

CSPDCL has filed Petition for final True-up of FY 2016-17 and provisional True-up of FY 2017-18 in accordance with Regulation 10.2 and 10.3 of the CSERC MYT Regulations, 2015 specified as under:

> *"10.2 ....The Distribution Licensee shall file an application for truing up of the previous year(s) and determination of tariff for the ensuing year, within the time limit specified in these Regulations.*
>
> *... ....*
>
> *10.3. In case the audited accounts are not available, the provisional truing up shall be done on the basis of un-audited/ provisional account and shall be subject to further final truing up, as soon as the audited accounts is available."*

As regards the status of finalisation of audited accounts for FY 2017-18, it has been understood from CSPDCL's submission that Statutory Auditor has been appointed and the process of audit is underway. As the process involves issuance of AG certificate as well as Board of Director's approval post completion of audit, the whole process cannot be completed during the proceedings of this Petition.

In accordance with the above, the Commission has undertaken the final true-up for FY 2016-17 and provisional true-up for FY 2017-18. The final true-up for FY 2017-18 based on audited accounts shall be undertaken in the next Tariff Petition, provided that CSPDCL files the true-up Petition for FY 2017-18 based on audited accounts.

In this Chapter, the Commission has analysed all the elements of audited/actual expenditure and revenue of CSPDCL for FY 2016-17 and FY 2017-18 and undertaken final and provisional true-up of expenses and revenue in accordance with Regulation 10 of CSERC MYT Regulations, 2015. Further, the Commission has also considered the approval made by this Commission during provisional true-up of FY 2016-17, while deciding on the final true-up of FY 2016-17.

The Commission has approved the sharing of gains and losses on account of controllable factors between CSPDCL and consumers, in accordance with Regulation 13 of the CSERC MYT Regulations, 2015.

6.2 Energy Sales

CSPDCL's Submission

CSPDCL submitted that it had 47,40,542 consumers at LV level and 2,613 consumers at HV and EHV level during FY 2016-17. In FY 2017-18, the number consumer of LV and EHV/HV categories increased to 49,87,761 and 2,769 respectively. The Commission in MYT Order had merged HV and EHV categories into supply at HV level effective from 1st April 2016. CSPDCL submitted that the connected load recorded during FY 2016-17 was 5,180.33 MW at LV level and 2,694.35 MW at EHV & HV level. Similarly, the connected load was 5,399.69 MW for LV and 2,825.51 MW for EHV and HV level during FY 2017-18. The category-wise energy sales were recorded as 19,162.51 MU for FY 2016-17 and 20,362.53 MU for FY 2017-18.

Commission's View

The Commission sought actual category-wise sales in kWh for all LV consumers and category wise sales in kVAh for all HV consumers. The details of slab-wise consumption within domestic categories were also sought for FY 2016-17 and FY 2017-18. CSPDCL submitted R-15 sheet for FY 2016-17 and FY 2017-18. The Commission also sought voltage-wise break up for HV and EHV sales for both the years.

During the provisional true-up for FY 2016-17, the Commission noted that for agriculture category, billing was done on assessment basis. Hence, the Commission in the present Petition sought details of defective meters, number of bills raised on assessment basis and category-wise assessed sales.

As regards the defective meters, the Commission observes that 4% of the total meters are found defective for all categories during FY 2016-17 and FY 2017-18, as shown in the table below:

Table 6-1: No of defective meters for FY 2016-17 and FY 2017-18

Sr. No.	Category	FY 2016-17			FY 2017-18		
		No. of Consumers	Defective Meters	%	No. of Consumers	Defective Meters	%
1	BPL	1,540,627	67,415	4.4%	1,599,230	64,372	4.0%
2	DLF	2,335,093	89,025	3.8%	2,491,170	99,881	4.0%
3	NDLF	298,633	5,595	1.9%	312,551	6,657	2.1%
4	Agriculture	385,295	25,012	6.5%	400,990	27,263	6.8%

Sr. No.	Category	FY 2016-17			FY 2017-18		
		No. of Consumers	Defective Meters	%	No. of Consumers	Defective Meters	%
5	Agriculture Allied	2,254	37	1.6%	1,997	40	2.0%
6	Industries	32,133	274	0.9%	32,808	325	1.0%
7	Street Light	6,145	422	6.9%	6,586	535	8.1%
8	Water Works	19,815	543	2.7%	23,091	686	3.0%
9	Info. Tech. Industries	-	-		-	-	
10	Temporary Connections	120,547	1,871	1.6%	119,337	1,907	1.6%
11	**Total**	4,740,542	190,194	4.0%	4,987,760	201,666	4.0%

It is observed that defective meters amongst domestic consumers is pretty high and constitute around 82% and 81% of total defective meters for FY 2016-17 and FY 2017-18, respectively. Similarly, agriculture category constitutes 13.2% and 13.5% of total defective meters for respective years.

Within domestic category 3.8% and4% were defective in FY 2016-17 and FY 2017-18. Similarly, in agriculture category 6.5% and 6.8% were defective, and for street light 6.9% and 8.1% were defective for respective years. As regards the assessed billing, the Commission observes as under:

(a) During FY 2016-17, approximately 30% of the total sales are based assessed billing, which amounts to assessed units of 3892.33 MU. The corresponding figures for FY 2017-18 are 22% and 3907.53 MU, respectively. Thus, the number of assessed units increased in FY 2017-18, which is a matter of concern.

(b) Out of total assessed units, 2612.67 MU in FY 2016-17 and 2748.97 MU in FY 2017-18 relates to Agriculture category. Thus, assessed billing in agriculture category is as high as 61% in FY 2016-17 and 57% in FY 2017-18, which is indicative of poor billing practices.

(c) Apart from Agriculture, assessed billing is also commonly prevalent in Domestic BPL category, i.e., 829.90 MU in FY 2016-17 and 723.79 MU in FY 2017-18. In this sub-category, 71% of billing in FY 2016-17 and 67% in FY 2017-18 was done on assessment basis.

(d) The concentration of assessed billing is observed mainly in 4 circles, namely, Baloda bazar, Rajnandgaon, Kawardha and Kanker Circle, withmore than 50% of sales on the basis assessed billing. Besides, in Raipur O&M, Mahasamund, Durg and Bilaspur Circle, the assessed billing is more than 40%, whereas, in Raipur City Circle I & II, Durg City, Bilaspur City and Raigarh Circle, the assessed billing was found to be less than 5%. This is indicative of wide variation in billing practices by CSPDCL from circle to circle, which needs to be corrected.

Further, the Commission observed that Average Billing Rate (ABR) computed from R-15 is much lower than the approved ABR for both the years, across all categories. In response, CSPDCL submitted that ABR is reduced due to reduction in sales and revenue as compared to approved ABR in respective Tariff Orders. Further, CSPDCL has clarified that energy sales consumption and revenue shown against each slab in R-15,being non-telescopic in nature, the per unit rate did not match with rate approved by the Commission for each slab. The Commission analysed sales and revenue data in R-15 for Domestic category and accepts the submission of the CSPDCL.

Agriculture Consumption

After analysing the submission made by CSPDCL, it was observed that Agriculture metered category recorded a load factor of 42% in FY 2016-17 and 46% in FY 2017-18, which translates to average running of 10 to 11 hours per day throughout the year. This is unreasonably high, considering the nature of power consumption in this sector. Similarly, as discussed above, 61% of the billing was done on assessment basis during FY 2016-17, including readings from defective meters. The Commission sought justification from CSPDCL for billing on assessment basis for such large quantum, to which CSPDCL did not respond.

Further, the Commission observes that the actual ABR realised for Agriculture category is much lower than the approved ABR. With regards to the sales and average energy charges billed to agricultural consumers during FY 2016-17 and FY 2017-18, CSPDCL submitted that the variation in the actual ABR and approved ABR is because of implementation of Government of Chhattisgarh notification on flat rate tariff. The following are the details submitted by CSPDCL:

Table 6-2: Sales and Energy Charge for Agriculture Consumers for FY 2016-17 and FY 2017-18 as submitted by CSPDCL

Consumer Category	Nos. of Consumer	Units Sold	Energy Charge Billed	Average Energy Charge	Approved Energy Charge
	Nos.	MU	Rs. crore	Rs. /kWh	Rs. /kWh
FY 2016-17					
A-Metered KJJY	*2,83,339*	*2,602.53*	*1,057.54*	*4.06*	*4.10*
B-Flat rate KJJY	*1,01,956*	*1,151.16*	*242.33*	*2.11*	*4.10*
Total	3,85,295	3,753.69	1,299.88	3.46	4.10
Difference in Energy Charge Recovery					0.64
FY 2017-18					
A-Metered KJJY	*2,81,279*	*2,662.36*	*1,264.13*	*4.75*	*4.80*
B-Flat rate KJJY	*1,19,711*	*1,537.26*	*400.45*	*2.60*	*4.80*
Total	4,00,990	4,199.62	1,664.58	3.96	4.80
Difference in Energy Charge Recovery					0.84

From the above table, it is observed that there is difference in energy charge recovery of Rs. 0.64/kWh for FY 2016-17 and Rs. 0.84/kWh for FY 2017-18, which amounts to under-recovery of Rs. 239.14 crore for FY 2016-17 and Rs. 351.24 crore for FY 2017-18.

In light of foregoing, the Commission is of the view that CSPDCL is bound to levy the tariff approved by the Commission in its respective Tariff Order for all categories including Agriculture consumers. Any form of subsidy given by the State Government is a relief to that category of consumers and therefore part of the approved tariff is to be recovered in the form of subsidy from the Government and the balance part is to be levied to consumers of that category. Overall CSPDCL is liable to recover the tariff approved by Commission (partly from consumers and partly from State Government).

The Commission is of the view that recovery of revenue as per approved tariff is the responsibility of CSPDCL, either from GoCG through subsidy or from agricultural consumers through energy charges. Therefore, Commission does not find any reason for reduction in energy charge recovery due to introduction of subsidy to flat rate consumers. Accordingly, the Commission has considered an additional revenue while true-up ARR for FY 2016-17 and FY 2017-18.

The difference of 64 paisa/kWh for FY 2016-17 and 84 paisa/kWh for FY 2017-18 translates into a lower realisation of Rs. 239.14Crore and Rs. 351.24 crore, respectively. In other words, had CSPDCL billed Agriculture-metered category at Rs.4.10/kWh and 4.80/kWh as approved for FY 2016-17 and FY 2017-18, the energy charge realization would have been Rs. 1539.02 crore for FY 2016-17 and Rs. 2015.82 crore for FY 2017-18 as against the actual energy charge realization of Rs. 1299.88 crore and 1664.58 crore respectively. The Commission has, hence, considered this amount of Rs. 239.14 crore for FY 2016-17 and Rs. 351.24 crore for FY 2017-18 as additional revenue while approving final and provisional true-up for respective years.

Further, number of consumers in LV Non-Domestic category, i.e., 2.97 lakh in FY 2016-17 and 3.11 lakh for FY 2017-18, appears to be unrealistically low. As per rough estimates, Raipur city alone has approximately 1 lakh LV Non-Domestic connections. It appears that a major portion of such consumers are not being billed under Non-Domestic category, which is resulting in loss of revenue for CSPDCL. Accordingly, the Commission directs CSPDCL to undertake a study to reconcile the number of its LV-Non-Domestic consumers with number of commercial establishments registered with various Municipal Corporations in Chhattisgarh, and cover all such consumers in relevant category. Further, CSPDCL should also furnish the reasons for such mismatch.

Further, Regulation11.1 of the CSERC MYT Regulations, 2015 specifies sales mix and quantum of sales as an uncontrollable factor. The Commission therefore approves the energy sales submitted by CSPDCL in its Petition for final True-up of FY 2016-17 and provisional True-up of FY 2017-18.

The consumer category-wise sales for FY 2016-17 estimated in MYT Order/ARR Order, actuals sales submitted by CSPDCL and Trued-up sales approved in this Order are shown in the Table below:

Table 6-3: Approved Energy Sales for FY 2016-17(MU)

Consumer Category	MYT Order	Petition	Approved
LV Categories (A)	**11,226.64**	**10,797.03**	**10,797.03**
Domestic Including BPL Consumers	5,336.04	4,722.00	4,722.00
Non-Domestic (Normal Tariff)	891.93	828.27	828.27
Non-Domestic (Demand Based)	33.74	33.97	33.97
Agriculture	3,579.83	3,753.69	3,753.69

Consumer Category	MYT Order	Petition	Approved
Agriculture allied	16.87	17.54	17.54
LT Industry	489.91	518.04	518.04
Public Utilities	287.36	316.23	316.23
IT Industry	-	-	-
Temporary	590.96	607.29	607.29
HV Categories (B)	**8,604.71**	**8,365.49**	**8,365.49**
Railway Traction	899.74	902.80	902.80
Mines (Coal & Others)	552.40	625.20	625.20
Other Industry & General Purpose Non-Industrial	2,514.32	2,207.77	2,207.77
Steel Industries	4,222.39	4,102.53	4,102.53
Low load factor Industries	72.55	105.04	105.04
PWW, Irrigation & Agriculture allied activities	66.88	113.26	113.26
Residential Purpose	239.92	183.68	183.68
Start-up Power Tariff	35.35	119.42	119.42
Industries related to manufacturing of equipment for power generation from RE sources	1.16	2.05	2.05
IT Industries	-	-	-
Temporary	-	3.74	3.74
Grand Total (A+B)	**19,831.35**	**19,162.52**	**19,162.52**

Also, the consumer category-wise sales for FY 2017-18 estimated in MYT Order/ARR Order, actuals sales submitted by CSPDCL and Trued-up sales approved in this Order are shown in the Table below:

Table 6-4: Approved Energy Sales for FY 2017-18 (MU)

Consumer Category	Tariff Order	Petition	Approved
LV Categories (A)	**12,358.78**	**11,494.55**	**11,494.55**
Domestic Including BPL Consumers	5,838.33	4,800.03	4,800.03
Non-Domestic (Normal Tariff)	990.70	855.08	855.08
Non-Domestic (Demand Based)	55.02	41.64	41.64
Agriculture Metered	3,954.17	4,199.62	4,199.62
Agriculture allied	19.87	17.87	17.87
LT Industry	533.525	524.80	524.80

Consumer Category	Tariff Order	Petition	Approved
Public Utilities	324.07	353.16	353.16
IT Industry	-	-	-
Temporary	643.11	702.35	702.35
HV Categories (B)	**8,956.11**	**8,867.98**	**8,867.98**
Railway Traction	925.64	925.43	925.43
Mines (Coal & Others)	698.39	616.66	616.66
Other Industry & General Purpose Non-Industrial	2,287.52	2,150.12	2150.12
Steel Industries	4,566.76	4,837.17	4837.17
Low load factor Industries	107.15	-	-
PWW, Irrigation & Agriculture allied activities	119.45	126.42	126.42
Residential Purpose	194.44	191.00	191.00
Start-up Power Tariff	49.35	19.94	19.94
Industries related to manufacturing of equipment for power generation from RE sources	1.89	1.24	1.24
IT Industries	-	-	-
Temporary	5.52	-	-
Grand Total (A+B)	**21,314.89**	**20,362.53**	**20,362.53**

It is mandatory under the Electricity Act, 2003, to ensure the supply of electricity through installation of a meter only. Further, the CSERC (Standard of Performance in Distribution of Electricity) Regulations, 2006 prescribes the ceiling for defective meters at 2.5% of total meters and Chhattisgarh State Electricity Supply Code, 2011, as amended from time to time, restricts the period for average billing for maximum two months. In light of foregoing, the Commission is of view that prevalent billing practices are in contradiction of the Electricity Act, 2003 and Regulations. It is pertinent to note that the existing SAP software captures data regarding defective meters, assessed billing, etc., on a monthly basis and the same is readily available with the field level officers of CSPDCL. It appears that such critical data sets are not being put to effective use to take corrective action in the interest of consumers, whereas the towards installation of SAP has already been passed on to the consumers in preceding Tariff Orders.

The Commission directs CSPDCL to prepare an action plan and take corrective measures to bring down percentage of defective meters and assessment-based billing within prescribed ceiling.

6.3 Distribution Loss and Energy Balance

CSPDCL's Submission

CSPDCL submitted that the energy losses for 33 kV and below system has been computed based on Regulation 71.1 and 71.2 of the CSERC MYT Regulations, 2015 as shown below:

"71.1 The energy loss for 33 kV and below voltage level, shall be evaluated taking into consideration the clause 4.2.5 and 8.4.3 of the State Grid Code 2011. The difference between the energy injected at 33 kV voltage level and the sum of energy sold to all consumers (retail and open access), at voltage level 33 kV and below shall be the energy loss for the 33 kV and below system. The same shall be considered for gain/loss at the time of true up.

71.2. Energy sold shall be the sum of the metered sales and assessed unmetered sales, if any, based on prudence check by the Commission."

In view of the above said provisions, CSPDCL submitted the Distribution Loss and Energy Balance for FY 2016-17 and FY 2017-18 as shown in the following Table:

Table 6-5: Energy Balance for FY 2016-17 and FY 2017-18 as submitted by CSPDCL (MU)

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Provisional True-up	Petition	Tariff Order	Petition
1	LV Sales	10,797.02	10,797.02	12,358.78	11,494.45
2	HV Sales	5,830.22	5,710.72	6,493.56	6,260.57
3	Total Below EHV Level	16,627.24	16,507.74	18,852.34	17,755.02
4	**Distribution Loss below 33 kV (in %)**	**20.35%**	**20.92%**	**21.00%**	**20.16%**
5	Distribution Loss below 33 kV (in MU)	4,248.18	4,367.36	5,011.38	4,483.68
6	Gross Energy requirement at 33 kV Level	20,875.39	20,875.10	23,863.72	22,238.70
7	*Less:* Direct Input to distribution at 33 kV Level	257.15	257.15	177.91	217.80
8	Net Energy Input required at Distribution Periphery at 33 kV Level	20,618.24	20,617.95	23,685.81	22,020.90
9	Sales to EHV consumers	2,535.27	2,654.77	2,462.56	2,556.19
10	Net energy requirement at Distribution periphery	23,410.65	23,272.72	26,148.37	24,577.09
11	**Distribution loss including EHV Sales**	**18.15%**	**18.56%**	**19.04%**	**18.08%**

Incentive for over-achievement of distribution loss

CSPDCL submitted that CSERC MYT Regulations, 2015 mandates the monitoring of energy losses of 33 kV and below system, where is it is specified that:

> *"71.3. Energy Loss trajectory for 33 KV and below system for State utility for each year of the control period shall be as under*
>
> *FY 2016-17 - 22.0%*
>
> *FY 2017-18 - 21.0%*
>
> *FY 2018-19 - 20.0%*
>
> *FY 2019-20 - 19.0%*
>
> *FY 2020-21 - 18.0%*
>
> *For other distribution licensees, the trajectory shall be given in the respective tariff order.*

However, in the 1st Amendment to the CSERC MYT Regulations notified on 16th June 2017, the following proviso was added in Clause 71.3:

> *Provided that if the State utility enters into any agreement with Government of India and/or Chhattisgarh Government and energy loss trajectory committed in this agreement is contrary to that as specified in this Regulations, the energy loss trajectory agreed under the agreement shall prevail over the energy loss specified in this Regulations."*

CSPDCL submitted that it has signed a tri-partite Memorandum of Understanding (MoU) on January 25, 2016with Ministry of Power, Government of India (GoI) and Government of Chhattisgarh (GoCG) under UDAY, to achieve financial turnaround. Under settled principles, MoU cannot be recognized or accepted as an Agreement. Hence, terms and conditions/undertakings of UDAY stands away from the scope of first amendment to the CSERC MYT Regulations 2015. Accordingly, targets specified under UDAY have not been considered for computation of incentives/penalties for distribution losses. CSPDCL added that under the terms of UDAY:

(a) AT&C loss targets for a particular year are not fixed but are flexible in nature.

(b) AT&C loss targets mentioned are for complete distribution system (HV and LV) and separate targets are not specified for 33 kV and below system.

(c) There is no separate mention or commitment of any trajectory specifically for Distribution Losses for 33 kV and below network.

CSPDCL submitted that even AT&C losses trajectory stipulated in the UDAY MoU is on ‘best effort’ basis and is dependent on counter obligations/commitments from GoI and GoCG in terms of funding and other support. CSPDCL has no control over the actions of GoI and GoCG in this regard, and there is no legal binding on the Parties towards the commitments agreed on. In view of this, it is not prudent to link the trajectory of distribution loss for 33 kV and below system with such MoUs.

CSPDCL further submitted that these commitments were based on certain time-bound capital investments under various heads. However, a substantial portion of capital expenditure proposed by CSPDCL has been disallowed by the Commission. The Commission in Order dated November 28, 2017 in the Petition No. 06 of 2017 (M), has held as under:

> *“………However, the Commission will give a fresh opportunity to the petitioner to explain the technical and commercial significance of the full scope of the proposal under this head with associated economic benefit and to justify the estimated cost as well as other factors involved in the schemes and measures.”*

In absence of requisite investment, it is practically difficult to meet the AT&C Losses stipulated in the UDAY MoU. CSPDCL has quoted a few judgements to justify that the Commission has taken an erroneous view to treat MoU as an agreement between parties. UDAY MoU is an understanding between the parties to agree on expectations and responsibilities of each parties, to achieve financial turnaround of CSPDCL. Under the principles of contract, UDAY MoU does not contain elements which are binding in a contract.

CSPDCL submitted that with the committed efforts under UDAY, CSPDCL is expected to achieve a target lower than that specified in CSERC MYT Regulations 2015. CSPDCL is committed to pass on the benefits of UDAY to the consumers of the state. CSPDCL is not claiming any incentive for the over achievement of losses from the targets specified for 33 kV and below network in the CSERC MYT Regulations, 2015 vis-à-vis the recomputed targets for same network under UDAY. CSPDCL requested the Commission not to levy any penalty for losses falling in this range at the time of true-up of future years. Further, CSPDCL is not claiming any incentive for distribution losses for both FY 2016-17 and FY 2017-18.

Commission's View

The Commission has considered the energy balance based on the actual Inter-State as well as Intra-State Transmission losses, energy sales approved in this Order and quantum of power procured during FY 2016-17 and FY 2017-18.

The Commission notes that CSPDCL has not responded to the query regarding details of actual Circle-wise Distribution Losses for the period. The Commission has, therefore, approved the energy balance as per the provisions of CSERC MYT Regulations, 2015 and methodology adopted in previous Tariff Orders.

The approved Distribution Loss and Energy Balance for FY 2016-17 and FY 2017-18isshown in the Table below:

Table 6-6: Approved Energy Balance and Distribution Loss for FY 2016-17& FY 2017-18

Sr. No.	Particulars	FY 2016-17		FY 2017-18	
		Petition	Final True-up	Petition	Provisional True-up
A	Input: Total Energy available (MU)	23,529.87	23,429.95	24,794.89	24,841.48
	i. Available at 33 kV outgoing feeder	20,617.95	20,637.54	22,020.90	22,091.56
	ii. Injected by CPP/IPP at 33/11kV S/s	257.15	257.15	217.80	217.80
	iii. Available at EHV Level	2,654.77	2,535.27	2,556.19	2,532.11
B	Output: Total Energy Sales (MU)	19,162.51	19,158.77	20,311.21	20,362.53
	i. LV Sales	10,797.02	10,797.02	11,494.45	11,494.55
	ii. HV Sales	5,710.72	5,826.48	6,260.57	6,335.87
	iii. EHV Sales	2,654.77	2,535.27	2,556.19	2,532.11
C	Distribution Loss below 33 kV (MU) *{(Ai + Aii) – (Bi +Bii)}*	4,367.36	4,271.19	4,483.68	4,478.94
D	**Distribution Loss below 33 kV (%)** *{C/(Bi+Bii)*100}*	**20.92%**	**20.44%**	**20.16%**	**20.08%**
E	Distribution Loss Including EHV Sales (MU) *(A – B)*	4,367.36	4,271.18	4,483.68	4,478.95
F	**Distribution loss including EHV Sales** *(E/B*100)*	**18.56%**	**18.23%**	**18.08%**	**18.03%**

CSPDCL has submitted that the tripartite MoU signed between GoI, GoCG and CSPDCL should not be considered as an agreement and hence cannot supersede the Distribution Loss trajectory specified in MYT Regulations, 2015. In this regard, the Commission notes that the prevailing Loss trajectory specified in the MYT Regulations, 2015 (Regulation 71.3) was amended on June 16, 2017, providing for adoption of any subsequent trajectory agreed upon between CSPDCL on one hand and State and/or Central Government on the other. The Amendment is reproduced below:

> *"Provided that if the State utility enters into any agreement with Government of India and/or Chhattisgarh Government and energy loss trajectory committed in this agreement is contrary to that as specified in this Regulations, the energy loss trajectory agreed under the agreement shall prevail over the energy loss specified in this Regulations."*

UDAY scheme is intended to turn-around the financial health of the Distribution companies, reeling under huge debt burden, which was ultimately passed to the consumers through tariff. The loss reduction trajectory, as envisaged in the Scheme was in fact agreed to by the parties after negotiations, and is an essential component towards achieving the objective of MoU. Further, it needs to be stressed here that there is no practice of executing agreements amongst governments and government agencies; instead, MoU is the general practice and in pursuance of the same, GoCG has fulfilled its commitment towards conversion of 50 % of CSPDCL's total debt (Rs. 870.12 crore) into grants. One has to appreciate that the Regulations were amended to facilitate implementation of such schemes and reforms. Therefore, Commission is of the view that one has to go by the intent and spirit behind the tripartite Understanding and the amended Regulations and not get bogged down with the mere wordings. Accordingly, CSPDCL has to honour its commitment towards reduction in distribution loss to the agreed level. Thus, the Commission approves the Distribution Loss Target for FY 2016-17 and FY 2017-18, as per UDAY MoU.

The Distribution Loss target, inclusive of EHV sales, stipulated under the UDAY scheme for FY 2016-17 and FY 2017-18 works out to 18.99% and 18.06% respectively. The actual Distribution Loss including EHV sales achieved by CSPDCL during FY 2016-17 and FY 2017-18 computed by the Commission, based on actual energy sales and power purchase units works out to 18.23% and 18.03% respectively. It is evident that CSPDCL has overachieved the distribution loss against the targets assigned under UDAY scheme.

The MYT Regulations, 2015 provide for gain/loss to be allowed at the time of True-up based on the difference between the actual and target Distribution Losses.

However, after scrutinising LT R-15 submitted by CSPDCL for FY 2016-17 and FY 2017-18, the Commission observes that the percentage of burnt/defective meters is 4% for both years and the assessed cases are in the range of 22-30% of the total bills raised by CSPDCL. Particularly, for Agricultural consumers, where CSPDCL has shown a 6% and 12% increase in the consumption during FY 2016-17 and FY 2017-18 respectively, the percentage of burnt/defective meters is in the range of 6-7% and the assessed cases are in the range of 51-67% of the total bills raised by CSPDCL. Hence, the reasons given by the Commission in its earlier Order dated 12th June 2014 for not allowing gains on account of Distribution Losses still hold true for FY 2016-17 and FY 2017-18. The Commission therefore is of the view that no incentive shall be given to CSPDCL for overachievement of Distribution Loss target for FY 2016-17 and FY 2017-18.

6.4 Power Purchase Cost

CSPDCL's Submission

CSPDCL has purchased the power from CSPGCL generating stations, Central Generating Stations (CGS) and other sources such as Captive Power Plants, Bio-mass units, CPPs/IPPs, Solar and other RE sources, CSPTrdCL and other short-term sources to meet the energy requirement during FY 2016-17 and FY 2017-18.

CSPDCL submitted that it has purchased 24,365.13 MU at the cost of Rs. 10,586.24 crore after netting off sale of surplus power of 2,789 MU at the cost of Rs. 974.13 crore during FY 2016-17. Similarly, CSPDCL purchased 25,950.52 MU at the cost of Rs. 9,625.07 crore after netting off sale of surplus power 6,139.58 MU at the cost of Rs. 2,443.79 crore during FY 2017-18. The sale of surplus power also includes sales to Telangana, which is a back-to-back agreement between CSPDCL and Telangana DISCOM.

Further, CSPDCL utilised banked power of 194.02 MU during FY 2016-17 and 443.70 MU during the FY 2017-18. It has also returned 2,322.04 MU of banked power during FY 2016-17 and sold 202.75 MU of banked power during FY 2017-18and the same has been claimed at no cost. Under the regulatory principles, banking of power involves a cashless transaction, where interchange of units has to be accomplished. This is in line with the Judgment of the Hon'ble APTEL dated July 1, 2014 in Appeal No.220 of 2013, wherein it has held that:

"In the present case, the electricity is actually available to distribution licensee during financial year when it requires the electricity. The said electricity has been accounted for and has been supplied to the consumers but the same ought not to be taken for calculating the total quantum of electricity

available with the distribution licensee during the year only for the purposes of calculation of APPC. We may further observe that there can be no notional cost attributed to such banked energy and the cost, if any, has to be included in the total power purchase cost of the distribution licensee when the corresponding electricity is supplied to the third party. In our view, the State Commission has correctly taken the price of the banked energy as available with the distribution licensee/HPSEBL at a zero cost. The banking is a continuous transaction. The principle of banking of energy is that the electricity received by the distribution licensee is to be returned. When the banked energy is rolled over, its return is only postponed. It is not that electricity is not to be received. The quantum of electricity to be returned would only increase in the subsequent years in future to compensate for the roll over and thereby increase the APPC substantially."

CSPDCL requested the Commission to approve power purchase expenses (including transmission charges) of Rs10,586.24Crore for FY 2016-17and Rs. 9,625.07 crore for the FY 2017-18.

Commission's View

The Commission has scrutinized the available material placed on record including the power purchase cost reflecting in final accounts of FY 2016-17 and provisional accounts for FY 2017-18, and the actual source-wise power purchase cost for FY 2016-17 and FY 2017-18as submitted by CSPDCL in its Petition.

CSPDCL has purchased power from CSPGCL Stations, CGS Stations, Renewable Sources, Short Term sources. CSPDCL clarified that there is no purchase of power during FY 2016-17 and FY 2017-18 from unapproved sources. All long term PPAs are already approved by the Commission and approval of purchase of short-term power is being taken from the Commission on annual basis.

The Commission notes that there was a difference of Rs. 422.70 crore in the power purchase expenses, which was not claimed in provisional true-up of FY 2016-17. However, the actual difference between power purchase cost in provisional True-up and that in Final true-up comes to Rs. 739.33 crore. In its justification, CSPDCL submitted that, at the time of reconciliation, it was observed that amount of Rs. 9,846.92 crore, available in provisional accounts, included revenue of Rs. 516.98 crore towards Banking Power sale. Since, this amount is to be considered as Nil as per regulatory principles, the actual power purchase amount as per provisional accounts worked out to be Rs. 10,363.90 crore. This essentially means that the power purchase cost was shown higher by ~ Rs. 100 crore in provisional accounts at the time of filing provisional true-up petition, which was reconciled with CSPGCL bills. Further, Rs. 90 crore additional amount was detected after reconciliation of other transmission charges.

CSPGCL Stations

The Commission has considered the power purchase quantum and cost of CSPGCL stations as submitted by CSPDCL in its Petition for FY 2016-17. The quantum of purchase form CSPGCL Thermal and Hydro Stations is 16,767.93 MU which is in line with the quantum approved by the Commission in provisional true-up of FY 2016-17. However, the cost of power purchase from CSPGCL stations has slightly increased. The Commission queried on the increase in cost from CSPGCL station to which CSPGCL replied that since the accounts were provisional, the final amount was not available at that time. Only after reconciliation and audit the power purchase cost from CSPGCL stations is finalized. The Commission has taken cognizance in the matter and hence approved power purchase cost of Rs. 6,189.72 crore from CSPGCL stations for FY 2016-17 as submitted by the Petitioner.

Similarly, during FY 2017-18, the Commission has provisionally approved 19.342.10 MU at the cost of Rs. 7,003.58 crore as submitted by CSPDCL. The cost of power purchase during FY 2017-18 is subject to change at the time of final True-up of FY 2017-18 based on audited accounts.

Central Generating Stations (CGS)

The Commission has considered the power purchase quantum and cost of Central Generating Stations (CGS) submitted by CSPDCL. The quantum of purchase form CGS is 7,851.49 MU and corresponding cost is Rs. 2,490.31 crore, which is in line with the quantum approved by the Commission in provisional true-up of FY 2016-17.

The Commission has also accepted the quantum and cost for FY 2017-18 as submitted by CSPDCL for CGS stations. The Commission therefore provisionally approves 7,685.80 MU at the cost of Rs. 2,216.54 crore for FY 2017-18

Renewable Sources

The Commission notes that CSPDCL has purchased the power from renewable sources during FY 2016-17 and FY 2017-18. The Commission sought the status of RPO compliance, which was submitted by CSPDCL as under:

Table 6-7: Status of RPO compliance as submitted by CSPDCL

Year	Type of Source	Total Consumption (MU)	RPO		Actual Purchase	
			(%)	MU	%	MU
FY 2016-17	Solar	19162	1.50%	287.43	1.52%	290.66
	Non-Solar		6.50%	1245.53	5.0%	958.56
	Total		8.00%	1532.96	6.52%	1249.22
FY 2017-18	Solar	20310.7	2.0%	406.21	1.64%	332.78
	Non-Solar		7.00%	1421.75	4.92%	999.30
	Total		9.00%	1827.96	6.56%	1332.08

From the above table, it has been observed that CSPDCL has been able to fulfil RPO compliance only for Solar purchase for FY 2016-17. CSPDCL further clarifies that it has not purchased any RECs during FY 2016-17 and FY 2017-18.

Regarding such shortfall of RPO, CSPDCL further submitted that it had filed the Petition for waiving off the accumulated deficit Solar and Non-Solar RPO to the extent of 360.08 MU and 2396.93 MU respectively for FY 2013-14 to 2017-18, which was accepted by the Commission vide Order dated July 11, 2018. CREDA has filed a Review Petition 52 of 2018, which is pending with the Commission.

The Commission has scrutinised the source wise details of RE purchase during FY 2016-17 and FY 2017-18. The quantum of energy procured from Biomass and Hydel sources as submitted by CSPDCL is in line with the quantum approved at the time of provisional True-up of FY 2016-17. The Commission has considered the same quantum in the final True-up of FY 2016-17 and hence accepted the cost submitted by CSPDCL in its Petition.

However, in case of solar the quantum of MU has decreased as compared to the quantum approved in provisional true-up and the cost has increased. The Commission has hence considered the same quantum as that approved in provisional true-up Order and accepted the cost submitted by CSPDCL against it for final true-up.

In case of FY 2017-18, the quantum and cost from all renewable sources is considered same as that submitted by CSPDCL. The quantum and cost are subject to change based on the final True-up of FY 2017-18.

Other Sources

The Commission sought details of purchase from concessional sources including source wise quantum, actual entitlement, actual availability, etc. CSPDCL submitted the requisite details for FY 2016-17 and FY 2017-18. It is observed that CSPDCL has purchased 1561.66 MU as against actual entitlement of 1666.47 MU during FY 2016-17 and purchased 1265.67 MU as against actual entitlement of 1665.79 MU during FY 2017-18. CSPDCL submitted that KWPCL and SVPPL units were under forced shutdown dye to technical problem since May 22, 2017 and May 28, 2017 respectively.

The power purchase from other sources during FY 2016-17 was almost in line with that approved in provisional true-up Order. The following table shows the comparison of other sources approved during provisional true-up, as submitted by CSPDCL and as approved by the Commission for final true-up.

Table 6-8: Power Purchase from Other Sources during FY 2016-17

Source	FY 2016-17								
	Provisional True-up			Petition			Approved		
	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)
Concessional Power - Through CSPTrdCL	1,561.66	300.52	1.92	1,561.66	304.31	1.95	1,561.66	304.31	1.95
CPPs/ IPPs/ Short Term	1,461.35	386.74	2.65	1,461.35	387.36	2.65	1,461.35	387.36	2.65
IEX/PXIL/ Traders	345.32	83.51	2.42	345.32	90.67	2.63	345.32	90.67	2.63
UI/DSM									
Over-Drawl	*336.72*	*111.42*	*3.31*	*336.72*	*133.73*	*3.97*	*336.72*	*133.73*	*3.97*
Under-Drawl	*-244.77*	*-19.69*	*0.80*	*-244.77*	*-21.66*	*0.89*	*-244.77*	*-21.66*	*0.89*

The Commission has accepted the submission of CSPDCL for other sources during FY 2017-18 for provisional True-up. The quantum and cost from other sources are subject to change at the time of final True-up.

The Commission observed that there have been consistent issues while processing of every Tariff Petition of CSPDCL with respect to the following parameters.

(a) Reconciliation of payment made by CSPDCL to CSPGCL for thermal and hydro generation, with revenue booked by CSPGCL.

(b) Reconciliation of payment made by CSPDCL to CSPTCL with revenue booked by CSPTCL.

The Commission, for the purpose of final true-up of FY 2016-17, has matched the revenue earned by CSPGCL with the purchase cost of CSPDCL from CSPGCL stations. Similarly, the revenue earned by CSPTCL has been matched with the Intra-State Transmission cost of CSPDCL. Accordingly, the Commission has provided for relevant adjustments while considering the Revenue Gap of CSPGCL and CSPTCL in the ARR of CSPDCL during FY 2019-20.

The Commission directs CSPGCL, CSPTCL and CSPDCL to reconcile the quantum and cost among themselves before finalization of annual accounts for each year and submit the same at time of true-up for such year.

The Commission has not considered any Late Payment Surcharge paid/received as an expense/revenue in ARR as per Regulation 28.1 of CSERC MYT Regulations, 2015.As regards banking of power, the Commission is of the view that presently, there is no proper accounting system to monitor the year-wise details of banking transactions, which results in mismatch of energy accounts. The Commission, while undertaking the provisional true-up for FY 2016-17, had given directives to CSPDCL regarding accounting for Banked Power and for submission of the necessary data along with the present Petition.However, the details submitted by CSPDCL lack clarity. Accordingly, the Commission directs CSPDCL to maintain a separate passbook which records the details of all banking transactions.

In its Petition, CSPDCL has accounted the sale of surplus power in power purchase expenses. However, the Commission has continued with the methodology adopted in previous Orders by separate accounting of revenue from sale of surplus power and revenue from retail-sale of power. The revenue from surplus power is Rs.974.13 crore during FY 2016-17 and Rs. 2,457.48 crore during FY 2017-18. In this regard, the Commission directs CSPDCL to examine the possibility of optimum utilisation of surplus power with the State through appropriate incentive mechanism and CSPDCL should come up with a proposal for same by November 30, 2019.

Transmission Charges

The Commission has scrutinized the Transmission charges which includes Inter-State charges (PGCIL), Intra-State charges (CSPTCL), SLDC and other Transmission charges for FY 2016-17. It is observed that the Transmission charges submitted by CSPDCL were in line with the charges approved in provisional true-up Order, except other transmission charges, which were significantly high. The Commission queried CSPDCL on significant increase in other transmission charges as compared to that approved in provisional true-up Order. CSPDCL replied that the Transmission charges paid on sale of power of Rs. 63.27 crore and Transmission charges on power banking of Rs.48.31 crore was not readily available at the time of filing of provisional true-up Petition. CSPDCL has also provided the break-up of expenses of other transmission charges of Rs. 180.02 crore. Taking cognizance of the matter, the Commission has accepted other transmission charges and approved total transmission charges in line with the submissions made by CSPDCL. The expenses towards the transmission charges can be either intra-state or inter-state. Therefore, for future tariff proceedings, the Commission directs CSPDCL to submit transmission charges by segregating other transmission charges under these two heads only.

For FY 2017-18, the Commission has accepted the Transmission charges submitted by CSPDCL, subject to change at the time of final true-up.

The source-wise power purchase quantum and cost considered by the Commission after final true-up for FY 2016-17 and provisional true-up of FY 2017-18 is shown in the Table below:

Table 6-9: Approved Power Purchase Cost for FY 2016-17

Source	Provisional True-up			Petition			Approved		
	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)
CGS	**7,851.49**	**2,487.89**	**3.17**	**7,851.49**	**2,490.31**	**3.17**	**7,851.49**	**2,490.31**	**3.17**
NTPC sub-total	7,036.59	2,172.86	3.09	7,036.59	2,215.13	3.15	7,036.59	2,172.86	3.09
NTPC-SAIL (NSPCL)	253.82	112.10	4.42	253.82	112.10	4.42	253.82	112.10	4.42
NPCIL	349.97	103.03	2.94	349.97	103.03	2.94	349.97	103.03	2.94
Other Charges (NVVN, Hirakud, Subhansiri)	211.11	60.06	2.84	211.11	60.06	2.84	211.11	60.06	2.84
Other Charges	-	39.85	-	-	-	-	-	42.27	-
CSPGCL	**16,767.93**	**6,062.28**	**3.62**	**16,767.93**	**6,189.72**	**3.69**	**16,767.93**	**6,189.72**	**3.69**
Total CSPGCL Thermal & Hydro	16,727.30	5390.96	3.22	16,735.43	6,177.16	3.69	16,727.30	5,390.96	3.69
CSPGCL – Renewables	40.63	15.73	3.87	32.50	12.56	3.87	40.63	15.73	3.87
Other Charges	-	655.59	-	-	-	-	-	783.03	-
IEX/PXIL/Traders	**345.32**	**83.51**	**2.42**	**345.32**	**90.67**	**2.63**	**345.32**	**90.67**	**2.63**
CPPs/IPPs/Short Term	**1,461.35**	**386.74**	**2.65**	**1,461.35**	**387.36**	**2.65**	**1,461.35**	**387.36**	**2.65**
Concessional Power - Through CSPTrdCL	**1,561.66**	**300.52**	**1.92**	**1,561.66**	**304.31**	**1.95**	**1,561.66**	**304.31**	**1.95**
Others - Renewables	**1,208.58**	**744.68**	**6.16**	**1,186.43**	**744.25**	**6.27**	**1,208.59**	**744.25**	**6.16**
Biomass	911.31	541.02	5.94	911.31	535.76	5.88	911.31	535.76	5.88
Solar	290.66	200.50	6.90	268.50	205.25	7.64	290.66	205.25	7.06
Hydel/Other RE	6.61	3.16	4.78	6.61	3.25	4.91	6.61	3.25	4.91
Other Sources	**16.03**	**10.25**	**6.39**	**16.03**	**10.38**	**6.47**	**16.03**	**10.25**	**6.39**
Transmission Charges	**-**	**1162.94**	**-**	**-**	**1255.02**	**-**	**-**	**1255.02**	**-**
Interstate Transmission Charges	-	256.85	-	-	228.07	-	-	228.07	-

Source	Provisional True-up			Petition			Approved		
	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)
Intrastate Transmission Charges	-	835.41	-	-	836.52	-	-	836.52	-
CSLDC Charges	-	5.52	-	-	10.40	-	-	10.40	-
Other Transmission Charges	-	65.16	-	-	180.02	-	-	180.02	-
UI Purchase	**91.95**	**91.74**	**9.98**	**336.72**	**133.73**	**3.97**	**336.72**	**133.73**	**3.97**
Banking Purchase	**194.02**	**-**	**-**	**194.02**	**-**	**-**	**194.02**	**-**	**-**
Gross Power Purchase Cost	**29,498.33**	**11,330.54**	**3.84**	**29,720.95**	**11,605.75**	**3.90**	**29,743.11**	**11,605.62**	**3.90**
Less: Adjustments	**-**	**446.63**	**-**	**5,355.82**	**1,019.52**	**1.90**	**244.77**	**45.38**	**1.85**
Rebate if any	-	17.31	-	-	17.31	-	-	17.31	-
GBI Claim received during the FY	-	6.42	-	-	6.41	-	-	6.41	-
Sale of Surplus Power	-	-	-	2,789.00	974.13	3.49	-	-	-
Banking Sale	-	-	-	2,322.04	-	-	-	-	-
UI Sale	-	-	-	244.77	21.66	0.89	244.77	21.66	0.89
Power purchase cost pending for reconciliation	-	422.7	-	-	-	-	-	-	-
Net Power Purchase Cost	**29,498.33**	**10,883.91**	**3.69**	**24,365.13**	**10,586.24**	**4.34**	**29,498.33**	**11,560.24**	**3.92**

Table 6-10: Approved Power Purchase Cost for FY 2017-18

Source	MYT Order			Petition			Approved		
	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)
CGS	**8,339.46**	**3,075.14**	**3.66**	**7,685.80**	**2,216.54**	**2.88**	**7,685.80**	**2,216.54**	**2.88**
NTPC sub-total	7,723.56	2,867.92	3.71	7,266.79	2,051.51	2.82	7,266.79	2,014.46	2.77
NTPC-SAIL (NSPCL)	297.95	111.97	3.76	176.09	87.28	4.96	176.09	87.28	4.96
NPCIL	303.97	92.44	3.04	226.40	70.37	3.11	226.40	70.37	3.11
Other Charges (NVVN, Hirakud, Subhansiri)	13.95	2.81	2.02	16.52	7.37	4.46	16.52	7.37	4.46
Other Charges								37.06	
CSPGCL	**14,650.82**	**4,411.74**	**3.01**	**19,342.10**	**7,003.58**	**3.62**	**19,342.10**	**7,003.58**	**3.62**
Total CSPGCL Thermal & Hydro	14,277.69	4324.10	3.03	19,319.84	6,995.42	3.62	19,313.71	6,651.17	3.44
CSPGCL – Renewables	373.13	87.64	2.35	22.26	8.15	3.66	28.39	11.41	4.02
Other Charges								341.00	
IEX/PXIL/Traders	**1,000.00**	**260.00**	**2.60**	**218.18**	**72.38**	**3.32**	**218.18**	**72.38**	**3.32**
CPPs/IPPs/Short Term	**-**	**-**	**-**	**1,860.96**	**481.58**	**2.59**	**1,860.96**	**481.58**	**2.59**
Concessional Power - Through CSPTrdCL	**2,516.92**	**402.71**	**1.60**	**1,265.67**	**207.17**	**1.64**	**1,265.67**	**207.17**	**1.64**
Others - Renewables	**1,111.41**	**684.83**	**6.16**	**1,357.16**	**824.80**	**6.08**	**1,357.16**	**824.80**	**6.08**
Biomass	864.15	528.01	6.11	897.91	558.36	6.22	897.91	558.36	6.22
Solar	238.72	152.76	6.40	348.34	223.70	6.42	348.34	223.70	6.42
Hydel/Other RE	8.54	4.06	4.75	110.91	42.74	3.85	110.91	42.74	3.85
REC Purchase		**144.69**							
Other Sources				**17.81**	**12.47**	**7.00**	**17.81**	**12.47**	**7.00**
Transmission Charges		**1,350.72**			**1,192.31**			**1,192.29**	

Source	MYT Order			Petition			Approved		
	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)
Interstate Transmission Charges		420.28			291.75			291.75	
Intrastate Transmission Charges		916.80			807.55			807.53	
CSLDC Charges		13.64			6.66			6.66	
Other Transmission Charges					86.34			86.34	
UI Purchase	**438.00**	**56.94**	**1.30**	**101.03**	**76.22**	**7.54**	**101.03**	**76.22**	**7.54**
Banking Purchase	**-**	**-**	**-**	**443.70**	**-**	**-**	**443.70**	**-**	**-**
Gross Power Purchase Cost	**27,678.60**	**10,327.52**	**3.73**	**32,292.41**	**12,087.04**	**3.74**	**32,292.41**	**12,087.02**	**3.74**
Less: Adjustments	**788.68**	**181.40**	**2.30**	**6,610.83**	**2,461.97**	**3.72**	**471.69**	**18.18**	**0.39**
Sale of Surplus Power	788.68	181.40	2.30	5,421.16	2,238.10	4.13	-	-	-
Sale of Surplus power in Telangana		49.39					-	-	-
Sale of surplus power to IEX				717.97	205.69	2.86	-	-	-
Banking Sale				202.75	-	-	202.75	-	-
UI Sale				268.94	18.18	0.68	268.94	18.18	0.68
Net Power Purchase Cost	**26,889.93**	**10,096.73**	**3.75**	**25,681.58**	**9,625.07**	**3.75**	**31,820.72**	**12,068.84**	**3.79**

The Commission approves Power Purchase Cost of Rs. 11,560.24 crore after final Truing-up of FY 2016-17 and Rs. 12,068.84 crore after provisional Truing-up of FY 2017-18.

6.5 O&M Expenses

CSPDCL's Submission

CSPDCL submitted the actual O&M expenses of Rs. 1,130.37Crore for FY 2016-17 as per audited accounts and Rs. 1,285.23Crore for FY 2017-18 based on the provisional accounts, excluding terminal benefits (pension and gratuity) and wage revision.

CSPDCL has claimed employee costs of Rs. 807.32 crore for FY 2016-17 and Rs. 912.72 crore for FY 2017-18. CSPDCL also submitted the sum of Repair & Maintenance (R&M) and Administrative & General (A&G) expenses of Rs. 323.05 crore for FY 2016-17and Rs. 372.51 for FY 2017-18.

As regards the contribution towards Pension and Gratuity, CSPDCL has contributed the amount of Rs. 298.80 crore for FY 2016-17 and Rs. 325.83 crore for FY 2017-18 as approved in MYT Order.

For computation of sharing of gains/(losses), CSPDCL has not considered any gain and loss on account of employee costs in line with the first amendment to the MYT Regulations, 2015. In case of A&G expenses, CSPDCL has claimed losses over normative expenses after reducing uncontrollable expenses of meter reading, other merchanting &service contracts and electricity charges to offices & establishments from the actual A&G expenses. CSPDCL further submitted that a substantial portion of A&G expenses is governed by Change in Law, which is binding on CSPDCL. Hence, under settled principles, such expenses should not be treated as controllable expenses. CSPDCL has shared loss of Rs. 3.09 crore on account of A&G expenses.

CSPDCL has claimed sharing of losses on account of R&M expenses by comparing normative expenses with actual R&M expenses. CSPDCL has shared loss of Rs. 29.25 crore on account of R&M expenses.

CSPDCL also submitted that it has not considered any gain and loss on account of O&M expenses for FY 2017-18 and has requested the Commission to allow submission of gain and losses once the audited accounts for FY 2017-18 are available. CSPDCL requested the Commission to approve Rs. 32.34 crore as sharing of loss in O&M expenses for FY 2016-17 as per CSERCMYT Regulations, 2015.

Commission's View

The Commission had approved O&M expenses of Rs. 1,070.06 crore in provisional truing-up Order for FY 2016-17 excluding Contribution to Pension and Gratuity and

Interim Wage Relief. In the present Petition, CSPDCL has claimed Rs. 1,130.37 crore for FY 2016-17 based on audited accounts. CSPDCL has also claimed Rs. 298.80 crore separately stating that the same amount has been paid towards contribution to Pension and Gratuity during FY 2016-17.

The Commission had approved O&M expenses of Rs.1,097.88 crore in Tariff Order dated March 31, 2017 for FY 2017-18 excluding contribution to Pension and Gratuity and Interim Wage Relief. CSPDCL has claimed Rs. 1,285.23 crore for FY 2017-18 based on provisional accounts. CSPDCL has also claimed Rs. 325.83 crore separately towards Contribution to Pension and Gratuity during FY 2017-18.

Regulation 57.4 of the CSERC MYT Regulations, 2015 specifies as under:

"

(a) Operation and Maintenance (O&M) Expenses for the distribution licensee shall include:

I. Employee Cost;

II. Administrative and general Expenses

III. Repairs and Maintenance Expenses

(b) The Commission shall stipulate a separate trajectory for each of the components of O&M expenses viz. employee cost, R&M expense and A&G expense for the control period.

(c) The employee cost, excluding pension fund contribution and impact of pay revision arrears for the base year i.e. FY 2015-16 shall be derived on the basis of the normalized average of the actual employee expenses, excluding pension fund contribution and impact of pay revision arrears, available in the accounts for the previous five years immediately preceding the base year FY 2015-16, subject to prudence check by the Commission. Any other expense of non-recurring nature shall also be excluded while determining normalized average for the previous five years.

(d) The normalization shall be done by applying last five years average increase in Consumer Price Index (CPI) on year to year basis. The average of normalized net present value for FY 2010-11 to FY 2014-15, shall then be used to project base year value for FY 2015-16. The base year value so arrived, shall be escalated by the above inflation rate to estimate the employee expenses (excluding impact of pension fund contribution and pay revision, if any) for each year of the control period.

At the time of true-up the employee costs shall be considered after taking into account the actual increase in CPI during the year instead of projected inflation for that period.

Provided further that impact of pay revision (including arrears) and pension fund contribution shall be allowed on actual during true-up as per accounts, subject to prudence check and any other factor considered appropriate by the Commission."

However, the Commission notified CSERC MYT Regulations, 2016 (First amendment) on June 16, 2017 and made it effective from April 1, 2017, whereby employee expenses are excluded from accounting of sharing of gains/(losses). The relevant Regulation is as under.

"In clause 13.1 of the principal regulations, the following proviso shall be inserted, namely: -

Provided further that the employee cost shall not be factored in for sharing of gains or losses on account of Operation and Maintenance expenses"

In line with above amendment, the employee expenses are now considered as uncontrollable expenses and therefore the amount claimed by CSPDCL has been approved for final truing-up of FY 2016-17 and provisional truing-up of FY 2017-18, after due prudence check.

The Commission observes that there is substantial increase in actual employee cost in FY 2017-18 compared to FY 2016-17. CSPDCL clarified that the Commission had allowed additional provision of interim wage relief of Rs. 58.90 crore to the account of anticipated impact of wage revision. However, the actual pay revision notification was issued in FY 2017-18 i.e., September 5, 2017 and actual pay out was done to the employees accordingly. Further, CSPDCL submitted that differential payment has been adjusted in different heads like basic pay, dearness allowance, additional pay, interim relief, etc., it is not possible to figure out the exact amount of pay-out due to pay revision during FY 2017-18 against approved amount of Rs. 58.90 crore.

The Commission therefore approves employee cost of Rs. 807.32 crore for FY 2016-17 and Rs. 912.72 crore for FY 2017-18. The employee cost approved for FY 2017-18 is subject to change based on audited accounts at the time of final Truing-up.

Further, Regulation 57.4 (e) and (f) of CSERC MYT Regulations, 2015 regarding A&G Expenses and R&M Expenses specify as under:

"(e) The administrative and general expenses and repair and maintenance expenses, for the base year i.e. FY 2015-16, shall be derived on the basis of the normalized average of the actual administrative and general expenses and repair and maintenance expenses, respectively available in the accounts for the previous five (5) years immediately preceding the base year FY 2015-16, subject to prudence check by the Commission. Any expense of non-recurring

nature shall be excluded while determining normalized average for the previous five (5) years.

(f) The normalization shall be done by applying last five-year average increase in Wholesale Price Index (WPI) on year to year basis. The average of normalized net present value for FY 2010-11 to FY 2014-15, shall then be used to project base year value for FY 2015-16. The base year value so arrived, shall be escalated by the above inflation rate to estimate the administrative and general expense and repair and maintenance expenses for each year of the control period.

At the time of true up, the administrative and general expenses and repair and maintenance expenses shall be considered after taking into account the actual inflation instead of projected inflation for that period."

Based on the above Regulations, the Commission has considered A&G and R&M expenses for FY 2016-17 and FY 2017-18.

The Commission observes that there is substantial increase of actual R&M expenses for FY 2016-17 at Rs. 170.39 crore and for FY 2017-18 at Rs. 209.66 crore, as compared to approved R&M expenses. In response, CSPDCL submitted that approved R&M is based on actual R&M for FY 2010-11 to FY 2014-15 along with the appropriate inflation as per the provisions of CSERC MYT Regulations, 2015. CSPDCL further submitted that the average GFA of Rs. 3,357 crore during FY 2010-11 to FY 2014-15 has increased to Rs. 6,637 crore for FY 2017-18. While there is requirement of R&M expenses toward new assets also, the Regulations have no provisions to link R&M commensurate to increase in asset base.

The Office of Economic Adviser, Ministry of Commerce and Industry, Government of India revises the base year of Wholesale Price Index (WPI) from FY 2004-05 to FY 2011-12 as a regular exercise, to capture structural changes in the economy. The summary of the average WPI considered for revised normative A&G expenses and R&M expenses are as shown below:

Table 6-11: Computation of Inflation rate (%)

Particulars	FY 2016-17	FY 2017-18
Wholesale Price Index	1.73%	2.92%

The normative A&G expenses and R&M expenses as approved in the MYT Order have been revised as per the above inflation rate taking WPI escalation of 1.73% for FY 2016-17 and 2.92% for FY 2017-18 respectively. The normative O&M expenses approved for FY 2016-17 and FY 2017-18 are shown in the table below:

Table 6-12: Approved Normative O&M Expenses FY 2016-17 (Rs. crore)

Sr. No.	Particulars	Provisional true-up	Petition	Approved
1	Net Employee Expenses (incl. Interim Relief)	820.92	807.32	807.32
2	Net A&G Expenses	129.13	152.66	129.13
3	Net R&M Expenses	120.01	170.39	120.01
4	**Total O&M Expenses**	**1,070.06**	**1,130.37**	**1,056.46**

Table 6-13: Approved Normative O&M Expenses for FY 2017-18 (Rs. crore)

Sr. No.	Particulars	Tariff Order	Petition	Approved
1	Net Employee Expenses (incl. Interim Relief)	818.72	912.72	912.72
2	Net A&G Expenses	144.69	162.85	132.90
3	Net R&M Expenses	134.47	209.66	123.51
4	**Total O&M Expenses**	**1,097.88**	**1,285.23**	**1,169.13**

The Commission approves total O&M expenses of Rs. 1,056.46 crore after final true-up of FY 2016-17 and Rs. 1,169.13 crore after provisional true-up of FY 2017-18.

The Commission notes with concern that the contentions given in the Petition are not supported by the material facts.

As per the provisions in the Regulation regarding sharing of gains/(losses) of O&M expenses, the Commission has computed the efficiency gains/losses on the basis of revised normative A&G expenses and R&M expenses, in accordance with the CSERC MYT Regulations, 2015.

It is important to note that all the expenses booked under O&M expenses, except Employee Expenses, are 'Controllable factors' as per Clause 11.2 of the CSERC MYT Regulations, 2015 read with first amendment. No exceptions are permitted under the controllable factors. Hence, the sharing of A&G expenses and R&M expenses is done based on actual expenses for FY 2016-17 as per the audited accounts and actual expenses for FY 2017-18 as per provisional accounts.

The year-wise normative A&G and R&M expenses prescribed in the MYT Regulations, 2015 are calculated taking into account last five years' expenditure, factoring the inflation index for each year, and therefore, can be said to be a fair estimation. The Commission notes with concern the unusual deviation of 29% in FY 2016-17 and 45% in FY 2017-18 in actual, compared to normative expenses, the actual R&M expenses for FY 2017-18 exceeding the normative by a whopping 70%. Further, the actual R&M expenditure for FY 2017-18 has increased by 23% over FY 2016-17, despite low inflation rate of 2.92%. Similarly, expenses towards Service Contract including Legal & Professional Charges has gone up by 116% during the same period. According to the MYT Regulations 2015, A&G and R&M Expenses are controllable and therefore, the Commission does not find any merit in the contention of CSPDCL that these expenses are largely uncontrollable.

On prudence check, the Commission has disallowed Rs. 0.11 crore for donation-contribution, Rs. 1.60 crore for compensation to outsider injury and Rs. 0.11 crore for obsolescence of stores from the actual A&G expenses of Rs. 152.66 crore for FY 2016-17 as submitted by CSPDCL in its Petition, while sharing of gains and losses.

The Commission has undertaken the sharing of efficiency gains or losses for R&M expenses and A&G Expenses for FY 2016-17 as shown in the following Tables:

Table 6-14: Sharing of (Gain)/Loss for FY 2016-17 (Rs. crore)

Particulars	Revised Normative	Actual Expenses	Efficiency (Gain)/Loss	Entitlement of (Gain)/Loss	
				CSPDCL	Consumers
Employee Expenses	807.32	807.32	-	-	-
A&G Expenses	129.13	150.94	21.81	10.90	10.90
R&M Expenses	120.01	170.39	50.38	25.19	25.19
Total	**1056.46**	**1128.65**	**72.19**	**36.09**	**36.09**

Further, the sharing of efficiency gains and losses on account of O&M Expenses for FY 2017-18 is undertaken as shown in the following Table:

Table 6-15: Sharing of (Gain)/Loss for FY 2017-18 (Rs. crore)

Particulars	Revised Normative	Actual Expenses	Efficiency (Gain)/Loss	Entitlement of (Gain)/Loss	
				CSPDCL	Consumers
Employee Expenses	912.72	912.72	-	-	-
A&G Expenses	132.90	162.85	29.95	14.98	14.98
R&M Expenses	123.51	209.66	86.15	43.08	43.08
Total	**1169.13**	**1285.23**	**116.10**	**58.05**	**58.05**

The Commission approves the sharing of efficiency loss of Rs. 36.09 crore for FY 2016-17 and Rs. 58.05 crore for FY 2017-18.

The Commission notes that even with the mechanism of sharing of the resultant efficiency loss by CSPDCL, half of the losses is still borne by the consumers. Therefore, CSPDCL is directed to manage its R&M and A&G expenses within the normative ceiling.

As regards to the contribution to Pension and Gratuity fund, the Commission notes that the amount reported in audited accounts for FY 2016-17 and provisional accounts for FY 2017-18 is same as approved in the MYT Order.

The Commission approves the actual contribution to Pension and Gratuity as Rs. 298.80 crore for FY 2016-17after final true-up and Rs 325.83 crore for FY 2017-18 after provisional true-up.

6.6 Capital Structure

CSPDCL's submission

CSPDCL has determined the capital structure for FY 2016-17 and FY 2017-18 based on the following submissions:

(a) Opening values of various parameters for FY 2016-17 have been considered equal to the closing values of FY 2015-16.

(b) The actual loan addition has been considered as Rs. 286.52 crore for FY 2016-17 based on audited accounts and Rs. 485.77 crore for FY 2017-18 based on provisional accounts.

(c) No grant has been received towards repayment of loan under UDAY scheme in FY 2016-17. However, consumer contribution has been considered as Rs. 820.72 crore for FY 2016-17 based on audited accounts and Rs. 971.78 crore for FY 2017-18 based on provisional accounts.

(d) Normative equity addition has been considered based on capital restructuring methodology as approved by the Commission in tariff Order dated July 12, 2013.

(e) GFA addition of has been considered as Rs. 627.16 crore for FY 2016-17 and Rs. 850.90 crore for FY 2017-18.

CSPDCL submitted the Capital Structure for FY 2016-17 and FY 2017-18 as under:

Table 6-16: Capital Structure for FY 2016-17 and FY 2017-18 as submitted by CSPDCL

(Rs. crore)

Particulars	Legend	FY 2016-17	FY 2017-18
Gross Fixed Assets (GFA)			
Opening GFA	A	5,159.00	5,786.16
Opening CWIP	B	2,273.74	2,353.59
Opening CAPEX	C=A+B	7,432.74	8,139.75
Capitalization during the year	D	627.16	850.90
Closing GFA	E=D+A	5,786.16	6,637.06
Closing CWIP	F	2,353.59	3,058.85
Closing CAPEX	G=F+E	8,139.75	9,695.91
Grants and Consumer Contribution			
Opening Grant and Contribution	H	2,768.05	3,588.76
Consumer contribution/grants during the year	I	820.72	971.78
Closing Consumer Contribution	J=H+I	3,588.76	4,560.54
Consumer Contribution in Opening GFA	K=H*A/C	1,921.28	2,551.08
Consumer Contribution in Closing GFA	L=J*E/G	2,551.08	3,121.79
Loan Borrowed			
Opening Borrowed Loan	M	2,193.87	2,480.39
Loan Borrowed during the year	N	286.52	485.77
Closing Borrowed Loan	O=M+N	2,480.39	2,966.16
Borrowed Loan in Opening GFA	P=M*A/C	1,522.75	1,763.19
Borrowed Loan in Closing GFA	Q=MAX (O*E/G, P)	1,763.19	2,030.40
Equity			
Opening Gross Equity	R=C-H-M	2,470.83	2,070.61
Equity Addition During the Year	T=S-R	(400.22)	98.61
Closing Gross Equity	S=G-J-O	2,070.61	2,169.22
Gross Equity in Opening GFA	U=A-K-P	1,714.98	1,471.90
Gross Equity in Closing GFA	V=C-L-Q	1,471.90	1,484.88
Average Gross Equity During the year	W=Avg. (U, V)	1,593.44	1,478.39
Funding of Capitalized Assets			
Total Capitalization		627.16	850.90
Contribution of Grant in Capitalized Assets		629.80	570.71
Contribution of Loan in Capitalized Assets		240.44	267.21
Contribution of Equity in Capitalized Assets		(243.09)	12.98

Commission's View

The approved closing balance in the True-up Order for FY 2015-16 (March 31, 2017)has been considered as the opening balance of FY 2016-17 for GFA, CWIP, CAPEX, Grants/Consumer Contribution, Loan and Equity

It is observed that CSPDCL has shown the equity reduction against the assets capitalised during FY 2016-17. CSPDCL has clarified that as per audited accounts substantial increase in consumer contribution as well as grant/subsidies received during FY 2016-17 has been noticed. This amount was submitted as Rs. 359.57 crore in Petition for provisional true-up however as per audited accounts this amounts to Rs. 820.72 crore as the total loan addition and addition of adjusted grants and consumer contribution exceeds total capex and capitalisation during the year, hence, there is net reduction in equity. The principle adopted in the petition is per the previous tariff Orders.

Addition to GFA, Grant/Consumer Contribution has been considered for FY 2016-17 and FY 2017-18 is based on audited accounts and provisional accounts respectively. The Consumer Contribution and Grants have been reduced from the GFA addition, before considering the normative debt: equity ratio, which has been consistently done for all the years**.**

Gross Fixed assets considered by the Commission for FY 2016-17 and FY 2017-18 are shown in the following Table:

Table 6-17: Approved Gross Fixed Assets for FY 2016-17 and FY 2017-18

(Rs. crore)

Sr. No.	Particulars	FY 2016-17	FY 2017-18
	Gross Fixed Assets (GFA)		
1	Opening GFA	5,159.00	5,785.83
2	Capitalization during the year	626.83	850.90
3	Closing GFA	5,785.83	6,636.73
	Funding of Capitalized Assets		
4	Grant	600.02	560.56
5	Loan	237.57	294.54
6	Equity	(210.76)	(4.20)
7	Total Capitalization	626.83	850.90

The Commission approves the total capitalization of Rs. 626.83 crore for FY 2016-17 and Rs. 850.90 crore for FY 2017-18 as shown in the Table above.

6.7 Depreciation

CSPDCL's Submission

CSPDCL submitted that depreciation has been calculated as per Regulation 24 of CSERC MYT Regulations 2015, along with the appropriate treatment of grant received under UDAY scheme. CSPDCL, while calculating depreciation for the FY 2016-17 and FY 2017-18, has followed the methodology specified in the aforesaid Regulations and the methodology adopted by the Commission in previous Tariff Orders. CSPDCL has claimed depreciation of Rs. 117.41 crore for FY 2016-17 and Rs. 170.81 crore for FY 2017-18.

Commission's View

For the purpose of final true-up for FY 2016-17 and provisional true-up for FY 2017-18, the Commission has computed he Depreciation as per Regulation 24 of the CSERC MYT Regulations, 2015.

The Commission sought justification for steep increase in depreciation claimed for FY 2017-18 as compared to depreciation claimed in FY 2016-17. CSPDCL clarified that deduction of depreciation on assets converted from loan to grant in UDAY has been inadvertently missed in petition and therefore. revised figure is submitted for correct computation of depreciation . Accordingly, as per revised submission by CSPDCL, depreciation has been claimed as Rs. 124.53 crore for FY 2017-18.

The Regulations specifies depreciation rates for each asset groups. Accordingly, the weighted average depreciation rates has been computed as 5.33% and 5.32% for FY 2016-17 and FY 2017-18 respectively., The Commission sought computation of depreciation on fully depreciated assets from CSPDCL. The depreciation on fully depreciated assets has been deducted in accordance with the approach adopted in the previous Orders.

The depreciation on consumer contribution in live assets has been deducted as per Regulation 24 of the CSERC MYT Regulations, 2015. Similarly, depreciation on assets converted from loan to grant under UDAY has been deducted. The depreciation approved for FY 2016-17 after final True-up is shown in the Table below:

Table 6-18: Approved Depreciation for FY 2016-17 (Rs. crore)

Particulars	FY 2016-17		
	Prov. True-up	Petition	Approved
Opening GFA	5,159.00	5,159.00	5,159.00
Additional Capitalisation during the Year	662.93	627.16	626.83
Closing GFA	5,821.93	5,786.16	5,785.83
Average GFA for the year	5,490.47	5,472.58	5,472.42
Depreciation Rates (%)	5.33%	5.33%	5.33%
Gross Depreciation	292.69	291.74	291.73
Less: Depreciation on consumer contribution on live assets	122.31	111.36	122.31
Less: Depreciation on Fully Depreciated Assets	16.58	16.58	16.58
Less: Depreciation on assets converted from loan to grant under UDAY	46.39	46.39	46.39
Net Depreciation	**107.42**	**117.41**	**106.46**

Similarly, depreciation approved for FY 2017-18 after provisional true-up is shown in the following Table:

Table 6-19: Approved Depreciation for 2017-18 (Rs. crore)

Particulars	FY 2017-18		
	MYT Order	CSPDCL	Approved
Opening GFA	7,110.00	5,786.16	5,785.83
Additional Capitalisation during the Year	2,064.21	850.90	850.90
Closing GFA	9,174.21	6,637.06	6,636.73
Average GFA for the year	8,142.11	6,211.61	6,211.28
Depreciation Rates (%)	4.95%	5.32%	5.32%
Gross Depreciation	402.97	330.41	330.40
Less: Depreciation on consumer contribution on live assets	231.34	143.06	139.84
Less: Depreciation on Fully Depreciated Assets	16.94	16.54	16.54
Less: Depreciation on assets converted from loan to grant under UDAY	53.72		46.28
Net Depreciation	**100.96**	**170.81**	**127.73**

The Commission approves the total depreciation of Rs. 106.46 crore for FY 2016-17 and Rs. 127.73 crore for FY 2017-18 as shown in the Table above.

6.8 Interest on Loan Capital

CSPDCL's Submission

CSPDCL submitted that the interest on loan capital has been computed in accordance with Regulation 23 of the CSERC MYT Regulations, 2015. The allowable depreciation for the year has been considered as the normative repayment for the year. The actual weighted average interest rate of has been considered as 8.94% for FY 2016-17 and 9.76% for FY 2017-18 based on actual loan portfolio during the respective year. CSPDCL claimed the interest on loan capital of Rs. 34.51 crore for FY 2016-17 and Rs. 33.42 crore for FY 2017-18.

Commission's View

The closing Net normative loan for FY 2015-16 approved in final Truing-up of FY 2015-16 has been considered as opening net normative opening loan for FY 2016-17. Based on the approve capitalisation for FY 2016-17 and FY 2017-18 loan addition during the year has been considered for deriving the debt portion. The allowable depreciation for the year has been considered as normative repayment for the year.

The Commission sought the documentary evidences for the opening loan balance for FY 2016-17 and FY 2017-18, applicable interest rate for each source of loan and the computation of weighted average rate of interest for FY 2016-17 and FY 2017-18. The actual weighted average interest rate has been worked out based on the interest expenses paid during FY 2016-17 and FY 2017-18 against the outstanding debt for the year.

The interest expense approved for FY 2016-17after final true-up is shown in the following Table:

Table 6-20: Approved Interest Expense for FY 2016-17 (Rs. crore)

Particulars	FY 2016-17		
	Prov. True-up	Petition	Approved
Opening Net Normative Loan	716.91	412.73	716.91
Repayment during the year	107.42	117.41	106.46
Additional Capitalization of Borrowed Loan during the year	144.17	240.44	237.57
Addition/(Reduction) in Normative loan during the year	211.27	-242.29	-218.80
Closing Net Normative Loan	964.94	293.47	629.21

Particulars	FY 2016-17		
	Prov. True-up	Petition	Approved
Average Normative loan during the year	840.92	353.10	673.06
Weighted Average Rate of Interest	7.11%	8.94%	8.94%
Interest Expense	**59.75**	**34.51**	**60.17**

Similarly, the interest expense approved for FY 2017-18 after provisional true-up is shown in the following Table:

Table 6-21: Approved Interest Expense for FY 2017-18 (Rs. crore)

Particulars	FY 2017-18		
	MYT Order	Petition	Approved
Opening Net Normative Loan	1,812.27	293.47	629.21
Repayment during the year	154.69	170.81	127.73
Additional Capitalization of Borrowed Loan during the year	436.42	267.21	294.54
Addition/(Reduction) in Normative loan during the year	-	-71.08	-91.30
Closing Net Normative Loan	2,094.00	318.79	704.72
Average Normative loan during the year	1,953.14	306.13	666.97
Weighted Average Rate of Interest	8.24%	9.76%	9.76%
Interest Expense	**160.90**	**33.42**	**65.10**

The Commission approves the Interest on Loan of Rs. 60.17 crore for FY 2016-17 and Rs. 65.10 crore for FY 2017-18 as shown in the Table above.

6.9 Interest on Working Capital

CSPDCL's Submission

CSPDCL submitted that Interest on Working Capital (IoWC) has been computed as per Regulation 25 of the CSERC MYT Regulations, 2015. For computation of working capital requirement, CSPDCL has considered one month of the approved O&M expenses, maintenance spares @ 40% of Repair and Maintenance expenses and one month of receivables equal to one month of expected revenue from sale of power.

CSPDCL has considered the interest rate of 12.80% (9.30% - SBI-PLR on April 1, 2017 plus 350 basis points) for computing the IoWC for FY 2016-17. Similarly, it has considered interest rate of 12.60% (9.10% - SBI-PLR on April 1, 2018 plus 350 basis points) for computing the IoWC for FY 2017-18.

CSPDCL submitted the normative IoWC as Rs. (44.36) crore for FY 2016-17 and Rs. (93.36) crore for FY2017-18.

Commission's View

The normative IoWC has been computed in accordance with the CSERC MYT Regulations, 2015. The Commission has considered the revised normative O&M expenses for computing the working capital requirement. The receivables have been considered equivalent to one month's actual revenue. The average consumer security deposit has been considered as Rs. 1525.72 crore and Rs. 1766.74 crore for FY 2016-17 and FY 2017-18 respectively. Since, the Consumer Security Deposit is more than normative working capital requirement, the actual IoWC requirement for FY 2016-17 and FY 2017-18 works out as negative and is as shown in the Table below:

Table 6-22: Approved IoWC for FY 2016-17 and FY 2017-18 (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	Prov. True-up	Petition	Approved	MYT Order	Petition	Approved
Operation and Maintenance Expenses for one month	89.17	94.20	88.04	96.40	82.08	97.43
Maintenance spares at 15% of O&M	-	-	-		-	-
Maintenance spares @ 40% of Repair and Maintenance expenses	48.00	68.16	48.00	53.79	28.07	49.41
Receivable equal to 1 month of expected revenue from sale of power	922.98	1,013.65	879.48	981.75	947.91	907.94
Total Working Capital	1,060.16	1,176.00	1,015.52	1,131.94	1,058.06	1,054.77
Less: Security Deposit	1,523.99	1,522.53	1,525.72	1,488.08	1,798.98	1,766.74
Net Working Capital Requirement	(463.83)	(346.53)	(510.21)	(356.14)	(740.92)	(711.97)
Rate of Interest (%)	12.80%	12.80%	12.80%	13.20%	12.60%	12.60%
Interest on Working Capital requirement	**(59.37)**	**(44.36)**	**(65.31)**	**-**	**(93.36)**	**(89.71)**

The Commission approves the Interest on Working Capital of Rs. (65.31) crore for FY 2016-17 and Rs. (89.00) crore for FY 2017-18 as shown in the Table above.

6.10 Interest on Consumer Security Deposit

CSPDCL's Submission

CSPDCL has considered the Interest on Consumer Security Deposit (CSD) paid to the consumers in line with the Regulation 6.13 of the Chhattisgarh Electricity Supply Code, 2011. Accordingly, the actual interest on CSD paid by CSPDCL is Rs. 103.26 crore during FY 2016-17 as per audited accounts and Rs. 101.97 crore during FY 2017-18 as per provisional accounts.

Commission's View

The Commission sought details of actual interest on CSD paid to consumers/adjusted in consumer's bills and variation with the interest on CSD booked as per audited/provisional accounts. CSPDCL submitted that, as per audited accounts of FY 2016-17, interest booked on CSD is Rs. 99.87 crore and the same has been paid/adjusted in consumer's bill. In the provisional account of FY 2017-18, an amount of Rs. 101.97 crore has been booked whereas as per SAP data dated February 5, 2019, an amount of Rs. 105.28 crore has been paid/ adjusted in the consumer's bill. The differential amount between SAP data and provisional accounts shall be adjusted in the books of accounts before signing of accounts by the statutory auditors and approval of the Board.

The closing security deposit amount approved in True-up of FY 2015-16. has been considered as the opening balance of consumer security deposit for FY 2016-17 The Commission approves interest on consumer security deposit of Rs. 99.87 crore for FY 2016-17 as per audited accounts and Rs. 105.28 crore for FY 2017-18 as per provisional accounts.

Table 6-23: Approved Interest on CSD for FY 2016-17 and FY 2017-18 (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	Prov. True-up	Petition	Approved	MYT Order	Petition	Approved
Opening CSD	1,444.64	1,373.78	1,444.64	1,417.22	1,671.28	1,606.81
Addition	158.69	297.50	162.16	141.72	255.39	319.86
Closing CSD	1,603.33	1,671.28	1,606.81	1,558.94	1,926.67	1,926.67
Rate	6.55%	7.52%	6.55%	7.00%	6.10%	5.96%
Interest on CSD	**99.88**	**103.26**	**99.87**	**99.21**	**101.97**	**105.28**

6.11 Return on Equity

CSPDCL's Submission

CSPDCL has computed permissible equity as per the capital structure proposed by CSPDCL and as per Regulation 17.1 of the CSERC MYT Regulations, 2015. CSPDCL has excluded consumer contribution, deposit work and grant obtained from the asset addition during the year for computation of normative debt: equity. CSPDCL has considered rate of Return on Equity as 16% for FY 2016-17 and FY 2017-18. CSPDCL has claimed Return on Equity of Rs. 204.37Crore for FY 2016-17 and Rs. 211.03 crore for FY 2017-18.

Commission's View

The Return on equity capital has been computed in accordance with Regulation 17 of the CSERC MYT Regulations, 2015.

The Commission has considered the closing permissible equity approved for FY 2015-16, as the opening permissible equity for FY 2016-17 and closing permissible equity of FY 2016-17 as the opening permissible equity of FY 2017-18. The equity portion of the additional net capitalisation for FY 2016-17 and FY 2017-18 has been considered as the equity addition for the year. The Commission has considered rate of return as 16% on average equity for the year. The RoE approved after final true-up for FY 2016-17 and provisional True-up of FY 2017-18 is shown in the Table below:

Table 6-24: Approved RoE for FY 2016-17 and FY 2017-18 (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	Prov. True-up	Petition	Approved	Tariff Order	Petition	Approved
Permissible Equity in Opening GFA	1,269.14	1,277.71	1,269.15	1,382.76	1,276.92	1,277.19
Permissible Equity in Closing GFA	1,468.02	1,276.92	1,277.19	1,433.85	1,360.97	1,364.29
Average Gross Permissible Equity during the year	1,368.58	1,277.31	1,273.17	1,408.31	1,318.95	1,320.74
Rate of Return (%)	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Return on Equity	**218.97**	**204.37**	**203.71**	**225.33**	**211.03**	**211.32**

The Commission approves Return on Equity of Rs. 203.71 crore for FY 2016-17 and Rs. 211.32 crore for FY 2017-18 as shown in the Table above.

6.12 Non-Tariff Income

CSPDCL's Submission

CSPDCL submitted Non-Tariff income of Rs. 234.48 crore for FY 2016-17 for the purpose of final true-up. This includes Rs. 212.33 crore towards Non-tariff income and Rs. 22.14 crore towards revenue from Wheeling Charges, Open Access and Cross-Subsidy Charges.

Further, CSPDCL submitted Non-Tariff Income of Rs. 285.10 crore for FY 2017-18, which includes Rs. 232.37 crore towards Non-tariff income and Rs. 52.73 crore towards revenue from Wheeling Charges, Open Access and Cross-Subsidy Charges.

Commission's View

It is observed that in the petition significantly lower non-tariff income has been submitted as compared to that approved in the Tariff Order. The Commission sought head-wise details of Non-Tariff Income for FY 2016-17 and FY 2017-18 and explanation for the same.CSPDCL replied that since almost all the constituents of Non-Tariff Income depend on external factors, it is beyond the control of CSPDCL to achieve Non-Tariff Income in line with the approved numbers. The Commission also scrutinized the head-wise amount of Non-Tariff Income reflecting in audited accounts for FY 2016-17 and provisional accounts for FY 2017-18. The following table shows the head wise Non-Tariff Income approved by the Commission for FY 2016-17 and FY 2017-18:

Table 6-25: Approved Non-Tariff Income for FY 2016-17 and FY 2017-18

(Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	Prov. True-up	Petition	Approved	MYT Order	Petition	Approved
Income from Investment Fixed and Call Deposits	**208.95**	17.76	17.76	**402.12**	7.03	7.03
Other Non-Tariff Income		121.85	121.85		120.52	120.52
Income from Misc. Charges from Consumers		72.72	72.72		104.82	104.82
Wheeling Charges, Open Access & Cross Subsidy Charges		22.14	22.14		52.73	52.73
Total Non-Tariff Income		**234.48**	**234.48**		**285.10**	**285.10**

The Commission approves Non-Tariff Income of Rs. 234.48 crore for FY 2016-17 and Rs. 285.10 crore for FY 2017-18.

6.13 Aggregate Revenue Requirement

The Commission in provisional True-up Order for FY 2016-17 had approved the component-wise ARR. The Commission had approved revised ARR for FY 2017-18 in Tariff Order dated March 31, 2017. The final true-up for FY 2016-17 and provisional True-up of FY 2017-18 has been done with respect to the ARR components approved in these Tariff Orders. Based on the above, the summary of ARR approved in the Final True-up for FY 2016-17 is shown in the Table below:

Table 6-26: Approved ARR for FY 2016-17 (Rs. crore)

Sr. No.	Particulars	Prov. True-up	Petition	Approved
A	**Power Purchase Expenses**	**10,884.12**	**10,586.24**	**11,560.24**
1	Power Purchase Cost	9,721.19	9,331.22	10,305.23
2	Inter-State Transmission charges (PGCIL)	256.85	228.07	228.07
3	Intra-State Transmission Charges	835.41	836.52	836.52
4	CSLDC Charges	5.52	10.40	10.40
5	Other Charges	65.15	180.02	180.02
B	**Operation & Maintenance Expenses**	**1,368.86**	**1,429.17**	**1,355.26**
1	Net Employee Expenses	820.92	807.32	807.32
2	Net Administrative and General Expenses	129.13	152.66	129.13
3	Net Repair and Maintenance charges	120.01	170.39	120.01
4	Pension & Gratuity	298.80	298.80	298.80
5	Interim Wage Relief	-	-	-
C	**Interest & Finance Expenses**	**100.26**	**93.41**	**94.74**
1	Interest on Loan	59.75	34.51	60.17
2	Interest on Security Deposit	99.88	103.26	99.87
3	Interest on Working Capital Requirement	(59.37)	(44.36)	(65.31)
D	**Other Expenses**	**326.39**	**321.78**	**310.17**
1	Depreciation	107.42	117.41	106.46
2	Return on Equity	218.97	204.37	203.71
E	**Gain/(Loss) on Efficiency**	**46.29**	**(32.34)**	**36.09**
1	Gain/(Loss) on Sharing O&M Efficiency	46.29	(32.34)	36.09
F	**Less: Non-Tariff Income**	**208.95**	**234.48**	**234.47**
1	Non-Tariff Income	187.31	212.33	212.33
2	Wheeling Charges, Open Access & Cross Subsidy Charges	21.64	22.14	22.14
G	**Annual Revenue Requirement**	**12,516.97**	**12,163.78**	**13,122.02**

Note*: * - Revenue from sale of surplus power has been considered separately, whereas CSPDCL has reduced the power purchase expenses to the extent of revenue from sale of surplus power*

Also, the summary of ARR approved in the provisional True-up for FY 2017-18 is shown in the Table below:

Table 6-27: Approved ARR for FY 2017-18 (Rs. crore)

Sr. No.	Particulars	Tariff Order	Petition	Approved
A	**Power Purchase Expenses**	**10,096.73**	**9,625.07**	**12,068.83**
1	Power Purchase Cost	8,803.84	8,432.76	10,876.55
2	Inter-State Transmission charges (PGCIL)	362.45	291.75	291.75
3	Intra-State Transmission Charges	916.80	807.55	807.53
4	CSLDC Charges	13.64	6.66	6.66
5	Other Charges	-	86.34	86.34
B	**Operation & Maintenance Expenses**	**1,482.61**	**1,611.06**	**1,494.96**
1	Net Employee Expenses	818.72	912.72	912.72
2	Net Administrative and General Expenses	144.69	162.85	132.90
3	Net Repair and Maintenance charges	134.47	209.66	123.51
4	Pension & Gratuity	325.83	325.83	325.83
5	Interim Wage Relief	58.90	-	-
C	**Interest & Finance Expenses**	**176.59**	**42.03**	**80.67**
1	Interest on Loan	77.38	33.42	65.10
2	Interest on Security Deposit	99.21	101.97	105.28
3	Interest on Working Capital Requirement	-	(93.36)	(89.71)
D	**Other Expenses**	**326.30**	**381.84**	**339.05**
1	Depreciation	100.97	170.81	127.73
2	Return on Equity	225.33	211.03	211.32
E	**Gain/(Loss) on Efficiency**	**-**	**-**	**58.05**
1	Gain/(Loss) on Sharing O&M Efficiency	-	-	58.05
F	**Less: Non-Tariff Income**	**402.12**	**285.10**	**285.10**
1	Non-Tariff Income	324.22	232.37	232.37
2	Wheeling Charges, Open Access & Cross Subsidy Charges	77.90	52.73	52.73
G	**Annual Revenue Requirement**	**11,680.11**	**11,374.88**	**13,756.46**

Note*: * - Revenue from sale of surplus power has been considered separately, whereas CSPDCL has reduced the power purchase expenses to the extent of revenue from sale of surplus power*

6.14 Revenue from Sale of Power

CSPDCL's Submission

CSPDCL submitted the total revenue from sale of power of Rs. 10,553.72 crore for FY 2016-17 as per audited accounts, as against revenue of Rs. 11,075.78 crore approved by the Commission in the provisional True-up Order. Similarly, CSPDCL submitted total revenue from sale of power of Rs. 10,895.24 crore for FY 2017-18 as per provisional accounts, as against revenue of Rs. 13,614.66 crore approved by the Commission in Tariff Order dated March 31, 2017.

The Commission had considered additional revenue from Agriculture consumers of Rs. 240.24 crore during provisional true-up of FY 2016-17 on account of under billing to Agriculture consumers. CSPDCL submitted that Government of Chhattisgarh is providing subsidy to Agriculture consumers up to 5 HP since November 2, 2009. Subsequent to this, Government of Chhattisgarh has issued directives vide Notification 2131/F 21/08/2009/13/2/U. V/K.J.JY. on September 19, 2013 conveying the decision of giving option of billing on flat rate basis to Agriculture consumers. CSPDCL submitted that the billing to Agriculture consumers is being done based on the provisions of prevailing Tariff Order and abovementioned notification of Government of Chhattisgarh and therefore requested to re-consider the decision of additional revenue to Agriculture Consumers.

Commission's View

<u>FY 2016-17</u>

For 2016-17, the revenue from sale of power submitted by CSPDCL as reflected in the audited accounts has been considered. The State Govt. Subsidy of Rs. 700 crore as reflected in audited accounts of FY 2016-17 has also been factored

has considered revenue from sale of surplus power for arriving net Power Purchase Cost. As per methodology adopted in previous tariff orders, the Commission has treated revenue on account of sale of surplus power as revenue item which amounts to Rs. 974.13 crore.

In provisional true up order for FY 2016-17, the Commission had observed that as against the total sales submitted for agriculture consumers CSPDCL has not recovered the revenue as per approved tariff. Therefore, an additional notional revenue of Rs. 239.14 crore was considered as revenue for this category. CSPDCL has requested to re-visit the issue in view of Government of Chhattisgarh notification. The Commission is of the view that the total recovery of charges from agriculture consumers shall be in line with the Tariff approved by the Commission in its prevailing Tariff Order. The State Government can provide subsidy to any class of consumer as per enabling provision (Section 65) of the Electricity Act, 2003. The relevant clause is as below

> *"If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108,* ***pay, in advance*** *and in such manner as may be specified****, the amount to compensate the person affected by the grant of subsidy*** *in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government:…"*

The Commission feels that CSPDCL has underbilled the revenue, which was supposed to be recovered from agriculture consumers (either through billing or through subsidy). It is CSPDCL responsibility to recover the revenue from consumers or class of consumers in accordance with the tariff approved by the Commission. Shortfall in revenue due to under-recovery from class of consumers cannot be adjusted or passed on to other consumers.

The Commission is not inclined to review this issue and approves additional notional revenue of Rs. 239.14 crore for FY 2016-17 towards Agriculture category.

FY 2017-18

The Commission approves the revenue from sale of power of Rs. 10,895.24 crore as submitted by CSPDCL and as reflected in the provisional accounts of FY 2017-18. The Commission has also accepted the State Govt. Subsidy of Rs. 514.24 crore as reflected in provisional accounts of FY 2017-18.

As narrated above, the treatment of revenue from sale of surplus power has been considered as revenue. The revenue from surplus power sale of Rs. 2457.48 crore as reflected in provisional accounts of FY 2017-18 has been considered

It is observed that for 2017-18 also, CSPDCL has not recovered the revenue from agriculture consumers as against the total sales submitted and as per approved tariff. The Commission has adopted similar approach for consideration of additional revenue from Agriculture consumers, as it has adopted in true-up of FY 2016-17 and accordingly considers revenue of Rs. 351.24 crore for FY 2017-18.

The Commission has accordingly considered total Revenue for FY 2016-17 as shown in the Table below:

Table 6-28: Approved Revenue for FY 2016-17(Rs. crore)

Particulars	FY 2016-17		
	Prov. True-up	**Petition**	**Approved**
Revenue from Retail Sale of Electricity	11,075.78	10,553.72	10,553.72
Add: Subsidy from State Government	350.00	700.00	700.00
Add: Additional revenue for Agriculture Metered category	240.24	-	239.14
Add: Revenue from sale of Surplus Power	1,037.19	*	974.13
Total Revenue from Sale	**12,703.21**	**11,253.72**	**12,466.99**

Note: ** has been considered towards reduction of power purchase cost by CSPDCL*

Similarly, the Commission has considered total Revenue for FY 2017-18as shown in the Table below:

Table 6-29: Approved Revenue for FY 2017-18 (Rs. crore)

Particulars	FY 2017-18		
	Tariff Order	**Petition**	**Approved**
Revenue from Retail Sale of Electricity	13,669.09	10,895.24	10,895.24
Add: Subsidy from State Government		514.24	514.24
Add: Additional revenue for Agriculture Metered category	-	-	351.24
Add: Revenue from sale of Surplus Power	-	*	2,457.48
Total Revenue from Sale	**13,669.09**	**11,409.48**	**14,218.20**

Note: * has been considered towards reduction of power purchase cost by CSPDCL

The Commission approves total revenue of Rs. 12,466.99 crore for FY 2016-17 and Rs. 14,218.20 crore for FY 2017-18, after including revenue from surplus power.

6.15 Revenue Gap/(Surplus)

CSPDCL's Submission

CSPDCL has submitted a standalone revenue gap of Rs. 1610.07 crore for FY 2016-17 and Rs. 479.64 crore for FY 2017-18. CSPDCL submitted State Government subsidy of Rs. 700 crore for FY 2016-17 and Rs. 514.24 crore for FY 2017-18. CSPDCL did not submit any revenue gap/(surplus) of CSPGCL, CSPTCL, and CSLDC arising after final true-up for FY 2016-17 as well as provisional true up of FY

2017-18. Further, revenue gap of Rs.2,799.56 crore against the impact of true-up of FY 2014-15 and Hon'ble APTEL Judgement with carrying cost up to FY 2016-17 and regulatory asset of Rs. 760.80 crore to arrive at final gap of FY 2016-17 have been considered. CSPDCL arrived as total accumulated deficit up to FY 2016-17 as Rs. 1,166.47 crore, after considering carrying cost at 12.80% interest rate.

Further, the accumulated deficit of FY 2016-17 was considered as opening balance of revenue gap for FY 2017-18. CSPDCL added the impact of true-up of FY 2015-16 and Hon'ble APTEL judgement with carrying cost up to FY 2017-18 of Rs. 448.31 crore. Also, CSPDCL has considered revenue gap of Rs. 809.49 crore against regulatory asset amortized and Rs. 5.79 crore against review Order dated December 8, 2014. The cumulative revenue gap of FY 2017-18, after consideration of carrying cost at 12.60% interest rate, works out to Rs. 2,619.87 crore.

Commission's View

As discussed earlier, the Commission has considered the Revenue Subsidy as Rs. 700 crore for FY 2016-17 and Rs 514.24 crore for FY 2017-18.As per past practices, the revenue gap/(surplus) after final true-up for FY 2016-17 and provisional true-up of FY 2017-18 for CSPGCL, CSPTCL, and CSLDC has not been considered for computing the revenue gap/(surplus) of CSPDCL for FY 2016-17 and FY 2017-18, and the same have been considered while computing the cumulative revenue gap/(surplus) for FY 2019-20, as discussed in the subsequent Chapters.

The summary of standalone revenue gap/(surplus) approved after final truing-up of FY 2016-17 for CSPDCL is shown in the Table below:

Table 6-30: Approved Stand-alone Revenue Gap/(Surplus) for FY 2016-17 (Rs. crore)

Sl. No.	Particulars	Prov. True-Up	Petition	Approved
1	CSPDCL ARR	12,516.97	12,163.78	13,122.02
2	Add: Impact of truing up of 2014-15 and APTEL Judgment with carrying cost up to 2016-17 for CSPDCL	2,799.56	2,799.56	2,799.56
3	Less: Regulatory Asset of CSPDCL	(760.80)	(760.80)	(760.80)
4	**Net ARR of CSPDCL for FY 2016-17**	**14,555.73**	**14,202.54**	**15,160.78**
5	**Net Revenue for FY 2016-17**	**14,555.73**	**11,253.72**	**12,466.99**
6	**Revenue gap/(surplus)**	**-**	**2,948.82**	**2,693.79**

Similarly, the summary of standalone revenue gap/(surplus) approved after provisional true-up of FY 2017-18 for CSPDCL is shown in the Table below:

Table 6-31: Approved Stand-alone Revenue Gap/(Surplus) for FY 2017-18 (Rs. crore)

Sl. No.	Particulars	Tariff Order	Petition	Approved
1	CSPDCL ARR	11,833.62	11,374.88	13,756.46
2	Balance FCA to be recovered	350.00	-	-
3	Claim to be adjusted against Review Order dated 8 Dec 2014 in Petition No 35/2014 (T)	5.79	5.79	5.79
4	Add: True-up of Revenue Gap of CSPDCL	1,256.11	1,257.81	1,257.81
5	**Net ARR of CSPDCL for FY 2017-18**	**13,445.52**	**12,638.48**	**15,020.06**
6	True-up Revenue Gap/(Surplus) of CSPGCL	329.80	-	-
7	True-up Revenue Gap/(Surplus) of CSPTCL	-103.21	-	-
8	True-up Revenue Gap/(Surplus) of CSLDC	-3.02	-	-
9	**Cumulative ARR of CSPDCL**	**13,669.09**	**12,638.48**	**15,020.06**
10	**Net Revenue for FY 2017-18**	**13,669.09**	**11,409.48**	**14,218.20**
11	**Revenue Gap/(Surplus)**	**-**	**1,229.00**	**801.85**

The Commission approves Standalone Gap of Rs. 2,693.79 crore after Final Truing-up of FY 2016-17 and Rs. 801.85 crore after provisional Truing-up of FY 2017-18.

The Commission has considered carrying cost on the Revenue Gap arrived after final Truing-up of FY 2016-17 and Provisional Truing-up of FY 2017-18. The Commission has considered the interest rates as specified in the Regulations which is Base rates plus 350 basis points for respective years. The Commission, at time of provisional true-up for FY 2016-17, has approved standalone revenue gap of Rs. 1852.52 crore and the after taking into account the carrying cost on the same, the revenue gap of Rs. 2357.68 crore has been adjusted in ARR for FY 2018-19. For the computation of cumulative revenue gap, the Commission has deducted the amount of Rs. 2357.68 crore in FY 2018-19, since the same amount has already been recovered through revised tariff for FY 2018-19.

The Cumulative revenue gap arrived till FY 2018-19 is computed as shown in the following Table:

Table 6-32: Cumulative Revenue Gap with Carrying Cost till FY 2018-19 (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Opening Revenue Gap/(surplus)	-	2,866.20	4,079.71
Addition of Revenue Gap	2,693.79	801.85	(2,357.68)
Closing Revenue Gap/(Surplus)	2,693.79	3,668.05	1,722.03
Interest Rate (%)	12.80%	12.60%	12.20%
Holding/ Carrying cost for the year	172.41	411.66	353.91
Total Closing Revenue Gap/(Surplus)	**2,866.20**	**4,079.71**	**2,075.93**

The Commission approves cumulative revenue gap of Rs. 2,075.93 crore up to FY 2018-19 for CSPDCL. This revenue gap has been adjusted in ARR for FY 2019-20 as discussed in subsequent chapter.

7 REVISED ARR FOR FY 2019-20

7.1 Background

ARR for CSPGCL, CSPTCL, CSLDC and CSPDCL for Control Period from FY 2016-17 to FY 2020-21 has been approved in MYT Order dated April, 30, 2016

Regulation 5.8 (b) (ii) of the CSERC MYT Regulations, 2015 specifies as under:

> *"5.8 The filing for the control period under these Regulations shall be as under:*
>
> *xxxxxxxxxxxxxxxxxx*
>
> *(b)After first year of control period and onwards, the yearly petition shall comprise of:*
>
> *xxxxxxxxxxxxxxxxxxx*
>
> *(ii)For Distribution Wheeling and retail supply business –*
>
> *xxxxxxxxxxxxxxxx*
>
> *2. Revised power purchase quantum/cost (if any), with details thereof, for the ensuing year.*
>
> *3. Revenue from existing tariffs and charges and projected revenue for the ensuing year.*
>
> *4. Application for re-determination of ARR for the ensuing year along-with retail tariff proposal."*

In accordance with the CSERC MYT Regulations, 2015, CSPDCL has submitted the revised projection of sales, power purchase and revised ARR for FY 2019-20.

In this Chapter, the Commission has revised the projection of energy sales, power purchase and determined the revised ARR for FY 2019-20 for CSPDCL.

7.2 Revision in Contribution to Pension and Gratuity

In MYT Order dated March 31, 2016, Contribution to Pension and Gratuity was approved as Rs. 622.44 crore for FY 2019-20, which includes amount of Rs. 387.47 crore for CSPDCL, Rs. 63.75 crore for CSPTCL, Rs. 1.56 crore for CSLDC and Rs. 169.66 crore for CSPGCL.

While issuing MYT Order, the amount of Rs. 622. 44 crore was computed, assuming a 9.05% annual escalation over pay-out of Rs. 480 crore for FY 2016-17, determined on the basis of actuarial analysis.

The Commission evaluated estimated outgo for FY 2019-20 based on submission by CSPDCL and notes that the estimated pay-out towards Pension and Gratuity for FY 2019-20 would be Rs. 863.88 crore for all the utilities.

Considering the aforesaid, the Commission is of view that a part of the requirement shall be met from interest accrual from Pension fund available with Pension Trust and the balance amount, from recovery through Tariff. Accordingly, provision towards Pension and Gratuity has been reviewed in this Order.

Based on the submissions made by CSPDCL, the Commission notes that amount available with pension fund as on March 31, 2018 is Rs. 5018 crore. After considering the arrears payment of Rs. 329.43 crore, the estimated amount as on March 31, 2019 works out as Rs. 4,688.57 crore. The interest accrual from pension fund available works out as Rs. 421.97 crore at rate of interest of 9%. Accordingly, the balance amount of Rs. 441.91 crore shall be recoverable from tariff.

Accordingly, the Commission approves Contribution to Pension and Gratuity for FY 2019-20 as Rs. 441.91 crore, which includes amount of Rs. 275.09 crore for CSPDCL, Rs. 45.26 crore for CSPTCL, Rs. 1.11 crore for CSLDC and Rs. 120.45 crore for CSPGCL.

7.3 Revised ARR for CSPGCL, CSPTCL and CSLDC

The Commission in MYT Order has approved ARR for CSPGCL, CSPTCL and CSLDC for Control Period from FY 2016-17 to FY 2020-21. In general, the approved ARR of these Utilities is not supposed to be revised during the Control period, except during Mid Term Review.

As per Regulation 4.3 of CSERC MYT Regulations, 2015, the Commission, under Mid Term Review, shall carry out a detailed analysis of the actual capital expenditure incurred vis-à-vis approved targets and factor in any variations or expected variations in performance in the revised regulations. Also, CSERC MYT Regulations, 2015 specifies that any variation other than those specified in Regulation 11, shall not be reviewed by the Commission during Control period.

The Commission notes that petition for Mid-term review was not filed by any of these utilities. However, the Commission, under CSERC MYT Regulations, 2015, has inherent powers to review the performance of Utilities and revise ARR during the Control Period. Accordingly, the Commission has revised ARR for Control period for CSPGCL, CSPTCL and CSLDC on account of the following:

Revision of AFC for CSPGCL

1. On account of Revised Capital Investment Plan

In MYT Order, Annual Fixed Cost for each Generating Stations of CSPGCL (excluding ABVTPP) has been approved, which is based on approved Capital Investment Plan. Further, the Commission notes that CSPGCL has filed a Petition No. 77 of 2018 for approval of revised Capital Investment Plan. On account of such revision in capital investment plan, there would be reduction in Annual Fixed Cost because of reduction in depreciation, return on equity and interest on loan capital. Hence, for the purpose of approval of Annual Fixed Cost for FY 2019-20, the Commission provisionally approves the reduction in Annual Fixed cost which was approved in MYT Order on account of such revised Capital Investment Plan. Also, while computing the impact of interest on loan capital, the Commission has taken into account the impact of re-financing of loans, which was approved during true-up for FY 2016-17 and provisional true-up for FY 2017-18. Accordingly, the Commission has reduced AFC of KTPS by Rs. 8.52 crore, HTPS by Rs. 37.11 crore, DSPM by Rs. 4.33 crore and KWTPP by Rs. 43.59 crore, as shown in the Table below:

Table 7-1: Approved Reduction in AFC for FY 2019-20 on account of reduction in CIP

(Rs. crore)

Stations	Depreciation		RoE		Interest on Loan		Total Impact of reduction in AFC
	MYT Order	Revised	MYT Order	Revised	MYT Order	Revised	
KTPS	60.55	53.95	2.71	0.79			**8.52**
HTPS	21.58	10.2	18.65	8.82	30.88	14.98	**37.11**
DSPM	0.9	0.66	0.76	0.65	38.53	34.55	**4.33**
KWTPP	192.58	192.58	91.83	91.83	263.16	219.57	**43.59**
HB	2.65	2.65	5.85	5.85	0.15	0.15	**-**
ABV TPP							**-**
Total	**278.26**	**260.04**	**119.80**	**107.94**	**332.72**	**269.25**	**93.55**

2. Revision in O&M Expenses

In MYT Order, O&M Expenses was approved as per provisions of CSERC MYT Regulations, 2015. While approving O&M Expenses, the Commission had considered the CPI of 9.05% and WPI of 6.77% based on average of CPI and WPI indices for the period from FY 2010-11 to FY 2014-15. Now, latest CPI and WPI indices are available. The Commission, in this Order, has undertaken true-up for FY 2016-17 and provisional true-up for FY 2017-18 based on CPI and WPI indices for the respective years. The Commission is of the view that change in O&M Expenses on account of changes in these indices is uncontrollable and the same has to be considered at time of true-up for respective year. However, based on latest trends it is felt that there is need to review the O&M Expenses for FY 2019-20 on account of revision in CPI and WPI indices.

The Commission notified CSERC MYT Regulations, 2016 (First amendment) on June 16, 2017 and made it effective from April 1, 2017, whereby employee expenses are excluded from accounting of sharing of gains/(losses). Hence, the employee expenses are allowable on actual basis. In view of this, the Commission has revised only R&M and A&G Expenses for FY 2019-20.

The Commission has considered the following indices for determining the R&M and A&G Expenses for FY 2019-20:

Table 7-2: CPI Index and WPI Index considered for O&M Expenses for FY 2019-20

Particulars	MYT Order	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
CPI Index	9.05%	4.12%	3.08%	4.38%	4.38%
WPI Index	6.77%	1.73%	2.92%	4.41%	4.41%
(CPI: WPI::60:40) Index	8.14%	3.16%	3.02%	4.39%	4.39%

The above said WPI indices for respective years are applied on base expenses determined by the Commission for FY 2015-16, to arrive at revised normative R&M and A&G Expenses for FY 2019-20.

Accordingly, O&M Expenses for CSPTCL and CSLDC are computed for FY 2019-20 as shown in the following Table:

Table 7-3: Revised O&M Expenses for CSPTCL and CSLDC for FY 2019-20

(Rs. crore)

Particulars	CSPTCL		CSLDC	
	MYT Order	Revised Approved	MYT Order	Revised Approved
Employee Expenses	201.77	201.77	8.02	8.02
A&G Expenses	35.24	30.96	1.40	1.23
R&M Expenses	36.12	31.73	2.05	1.80
Total O&M Expenses	**273.13**	**264.45**	**11.48**	**11.05**

Similarly, the generation station-wise O&M Expenses for CSPGCL are computed for FY 2019-20 as shown in the following Table:

Table 7-4: Revised O&M Expenses for CSPGCL for FY 2019-20 (Rs. crore)

Particulars	FY 2019-20				
	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP
Employee Expenses	130.31	247.07	87.94	12.01	108.84
A&G Expenses	9.26	17.05	12.27	1.64	
R&M Expenses	37.70	103.17	81.81	2.29	
Total O&M Expenses	**177.27**	**367.29**	**182.03**	**15.93**	**108.84**

Revised ARR for CSPTCL and CSLDC

In view of the above, the Commission has revised ARR for FY 2019-20 for CSPTCL and CSLDC as shown in the following Table:

Table 7-5: Revised ARR for CSPTCL and CSLDC for FY 2019-20 (Rs. crore)

Particulars	CSPTCL	CSLDC
Aggregate Revenue Requirement	954.19	13.90
Contribution to Pension and Gratuity	45.26	1.11
Total ARR	**999.45**	**15.01**

Revised Annual Fixed Cost for CSPGCL Generating Stations

For ABVTPP, the Commission has approved the Annual Fixed Cost and energy charge for FY 2019-20 in its Tariff Order dated July 7, 2018. The Commission has considered the same AFC for FY 2019-20. On account of revision in Depreciation, Return on Equity, Interest on loan capital because of revised Capital Investment Plan and revised O&M Expenses, the Commission has approved revised Annual Fixed Cost for existing Generating Stations, except ABVTPP, as shown in the following Table:

Table 7-6: Revised Annual Fixed Cost for CSPGCL's generating Stations for FY 2019-20 (Rs. crore)

Particulars	KTPS	HTPS	DSPM	Hasdeo Bango	KWTPP	ABVTPP
Annual Fixed Cost	264.54	524.06	473.51	26.52	629.05	1599.32
Contribution to Pension and Gratuity	42.71	44.22	7.26	2.95	7.16	16.15
Total AFC	**307.25**	**568.28**	**480.77**	**29.47**	**636.21**	**1615.47**

7.4 Energy Sales

CSPDCL's Submission

CSPDCL submitted that there are various factors, which can have an impact on the actual consumption of electricity and are often beyond the control of the licensee, such as Government Policy, economic climate, weather conditions, force-majeure events like natural disasters, change in consumption mix, etc. Hence, various factors affecting electricity consumption considered and interrelationships have been estimated among them to arrive at a forecast of energy sales within a range for the purpose of estimating future costs/revenues. Further, CSPDCL added that CSERC MYT Regulations, 2015 has specified sales mix and quantum of sales as uncontrollable, which are beyond the control of the licensee, and could not be mitigated by the licensee.

The Commission in its Tariff Order dated April 30, 2016 had merged HV and EHV categories into supply at HV voltage level to be effective from April 1, 2016. CSPDCL, for projecting the category-wise energy sales for FY 2019-20, has categorized the past sales prior to FY 2016-17 based on new redefined categories/ sub categories and apportioned/transformed it so that the total actual sales category wise remains same. CSPDCL has considered the past growth trends in each consumer category for projecting FY 2019-20. Compounded Annual Growth Rate (CAGR) is computed for each category of LV and HV consumers for the past 5-Year period from FY 2012-13 to FY 2017-18, 4-Year period from FY 2013-14 to FY 2017-18, 3-Year period from FY 2014-15 to FY 2017-18, 2-Year period from FY 2015-16 to FY 2017-18 along with the Year-on-Year growth rate of FY 2017-18 over FY 2016-17.Subject to the specific characteristics of each consumer category, 5 Year CAGR has been chosen as the basis of sales projection for that category. CSPDCL has considered the actual sales for FY 2017-18 for each consumer category as the base, i.e., the CAGR is applied over the actual sales for FY 2017-18 to make projections for each category for FY 2018-19; and for projections for FY 2019-20.

Further, for projection of number of consumers, sale and connected load of subcategories/slabs of any consumer category, CSPDCL has used the ratio of provisional sales in the subcategory to total sales of the category observed in FY 2017-18. For projecting the category-wise energy sales for FY 2019-20, CSPDCL has categorized the past sales prior to FY 2017-18 based on new redefined categories/ sub categories and apportioned it so that the total actual sales category wise remains same.

The category-wise CAGR considered by CSPDCL and Energy Sales projected for FY 2019-20 is summarised in the following Table:

Table 7-7: Consumer category-wise sales estimated by CSPDCL for FY 2019-20 (MU)

Particulars	FY 2019-20		
	CAGR considered	Remarks	Sales (MU)
LV Category			**13,296.47**
LV 1: Domestic Including BPL	6.42%	5 Year CAGR	5,436.30
LV 2: Non-Domestic (Normal Tariff)	5.43%	5 Year CAGR	950.48
LV 2.1: Non-Domestic (Demand Based Tariff)	10%	Fixed	50.38
LV 3: Agriculture – Metered	10%	Fixed	5,081.53
LV 4: Agriculture - Allied Activities	2.15%	Wt. Average	18.66
Up to 100 HP or 75 kW	1.37%	5 Year CAGR	*16.69*
Demand Based Tariff for Contract Demand of 15 to 75 kW	10%	Fixed	*1.97*
LV 5: LT Industry	1.92%	Wt. Average	572.54
LV 5.1: Flour mills, Hullers, power looms, grinders for grinding masalas, terracotta, handloom, handicraft, agro-processing units, minor forest produce up to 15 HP	0.00%	No growth	*52.54*
LV 5.2: Other Industries	0.00%	No growth	*244.91*
LV 5.3: Demand based Tariff for contract above 15 kW to 75 kW	10%	Fixed	*275.10*
LV 6: Public Utilities	8.04%	5 Year CAGR	412.23
LV 7: IT Industries	0.00%	No growth	0.00
LV 8: Temporary	5.00%	Fixed	774.34
HV Category			**10,199.49**
HV 1: Railway Traction	0.57%	5 Year CAGR	935.97
HV 2: Mines	7.79%	Wt. Average	712.78
HV 3: Other Industrial and General Purpose Non-Industrial	4.37%	Wt. Average	2,343.83
HV 4: Steel Industries	10.00%	Fixed	5,852.92
HV 5: Irrigation & Agriculture Allied Activities, Public Water Works	3.78%	5 Year CAGR	136.16
HV 6: Residential	1.40%	5 Year CAGR	196.39
HV 7: Start-up Power Tariff	0.00%	No Growth	19.94
HV 8: Industries related to manufacturing of equipment for RE power generation	10%	Fixed	1.50
HV 9: Information Technology Industries	0.00%	No Growth	-
HV 10: Temporary Connection	0.00%	No Growth	-
Total Sales for FY 2019-20			**23,495.96**

Commission's View

For projecting the energy sales for respective categories, the Commission has analysed the trend of actual sales. The category-wise sales projected by CSPDCL and approved by the Commission has been discussed in the paragraphs below:

LV-1: Domestic Consumers including BPL consumers

As against the sales of 7,515.30 MU, approved in the MYT Order, CSPDCL has projected 5436.30 MU sales to this category. From the analysis of sales data, the Commission has observed that the sales to domestic category has increased at a CAGR of 6.4% over the last five years, 5.6% over the last four years, 2.8% over the last three years, 1.42% over the last two years, and 1.65% YoY, based on actual sales till FY 2017-18. The trend indicates a definite slowdown in growth rate in last three years, which is 2.80%. However, CSPDCL has estimated the growth rate at 6.42% for FY 2019-20 over FY 2017-18 which appears to be much on the higher side. The Commission is of the view that it would be prudent to sync the estimation for FY 2019-20 with the 3-year CAGR of 2.80% over FY 2017-18. Accordingly, the Commission has estimated sales to domestic category (including BPL) at 5,072.40 MU for FY 2019-20, as indicated in the table below:

Table 7-8: Sales projection for LV Domestic Category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV 1: Domestic Category	4,800.03	4,934.34	5,072.40

LV-2: Non-Domestic Category

Regarding LV 2.1 Non-domestic category, the Commission notes that CSPDCL has projected sales of 950.48 MU for this category compared to 1164.35 MU approved in the MYT Order. Analysis of last five years' sales data points towards plateauing of growth rate over the last three years. The sales have increased at CAGR of 5.43% over the last five years, 4.44% over the last four years, 4.13% over the last three years, 3.14% over the last two years, and 3.24% YoY, based on actual sales for FY 2017-18.

Hence, for estimating the projection of sales to this category for FY 2019-20, the Commission deems it appropriate to adopt the 3-year CAGR of 4.13% over actual sales for FY 2017-18. Accordingly, the Commission has estimated sales to Non-domestic category for FY 2019-20 at 927.11 MU. The Commission has projected the slab-wise energy sales in the same proportion of the actual sales for FY 2017-18.

Similarly, regarding LV 2.2 Non-domestic category demand-based tariff, the CSPDCL has projected sales of 50.38 MU to this category as compared to the sales of 118.62 MU approved in the MYT Order.

CSPDCL has considered growth rate of 10% for projection of energy sales over actual sales for FY 2017-18. It appears that the actual growth in energy sales for this sub-category is much higher as more consumers have opted for demand-based tariff in past years. However, as the total energy sales for entire category may remain the same, the Commission has considered the same growth rate of 4.13% on actual sales for FY 2017-18. Accordingly, the Commission has estimated the energy sales of 45.14 MU for LV 2.2 category. The projected sales for the category are indicated in the table below:

Table 7-9: Sales projection for LV-2: Non-Domestic Category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV-2.1: Non-Domestic	855.08	890.37	927.11
LV 2.2 Non-Domestic (Demand Based)	41.64	43.35	45.14

LV 3: Agriculture Category

CSPDCL has projected the sales for Agricultural Category as 5,081.53 MU for FY 2019-20, by considering fixed CAGR of 10%.

CSPDCL's estimation of sales for FY 2019-20 is in relation to sales data of previous years which are largely based on assessed consumption (approximately 60%), which is due to high percentage of defective meters and lack of timely meter reading. As a result, the estimation of sales for FY 2019-20 cannot be said to be reflective of actual consumption. The Commission, in the Tariff Order for FY 2018-19, had underlined this concern and had sought for justification in this regard. However, the reasons advanced and correctives taken by CSPDCL were not convincing. In view of the aforesaid, the Commission does not consider it appropriate to estimate energy sales based on such assessed consumption.

Further, it is noted that CSPDCL has spent approximately Rs. 230 crore on separation of Agricultural feeders, with installation of feeder meters, for better load management and capturing actual sales. Therefore, actual consumption data captured at feeder-meter level would be a better option for estimation of energy sales for Agriculture category. Accordingly, the Commission has proposed the methodology for estimation by taking the feeder-meter level consumption data as the basis. However, for the present, the Commission has relied on data submitted by CSPDCL on random sampling basis. Therefore, it is desirable to undertake a field level survey for estimation of Agriculture consumption.

In view of the aforesaid, the Commission directs CSPDCL to undertake a field level study for determination of norms of consumption (units/HP/month) for agriculture category and submit its report to the Commission by December 31, 2019. Thereafter, Commission would undertake a detailed review of the methodology of determination of norms of consumption.

For estimating the consumption of Agriculture category for FY 2019-20, the Commission has analysed the sampled metered data at feeder level for FY 2017-18, collected from predominantly agriculture districts, samples being selected on random basis. The feeder level consumption data for FY 2017-18 has thus been used for deriving consumption norm in term of units per HP per month, as indicate in the table below:

Table 7-10: Summary of Sample meter data for Agriculture feeder – FY 2017-18 (MU)

Districts	Feeder	Connected Pumps (Nos.)	Total Connected Load (HP)	Consumption (Units)	Consumption (units/HP/month)
Durg	Ahiwara	575	2,802	56,24,000	167.26
	Godhi	684	2,296	47,74,600	173.29
	Matra	303	1,623	39,46,800	202.65
Raipur	Kurud	262	966	29,08,000	250.86
	Adesana	44	188	8,21,045	363.94
	Siliyari	47	179	7,39,000	344.04
Mahasaund	Kisadi	145	479	15,30,816	266.32
	Toshgaon	132	432	13,46,298	259.70
	Arjuni	323	1,009	33,44,058	276.19
Dhamtari	Khapri	342	1,051	21,04,400	166.86
	Demar	812	2,624	32,66,800	103.75
	Sambalpur	389	1,267	28,46,700	187.23
Grand Total		**4,058**	**14,916**	**3,32,52,517**	**185.78**

From the above table, it has been noted that weighted average consumption for sampled metered data has been worked out as 185.78 units/HP/month. Being a representative sample, this consumption figure could be considered as a norm for projecting the agricultural sales for entire State.

It is pertinent to mention here that as per the SNC-Lavalin study, 2009, commissioned by the erstwhile CSEB, the actual consumption per HP/month was reported as 137 units. Comparing this figure with that of FY 2017-18, as calculated above, the annual escalation in consumption norm comes to 3%. Moreover, variation in load factor could be marginal, keeping in view lowering underground water table. After considering this annual escalation, consumption norm for FY 2019-20 has been arrived at 197.09 units/HP/month.

However, from sales data submitted by CSPDCL, which is inclusive of 60% assessed sales, the norm for FY 2017-18 works out to be 248 units/ HP/ month which is 33.5% higher, compared to consumption norm determined above. Accordingly, the projection for FY 2019-20 has been assessed as 265 units/HP/month. The Commission wanted to ascertain the reasons for this unreasonably high deviation. However, CSPDCL could not furnish any justification. Accordingly, as against CSPDCL's projection of 5082 MU, the Commission approves the estimated sales as 3775.11 MU for FY 2019-20, shown in the table below:

Table 7-11: Sales projection for LV-3: Agriculture Category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV-3: Agriculture Category	4,199.62	3,295.12	3,775.11

LV 4: Agriculture Allied Services

The Commission notes that CSPDCL has projected 18.66 MU sales to this category as compared to the sales of 18.06 MU approved in the MYT Order. The sales to Agriculture Allied Services category have increased at CAGR of 3.02% over the last five years, 4.07% over the last four years, 3.18% over the last three years, 3.79% over the last two years, and 1.92% year-on-year based on the actual sales for FY 2017-18.

The Commission notes that energy sales in this category in the past have increased. The Commission has considered the 3-year CAGR of 3.18% for projection of sales over the actual sales for FY 2017-18. The Commission has estimated sales to Agriculture Allied Services category at 19.03 MU for FY 2019-20, as shown in the table below:

Table 7-12: Sales projection for LV-4: Agriculture Allied Activities (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV-4: Agriculture Allied Activities	17.87	18.44	19.03

LV 5: LT Industry

CSPDCL has projected 572.54 MU sales to this category as compared to the sales of 498.45 MU approved in the MYT Order. The sales to LT Industry category have increased at CAGR of 1.92% over the last five years, 0.42% over the last four years, 0.14% over the last three years, (0.51) % over the last two years, and 1.30% year-on-year based on the actual sales for FY 2017-18.

The Commission has observed the fluctuating trend in this category. In fact, the actual sales in this category have decreased in FY 2016-17 over the previous years, which was become at level of FY 2013-14. However, the energy sales have further increased in FY 2017-18 over previous years. The Commission has considered the Year on Year CAGR of 1.30% for projection of sales over the actual sales for FY 2017-18. The Commission has estimated sales to LT Industry category at 538.58MU for FY 2019-20, as shown in the Table below:

Table 7-13: Sales projection for LV-5: LT Industry (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV-5: Industry	524.80	531.65	538.58

LV 6: Public Utilities

CSPDCL has projected 412.23 MU sales to this category as compared to the sales of 329.01 MU approved in the MYT Order. The sales to LT Industry category have increased at CAGR of 8.04% over the last five years, 7.37% over the last four years, 7.67% over the last three years, 10.84% over the last two years, and 11.68% year-on-year based on the actual sales for FY 2017-18.

The Commission has considered the 2-Year CAGR of 10.84% for projection of sales over the actual sales for FY 2017-18. The Commission has estimated sales to Public Utilities category at 433.89 MU for FY 2019-20, as indicated in the following table:

Table 7-14: Sales projection for LV-6: Public Utilities (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV-6: Public Utility	353.16	391.45	433.89

LV 8: Temporary

CSPDCL has projected 774.34 MU sales to this category as compared to the sales of 947.13 MU approved in the MYT Order. The sales to LT Temporary category have increased at CAGR of 17.39% over the last five years, 22.41% over the last four years, 13.49% over the last three years, 12.45% over the last two years, and 15.65% year-on-year based on the actual sales for FY 2017-18.

The Commission has considered the 2-Year CAGR of 12.45% for projection of sales over the actual sales for FY 2017-18. The Commission has estimated sales to LT Temporary category at 888.17 MU for FY 2019-20, as indicated in the following table:

Table 7-15: Sales projection for LV-8 Temporary Category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
LV-8: Temporary	702.35	789.81	888.17

HV 1: Railway Traction

CSPDCL has estimated 935.97 MU sales to this category as compared to the sales of 970.64 MU approved in the MYT Order. The sales to Railway Traction category have increased at CAGR of 0.57% over the last five years, 2.53% over the last four years, 2.23% over the last three years, 1.97% over the last two years, and 2.51% year-on-year based on the actual sales for FY 2017-18.

There is steady increase in energy sales to this category. The Commission has considered the 3-Year CAGR of 2.23% for projection of sales over the actual sales for FY 2017-18. The Commission has estimated sales to HV Railway Traction category at 967.20 MU for FY 2019-20, as shown in the table below:

Table 7-16: Sales projection for HV-1: Railway Traction category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV-1: Railway Traction	925.43	946.08	967.20

HV 2: Mines

CSPDCL has projected 712.78 MU sales to this category as compared to the sales of 724.08 MU approved in the MYT Order. The sales to HV Mines category have increased at CAGR of 12.20% over the last five years, 12.56% over the last four years, 14.70% over the last three years, 18.15% over the last two years, and (1.36) % year-on-year based on the actual sales for FY 2017-18.

There is steady increase in energy sales to this category in the past. However, during FY 2017-18, the energy sales have reduced by 1.36% over previous years. Accordingly, it appears that the increase would be not much higher in this category.

The Commission has considered CAGR of 9.08%, which is half of 2-year CAGR, for projection of sales over the actual sales for FY 2017-18. Thus the Commission has estimated sales to HV Mines category at 733.67MU for FY 2019-20, as shown in the table below:

Table 7-17: Sales projection for HV-2: Mines category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV-2: Mines	616.66	672.63	733.67

HV 3: Other Industrial & General Purpose Non-Industrial

CSPDCL has projected 2,343.83 MU sales to this category as compared to the sales of 3,295.74 MU approved in the MYT Order. The sales to HV Other Industrial and General purpose Non-industrial category have shown negative growth trend in the past. The actual sales for FY 2017-18 are 2150.12 MU, which are slightly lower than energy sales in FY 2013-14. The Commission has further analysed the growth rates for consumption at different voltage levels. It has been observed that there is decreasing trend for consumption at 132 kV and 220 kV level. The Commission has not considered any growth for consumption at this voltage level.

However, there is increasing trend for energy sales at 33 kV and 11 kV level. The Commission has considered 3 Year CAGR of 4.48% and 5.61% over the actual sales for FY 2017-18 at voltage level of 33 kV and 11 kV respectively. The Commission has estimated sales to HV Other Industrial and General purpose Non-industrial category at 2,289.41MU for FY 2019-20, as shown in the table below:

Table 7-18: Sales projection for HV-3: Other Industrial & General Purpose Non-Industrial category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV-3: Other Industrial & General Purpose Non-Industrial	2,150.12	2,218.17	2,289.41

HV 4: Steel Industries

CSPDCL has projected 5,852.92 MU sales to this category as compared to the sales of 5,534.78 MU approved in the MYT Order. The sales to HV Steel Industries category have increased at CAGR of 9.92% over the last five years, 13.15% over the last four years, 13.22% over the last three years, 13.41% over the last two years, and 17.91% year-on-year based on the actual sales for FY 2017-18.

The growth in consumption for this category is much higher in past two years.. The Commission notes that CSPDCL has considered the CAGR of 10% for estimating the energy sales for this category. The Commission notes that 5 Year CAGR for this category works out as 9.92%, which gives the increase over much longer period. Hence, the Commission has also considered CAGR of 10% over actual sales for FY 2017-18. The Commission has estimated sales to HV Steel Industries category at 5,852.98MU for FY 2019-20, as shown in the table below:

Table 7-19: Sales projection for HV-4: Steel Industries (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV-4: Steel Industries	4,837.17	5,320.89	5,852.98

HV 5: Irrigation & Agriculture Activities, Public Water Works

The Commission has considered 2 Year CAGR of 6.81% over the actual sales for FY 2017-18. The Commission has estimated sales to this category at 144.22MU for FY 2019-20, as shown in the table below:

Table 7-20: Sales projection for HV 5: Irrigation & Agriculture Activities, Public Water Works category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV 5: Irrigation & Agriculture Activities, Public Water Works	126.42	135.03	144.22

HV 6: Residential

CSPDCL has projected 196.39 MU sales to this category as compared to the sales of 314.48 MU approved in the MYT Order. The Commission has considered 2 Year CAGR of 3.43% over the actual sales for FY 2017-18. The Commission has estimated sales to this category at 204.35MU for FY 2019-20, as shown in the table below:

Table 7-21: Sales projection for HV-6: residential category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV 6: Residential	191.00	197.56	204.35

HV 7: Start-up Power

CSPDCL has projected 19.94 MU sales to this category as compared to the sales of 46.34 MU approved in the MYT Order. There is decreasing trend in consumption of this category in past years; hence, the Commission has not considered any growth over the actual sales for FY 2017-18. The Commission has estimated sales to Start-up Power category at 19.94 MU for FY 2019-20, as shown in the table below:

Table 7-22: Sales projection for HV 7: Start-up Power category (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV 7: Start-up Power	19.94	19.94	19.94

HV 8: Industries related to manufacturing of equipment for RE power generation

The Commission notes that CSPDCL has projected 1.50 MU sales to this category as compared to the sales of 1.52 MU approved in the MYT Order. The Commission has not considered any growth over the actual sales for FY 2017-18. The Commission has estimated sales to this category at 1.24 MU for FY 2019-20, as shown in the table below:

Table 7-23: Sales projection for HV 8: Industries related to manufacturing of equipment for RE power generation (MU)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
HV 8: Industries related to manufacturing of equipment for RE power generation	1.24	1.24	1.24

HV 10: Information Technology Industries and HV 11: Temporary Connection

The Commission has accepted submission of CSPDCL's and has estimated sales as Nil for FY 2019-20 for this category

The summary of category-wise sales for FY 2019-20 approved by the Commission in this order, estimated by CSPDCL and as approved in the MYT order 2016 is shown in the table below:

Table 7-24: Consumer category-wise sales estimated by the Commission for FY 2019-20 (MU)

Particulars	MYT Order 2016	CSPDCL Petition	Approved in this Order
LV Category	**15334.90**	**13,296.47**	**11,699.43**
LV 1: Domestic Including BPL	7,515.30	5,436.30	5,072.40
LV 2: Non-Domestic (Normal Tariff)	1,164.35	950.48	927.11
LV 2.1: Non-Domestic (Demand Based Tariff)	118.62	50.38	45.14
LV 3: Agriculture – Metered	4,743.99	5,081.53	3775.11
LV 4: Agriculture - Allied Activities	18.06	18.66	19.03

Particulars	MYT Order 2016	CSPDCL Petition	Approved in this Order
LV 5: LT Industry	498.45	572.54	538.58
LV 6: Public Utilities	329.01	412.23	433.89
LV 7: IT Industries	-	-	-
LV 8: Temporary	947.13	774.34	888.17
HV Category	**11,070.24**	**10,199.49**	**10,213.00**
HV 1: Railway Traction	970.64	935.97	967.20
HV 2: Mines	724.08	712.78	733.67
HV 3: Other Industrial and General Purpose Non-Industrial	3295.74	2,343.83	2,289.41
HV 4: Steel Industries	5534.78	5,852.92	5,852.98
Low Load Factor Industries	95.10	-	-
HV 5: Irrigation & Agriculture Allied Activities, Public Water Works	87.67	136.16	144.22
HV 6: Residential	314.48	196.39	204.35
HV 7: Start-up Power Tariff	46.34	19.94	19.94
HV 8: Industries related to manufacturing of equipment for RE power generation	1.52	1.50	1.24
HV 9: Information Technology Industries	-	-	
HV 10: Temporary Connection	-	-	
Total Sales for FY 2019-20	**26,405.14**	**23,495.96**	**21,912.43**

7.5 Energy Losses & Energy Balance

CSPDCL's Submission

CSPDCL has submitted that it has considered intra-state transmission loss of 3.22% as approved in the MYT order dated April 30, 2016. Also, it has considered distribution loss of 19% as specified in clause 71 of CSERC MYT Regulations, 2015.

After taking into account the projected energy sales for FY 2019-20, distribution loss of 19% and intra-State Transmission loss of 3.22%, CSPDCL has projected net energy requirement of 28,147.87 MU at distribution periphery.

Commission's Views

The proviso to Regulation 71.3 of MYT Regulations, 2015 (First amendment) notified on June 16, 2017 specifies that, if the State utility enters into any agreement with Government of India and/or Chhattisgarh Government, the energy loss trajectory agreed under the agreement shall prevail over the energy loss specified in this

Regulations. Accordingly, the Commission in Tariff Order for FY 2018-19 has approved energy loss for below 33 kV system of 16.50% for FY 2018-19 based on target set under UDAY scheme. Further, it is noted that UDAY scheme stipulates target up to FY 2018-19 only. The Commission approves the same target of 16.50% for FY 2019-20 based on UDAY Scheme.

The Commission has approved the intra-State Transmission loss of 3.22% in the MYT Order. However, as discussed in earlier Chapter, the Commission provisionally approved intra-State Transmission loss of 3% for FY 2017-18. Hence, it would not be appropriate to consider higher transmission losses, as actual losses are much lower. Hence, the Commission has considered intra-State Transmission loss of 3% for FY 2019-20 also. Further, the Commission has estimated inter-State transmission loss of 3.63% for FY 2019-20, which is the average of the actual loss for April 2016 to March 2017. The Energy Balance approved by the Commission for FY 2019-20 is shown in the following Table:

Table 7-25: Energy Balance approved by the Commission for FY 2019-20

Particulars	Formulae	MYT Order 2016	CSPDCL Petition	Approved
LV Sales	A	15,335	13,296.47	11,699.43
HV Sales (11 kV & 33 kV)	B	7,696	7,463.85	7,449.28
Sub-total	C=A+B	23,031	20,760.33	19,148.71
Distribution Loss below 33 kV (%)	**D**	**19.00%**	**19.00%**	**16.50%**
Distribution Loss below 33 kV (MU)	E	5,402	4,869.71	3,783.88
Gross Energy requirement at 33 kV level	F=C+E	28,433	25,630.03	22,932.59
Less: Direct Input to distribution at 33 kV level	G	1,977	217.80	217.80
Net Energy Input required at Distribution Periphery at 33 kV level	H=F-G	26,456	25,412.23	22,714.79
Sales to EHV consumers (132 kV & 220 kV)	I	3,374	2,735.63	2,763.72
Net Energy requirement at Distribution periphery	**J=H+I**	**29,830**	**28,147.87**	**25,478.51**
Distribution loss including EHV Sales	K	16.98%	17.17%	14.73%
Intra-State Transmission loss (in %)	L	3.22%	3.22%	3.00%
Intra-State Transmission loss (in MU)	M	992	936.52	788.00
Net energy requirement at Transmission periphery	**N=J+M**	**30,823**	**29,084.38**	**26,266.51**

7.6 Power Purchase Expenses

CSPDCL's Submission

CSPDCL submitted that it has broadly categorised the sources of energy into State owned Generation i.e., Generation from CSPGCL, Allocation (firm and non-firm) from Central Generating Stations (CGS), Captive Power Plants (CPPs), Independent Power Producers (IPPs), Biomass, and Solar Power Plants and Short-Term/UI/Bilateral purchases, etc. CSPDCL further submitted that new Central and State Generating Plants scheduled to commence generation during the MYT Control Period and accordingly provided the expected commissioning date.

CSPDCL has projected the purchase of power from various sources as detailed below:

Power Purchase from Central Generating Stations

CSPDCL has firm allocation of power from Central Generating Stations like Korba Super Thermal Power Station (STPS), Vindhyachal Thermal Power Station, Sipat Super Thermal Power Station, Kahalgaon Super Thermal Power Station, Mauda Super Thermal Power Station, Solapur Super Thermal Power Station and Tarapur Atomic Power Stations etc. to meet its energy requirement.

For estimating the power purchase cost, CSPDCL has considered the last three months (July 18 to September 18) average energy charge (excluding FSA) for projecting the energy charge for the FY 2019-20. The fixed charges have been considered at same level as FY 2018-19 as per the latest tariff orders issued by the Central Electricity Regulatory Commission. CSPDCL have considered only the fixed and energy charge and has estimated that any cost over and above would be passed though on actual basis.

CSPDCL estimated the gross energy availability from the existing stations based on the allocated capacity and the average Plant Load Factor (PLF) for the past five years i.e., from FY 2013-14 & FY 2017-18 and same has been considered for FY 2019-20 for calculating the gross energy availability for state. For recently commissioned generating stations, CSPDCL has considered PLF of 80%.

CSPDCL submit that expected commissioning date of upcoming LARA STPS Unit I and II are April 1, 2019 and September 1, 2019 respectively. CSPDCL has estimated average power purchase cost from LARA for FY 2018-19 at Rs. 3.90/kWh.

The summary of the power purchase quantum and cost as submitted by CSPDCL for CGS is shown in the Table below:

Table 7-26: Power Purchase from CGS as projected by CSPDCL for FY 2019-20

Source	Power Purchase (MU)	Fixed Cost (Rs. crore)	Variable Cost (Rs. crore)	Total Cost (Rs. crore)
Korba STPS	1,507.71	79.31	192.19	271.51
Korba STPS Unit VII	550.24	73.38	69.08	142.46
Vindhyachal	1,356.10	196.63	192.20	388.83
Sipat STPS	3,139.67	426.13	397.12	823.25
Mauda STPS	984.51	140.40	289.86	430.26
NTPC - SAIL (NSPCL)	297.95	52.71	46.41	99.12
Lara STPS	4,143.32	-	1,615.90	1,615.90
Solapur STPS	520.59	104.74	208.51	313.26
Kahalgaon STPS	182.63	22.99	42.22	65.21
Tarapur (Unit 3 & 4)	303.97	-	93.30	93.30
Hirakund (OHPCL)	13.95	-	2.87	2.87
Total Central Generating Stations	**13,000.64**	**1,096.29**	**3,149.66**	**4,245.95**

Power Purchase from State Generating Stations

CSPDCL submitted that it mainly relies on the power from State Generating Stations. Currently, it has allocation of 3,225 MW from the State generating company i.e. CSPGCL. CSPDCL, while estimating the costs, have considered the fixed charges and energy charges of existing stations as approved by the Commission in its MYT Order dated April 30, 2016 for projecting the energy charge for the FY 2019-20 and has estimated that any cost over and above would be passed though on actual basis. The projection for Quantum of energy purchased from each State generating station is based on PLF as approved by Commission in its MYT Order dated April 30, 2016 for FY 2019-20.

For State Hydro and Co-generation Plant of CSPGCL, CSPDCL has considered the latest Tariff Order of the Commission and cost as per latest figures available for the last 6 months (April 17 to September 17). Also, CSPDCL has considered sale of the power of Marwa to Telangana at state periphery for FY 2019-20 on back to back arrangement without any trading margin at actual prevailing rates.

The total power purchase cost along with quantum from CSPGCL is shown below:

Table 7-27: Power Purchase from State Generating Stations submitted by CSPDCL for FY 2019-20

Source	Power Purchase (MU)	Fixed Cost (Rs crore)	Variable Cost (Rs crore)	Total Cost (Rs crore)
KTPS - East	1,306.12	339.72	224.65	564.37
DSPM	3,387.93	501.10	437.04	938.14
Hasdeo TPS	4,942.28	640.10	573.30	1,213.40
KTPS- West	3,527.54	696.56	349.23	1,045.79
Marwa	7,055.09	1,622.07	1,122.09	2,744.16
HPS Bango	271.26	-	25.01	25.01
HPS Korba Mini Hydro	4.38	-	1.67	1.67
HPS Gangrel	25.75	-	9.48	9.48
HPS Sikaser	24.04	-	6.46	6.46
Co-Gen Kawardha	47.70	-	22.75	22.75
Total State Generating Stations	**20,592.08**	**3,799.55**	**2,771.67**	**6,571.22**

Power Purchase from Renewable Sources

The Commission in its Chhattisgarh State Electricity Regulatory Commission (Renewable Purchase Obligation and REC framework Implementation) Regulations, 2016 has shown a trajectory for RPO compliance till FY 2020-21. Further in its MYT Order dated April 30, 2016, it has increased solar trajectory by 0.50% for FY 2016-17. CSPDCL has considered the same percentage of total consumption for meeting RPO from FY 2019-20 with an addition of 0.50% in solar as shown below:

Table 7-28: Minimum quantum of electricity to be procured through renewable sources

Category	FY 2019-20
Solar	5.00%
Non-Solar	8.00%

For the purpose of projections, CSPDCL has considered Renewable Energy purchase at same level and rates as actuals for FY 2017-18. The remaining shortfall is proposed to be met through Renewable Energy Certificate purchase at floor price approved by

CERC. Based on the above, the quantum of renewable energy estimated to be purchased by CSPDCL for FY 2019-20 is shown in the Table below:

Table 7-29: Purchase of RPO in FY 2019-20 as projected by CSPDCL

Source	Power Purchase (MU)	Fixed Cost (Rs crore)	Variable Cost (Rs crore)	Total Cost (Rs crore)
Biomass	897.91	-	558.50	558.50
Solar	348.34	-	223.63	223.63
Hydel/Other RE	110.91	-	42.70	42.70
RECs		-	228.27	228.27
Total Renewables	**1,357.16**	**-**	**1,053.10**	**1,053.10**

Power Purchase from Concessional Sources

For the purpose of projections for FY 2019-20, CSPDCL has considered purchase of concessional power at same level and rates as actuals for FY 2017-18 as shown in table below:

Table 7-30: Concessional Power Purchase as projected by CSPDCL for FY 2019-20

Source	Power Purchase (MU)	Fixed Cost (Rs crore)	Variable Cost (Rs crore)	Total Cost (Rs crore)
Concessional Power	1,265.67	-	202.51	202.51

Power Purchase from Short-Term Sources

CSPDCL has submitted that, while there is estimated net surplus of power, as seen from past trends, there is still a shortage of power during certain durations of day/month/year. Accordingly, CSPDCL has considered short term purchase of 100 MU from exchange and availability of 350.11 MU from the unscheduled sources and requests the Commission to approve the same for the FY 2019-20 as shown in the Table below:

Table 7-31: Short-term Power Purchase as projected by CSPDCL for FY 2019-20

Source	Power Purchase (MU)	Fixed Cost (Rs crore)	Variable Cost (Rs crore)	Total Cost (Rs crore)
IEX/PXIL/Traders	100.00	-	32.50	32.50
Unscheduled sources	350.11	-	45.51	45.51
Total Short-Term Purchase	**450.11**	**-**	**78.01**	**78.01**

Transmission Charges – Inter-State, Intra-State and CSLDC Charges

CSPDCL has to pay transmission charges to PGCIL for use of their transmission facilities to enable power drawl from western and eastern regions. The charges of PGCIL has been calculated as per the prevailing CERC Regulation for Point of Connection (PoC) rates and transmission losses and are as per the latest CERC Order No. L-1/44/2010-CERC dated September 19, 2018.

Further, for intra-state transmission charges and SLDC charges, CSPDCL submitted that it has considered values as approved by the Hon'ble Commission in the MYT Order dated April, 30, 2016.

Inter-State Sale

CSPDCL has considered sale of power of Marwa at state periphery at actual weighted average purchase rate and sale of balance surplus power has been estimated at Rs 3.35/kWh (as approved by the Commission in the MYT Order dated April 30, 2016) for the FY 2019-20.

CSPDCL has also submitted that the sale of electricity other than to retail consumers is not within the regulatory purview of the Commission. As electricity cannot be stored, the surplus energy has to be sold as and when available at the market realised rates. The availability of surplus energy is dependent on the consumption of the consumers and not on the licensee. The sale of surplus energy is always ensured to be sold with the objective of maximising the revenue from such sale and to pass on the accrued benefit to the retail consumers.

Commission's Views

The submissions of CSPDCL has been analysed in detail and additional information was also sought on the same. The Commission has approved the Power Purchase expense for FY 2019-20 in the following manner:

a) Regarding the purchase from Central generating Stations, CERC Orders for Annual Fixed Cost for FY 2019-20 are not available and are not likely to be issued during FY 2019-20, due to pendency of finalisation of tariff regulations for next control period by CERC. Hence, the Commission has considered the Annual fixed cost at same level of FY 2018-19. Energy charges have been escalated by 3% as against the escalation claimed by CSPDCL.

b) The purchase from new Generating Station of NTPC, i.e., Lara STPS have been estimated by considering Unit 1& 2 operating at 50% PLF for whole year due to coal availability issue. It is estimated that CSPDCL will purchase 50% of the total power produced from Unit 1 and Unit 2. The quantum of energy has been estimated by considering the commission of Unit 1 on June 1, 2019 and Unit 2 on November 1, 2019. It may be noted that the PPA between CSPDCL and NTPC-Lara is under consideration before the Commission, and the inclusion of this quantum of energy in the power purchase of CSPDCL has been considered on provisional basis.

c) Regarding purchase from State generating stations, the Commission has considered the revised Annual Fixed Charges (AFC) with respect to AFC as approved in MYT Order. Also, revised contribution to Pension and gratuity and O&M Expenses have been considered for CSPGCL as discussed in subsequent Section of this Order.

d) For ABVTPP, the Commission has considered the Annual Fixed Cost and energy charge as per its Tariff Order dated July 7, 2018. The cost of power supplied by Marwa power plant which shall be sold to Telangana has been considered inclusive of trading margin of 7 paise /kWh, The RPO percentage has been considered in accordance with the CSERC (RPO and REC Framework Implementation) Regulations, 2016 notified on December 1, 2016. The following RPO percentage is applicable to the quantum of sales to LV, HV and EHV categories for CSPDCL in FY 2019-20:

Year	Solar	Non-Solar	Total
FY 2019-20	5.00%	8.00%	13.00%

e) The quantum of purchase of Renewable Energy has been considered based on the actual purchase in FY 2017-18 and FY 2018-19 (H1). To meet the RPO target the shortfall in Solar and Non-solar RE purchase shall be met through purchase of Renewable Energy Certificates (RECs) at the floor rates of Rs. 1.00 per kWh and for Solar and Non-solar REC each.

f) To meet the demand-supply gap, if any, the Commission has estimated short term power purchase at the weighted average rate of Rs. 3.07 per unit. Inter-state sales of surplus power have been estimated to be supplied at weighted average rate of Rs. 3.56/kWh.

g) The Commission has considered the revised Annual Transmission Charges and SLDC Charges for FY 2019-20 with respect to charges approved in MYT Order. These charges are revised on account of revision in O&M Expenses and contribution of pension and gratuity, which is discussed in subsequent Section of this Order.

h) The summary of power purchase cost as submitted by CSPDCL and approved by the Commission in this Order, is shown in the Table below:

Table 7-32: Power Purchase Cost estimated by Commission for FY 2019-20

Sr. No.	Particulars	MYT Order			CSPDCL Petition			Approved by the Commission		
		Purchase Quantum (MU)	Total Cost (Rs crore)	Rs. /kWh	Purchase Quantum (MU)	Total Cost (Rs crore)	Rs. /kWh	Purchase Quantum (MU)	Total Cost (Rs crore)	Rs. /kWh
1	**Central Generating Stations**	**15690.76**	**4842.07**	**3.09**	**13,000.64**	**4,245.95**	**3.27**	**11,225.80**	**3,481.33**	**3.10**
a	*NTPC*	*14393.86*	*4422.93*	*3.07*	*12,384.77*	*4,050.67*	*3.27*	*10,446.12*	*3,238.56*	*3.10*
b	*NTPC - SAIL (NSPCL)*	*323.65*	*131.42*	*4.06*	*297.95*	*99.12*	*3.33*	*297.95*	*99.12*	*3.33*
c	*NPCIL*	*790.10*	*226.41*	*2.87*	*303.97*	*93.30*	*3.07*	*303.97*	*93.30*	*3.07*
d	*Others*	*183.16*	*61.32*	*3.35*	*13.95*	*2.87*	*2.05*	*13.95*	-	-
e	*Thermal Bundled Power*	-	-	-	-	-	-	*163.81*	*50.36*	*3.07*
2	**State Generating Stations**	**14131.38**	**3883.83**	**2.75**	**20,592.08**	**6,571.22**	**3.19**	**19,846.75**	**6,256.28**	**3.15**
a	*CSPGCL – Thermal*	*14034.46*	*3838.32*	*2.73*	*20,218.95*	*6,505.86*	*3.22*	*19773.66*	*6229.65*	*3.15*
b	*CSPGCL - Renewables*	*96.92*	*45.51*	*4.70*	*373.13*	*65.36*	*1.75*	*73.09*	*26.63*	*3.64*
3	**Short Term Purchase**	**1727.54**	**604.64**	**3.50**	**450.11**	**78.01**	**1.73**	**350.11**	**124.58**	**3.56**
4	**Concessional Power - Through CSPTrdCL**	**2160.86**	**411.51**	**1.90**	**1265.67**	**202.51**	**1.60**	**1,689.81**	**270.37**	**1.60**
5	**Others – Renewables**	**1974.64**	**1093.54**	**5.54**	**1,357.16**	**1,053.10**	**7.76**	**1,264.21**	**892.84**	**7.06**
a	*Biomass*	*1159.16*	*637.54*	*5.50*	*897.91*	*558.50*	*6.22*	*602.62*	*368.83*	*6.12*
b	*Solar*	*321.72*	*209.12*	*6.50*	*348.34*	*223.63*	*6.42*	*311.89*	*166.62*	*5.34*
c	*Hydel/Other RE*	493.76	*246.88*	*5.00*	*110.91*	*42.70*	*3.85*	*177.44*	*78.72*	*4.44*
d	*Solar & Non-Solar RECs*	-	-	-	-	*228.27*	-	-	*158.44*	-

Sr. No.	Particulars	MYT Order			CSPDCL Petition			Approved by the Commission		
		Purchase Quantum (MU)	Total Cost (Rs crore)	Rs. /kWh	Purchase Quantum (MU)	Total Cost (Rs crore)	Rs. /kWh	Purchase Quantum (MU)	Total Cost (Rs crore)	Rs. /kWh
e	*Solar Bundled Power*	-	-	-	-	-	-	*45.33*	*50.42*	*11.12*
f	*SECI*	-	-	-	-	-	-	*126.93*	*69.81*	*5.50*
6	**Transmission Charges**	-	**1384.13**	-	-	**1485.27**	-	-	**1458.06**	-
a	*Interstate Transmission Charges*	-	*341.63*	-	-	*443.18*	-	-	*443.18*	-
b	*Intrastate Transmission Charges*	-	*1026.62*	-	-	*1,026.21*	-	-	*999.45*	-
c	*CSLDC Charges*	-	*15.88*	-	-	*15.88*	-	-	*15.43*	-
7	**Gross Power Purchase Cost**	**35,685.21**	**12,219.73**	**3.42**	**36,665.66**	**13,636.07**	**3.72**	**34,376.68**	**12,483.45**	**3.63**
8	*Less: Sale to Telangana*		*49.13*		*6,827.91*	*2,655.80*	*3.89*	*6,159.09*	*2,589.70*	*4.20*
9	*Less: Sale of Surplus Power*	*2293.82*	*768.43*	*3.35*	*1,000.81*	*335.27*	*3.35*	*1,549.54*	*551.63*	*3.56*
10	**Net Power Purchase Cost**	**33,391.39**	**11,402.17**	**3.41**	**28,836.94**	**10,645.00**	**3.69**	**26,668.06**	**9,342.11**	**3.50**

7.7 O&M Expenses

As discussed in earlier Section of this Order, the R&M and A&G expenses for CSPDCL has been revised by considering the applicable WPI Indices for respective years. The revised O&M Expenses approved by the Commission for FY 2019-20 are shown in the following Table:

Table 7-33: Revised O&M Expenses for CSPDCL for FY 2019-20

Particulars	FY 2019-20	
	MYT Order	Revised Approved
Employee Expenses	973.64	973.64
A&G Expenses	164.95	144.89
R&M Expenses	153.31	134.66
Total O&M Expenses	**1,291.91**	**1,253.19**

7.8 Interest on Working Capital

CSPDCL's Submission

CSPDCL has considered one month of the approved O&M Expenses, Maintenance spares @ 40% of Repair and Maintenance expenses and receivables equivalent to one month of receivables equal to 1 month of expected revenue from sale of power for computing the working capital requirement. Further, it has considered the interest rate of 12.45% (8.95% - SBI-PLR Base Rate on 30th September 2018 plus 350 basis points) for computing the Interest on Working Capital. Accordingly, CSPDCL submitted the net income of Rs. 73.23 crore on account of interest on Working Capital for FY 2019-20.

Commission's Views

The normative IoWC has been computed in accordance with the CSERC MYT Regulations, 2015. The Commission has considered the revised normative O&M expenses for computing the working capital requirement. The rate of interest has been considered as 12.45% for FY 2019-20. Since, the Consumer Security Deposit is more than normative working capital requirement, expenses towards IoWC for 2019-20 works out as negative as shown in the Table below:

Table 7-34: Approved IoWC for CSPDCL for FY 2019-20 (Rs. crore)

Sr. No.	Particulars	CSPDCL Petition	Approved
1	Operation and Maintenance Expenses for one month	112.68	110.26
2	Maintenance spares @ 40% of Repair and Maintenance expenses	57.43	53.86
3	Receivable equal to 1 month of expected revenue from sale of power	1,042.30	920.63
4	Total Working Capital requirement	1,212.40	1,084.76
5	Less: Security Deposit	1800.58	1,800.58
6	**Net Working Capital Requirement**	**(588.18)**	**(715.82)**
7	Rate of Interest (%)	12.45%	12.45%
8	**Interest on Working Capital requirement**	**(73.23)**	**(89.12)**

The Commission approves the Interest on Working Capital of Rs. (89.12) crore for FY 2019-20 as shown in the Table above.

7.9 Revised Aggregate Revenue Requirement for FY 2019-20

Based on the above, the ARR approved by the Commission for FY 2019-20 is shown in the Table below:

Table 7-35: ARR approved for CSPDCL for FY 2019-20 (Rs. crore)

Sr. No.	Particulars	FY 2019-20		
		MYT Order	CSPDCL Petition	Approved
A	**Power Purchase Expenses**	**11,402.17**	**10,645.00**	**9,342.11**
1	*Power Purchase Cost (Net of UI, Bilateral Sale, DPS, GBI, Transmission & SLDC Charges and Trading Income, Reversal)*	*10,018.45*	*9,159.73*	*7,884.05*
2	*Interstate Transmission charges (PGCIL)*	*341.63*	*443.18*	*443.18*
3	*Intrastate Transmission Charges*	*1,026.21*	*1,026.21*	*999.45*
4	*CSLDC Charges*	*15.88*	*15.88*	*15.43*
B	**Operation & Maintenance Expenses**	**1,739.60**	**1,739.60**	**1,598.25**
1	*Net Employee Expenses*	*973.58*	*973.58*	*973.58*
2	*Net Administrative and General Expenses*	*164.94*	*164.94*	*144.89*
3	*Net Repair and Maintenance charges*	*143.57*	*143.57*	*134.66*
4	*Terminal Benefits (Pension & Gratuity)*	*387.47*	*387.47*	*275.09*
5	*Interim Wage Relief*	*70.04*	*70.04*	*70.04*

Sr. No.	Particulars	FY 2019-20		
		MYT Order	CSPDCL Petition	Approved
C	**Interest & Finance Expenses**	**158.14**	**144.90**	**129.01**
1	Interest on Loan	*98.09*	*98.09*	*98.09*
2	Interest on Security Deposit	*120.04*	*120.04*	*120.04*
3	Interest on Working Capital	*(59.99)*	*(73.23)*	*(89.12)*
D	**Other Expenses**	**407.76**	**407.76**	**407.84**
1	Depreciation	*160.18*	*160.18*	*160.27*
2	Return on Equity	*247.58*	*247.58*	*247.58*
F	**Less: Non-Tariff Income**	**429.69**	**429.69**	**429.69**
1	*Non-Tariff Income*	*335.43*	*335.43*	*335.43*
2	*Wheeling Charges, Open Access & Cross Subsidy Charges*	*94.26*	*94.26*	*94.26*
G	**Annual Revenue Requirement**	**13,277.98**	**12,507.58**	**11,047.54**

7.10 Revenue at existing tariff

CSPDCL's Submission

CSPDCL submitted that it has computed Revenue from Sale of Power for FY 2019-20 based on the tariff determined by the Commission in MYT Order dated March 31, 2018. CSPDCL has estimated the Revenue from sale of electricity at existing tariff as Rs. 14,701.16 crore.

Commission's View

The Commission has estimated the revenue from sale of electricity as Rs. 13,834.87 crore, on the basis of the prevailing tariff and applicable terms and conditions as specified in the Tariff schedule for each consumer category, and the category-wise sales projected by the Commission, as discussed earlier.

7.11 Standalone Revenue Gap/(Surplus)

Based on the estimation of ARR and Revenue at existing tariff, the standalone revenue gap/surplus for FY 2019-20 approved by the Commission is shown in the table below:

Table 7-36: Standalone Revenue Deficit/(Surplus) for CSPDCL (Rs. crore)

Sr. No.	Particulars	FY 2019-20	
		CSPDCL Petition	Approved
1	Annual Revenue Requirement	12,507.58	11,047.54
2	Income from sale of Power at Existing Tariff	14,701.16	13,834.87
3	**Standalone Deficit/(Surplus)**	**(2,193.59)**	**(2,787.33)**

8 TARIFF PRINCIPLES AND DESIGN

8.1 Cumulative Revenue Gap/(Surplus) for FY 2019-20

CSPDCL's Submission

CSPDCL submitted that there is net standalone Revenue surplus of Rs. 2193.59 crore in FY 2019-20. However, considering the net Revenue Gap of Rs. 2,947.35 crore carried forward after final true-up for FY 2016-17 and provisional true-up for FY 2017-18, there is an overall net Revenue Gap of Rs. 753.76 crore in FY 2019-20.

Commission's View

The Commission notes that in the revised ARR for FY 2019-20, CSPDCL has not factored in the impact of the Revenue Gap/(Surplus) of CSPGCL, CSPTCL and CSLDC, arising after final true-up for FY 2016-17 and provisional true-up for FY 2017-18. The Commission has adjusted these gaps, including carrying cost approved in earlier Chapters of this Order. The cumulative revenue gap approved for CSPDCL for FY 2019-20 is shown in the Table below:

Table 8-1: Cumulative Revenue Deficit/(Surplus) for CSPDCL (Rs. crore)

Sr. No.	Particulars	FY 2019-20	
		CSPDCL Petition	Approved
A.	Annual Revenue Requirement	12,507.58	11,047.54
B.	Income from sale of Power at Existing Tariff	14,701.16	13,834.87
C.	**Standalone Deficit/(Surplus) (C)=(A-B)**	**(2,193.59)**	**(2,787.33)**
D.	Deficit/(Surplus) carried forward from provisional true-up of FY 2016-17 for CSPGCL	-	348.76
E.	Deficit/(Surplus) carried forward from provisional true-up of FY 2016-17 for CSPTCL	-	(182.61)
F.	Deficit/(Surplus) carried forward from provisional true-up of FY 2016-17 for CSLDC	-	5.33
G.	Deficit/(Surplus) carried forward from provisional true-up of FY 2016-17 for CSPDCL	2,947.35	2075.93
H.	**Cumulative revenue gap/(surplus) H=(C+D+E+F+G)**	**753.76**	**(539.92)**
I.	**Adjusted ARR after considering cumulative revenue gap/(surplus) (B+H)**	**15,454.94**	**13,294.94**

Thus, the Commission has determined a cumulative Revenue Surplus of Rs. 539.92 crore for FY 2019-20, as against the cumulative Revenue Gap of Rs. 753.76 crore projected by CSPDCL. The treatment of this Revenue Surplus is elaborated in subsequent paragraphs.

The Average Cost of Supply (ACoS), approved by the Commission for FY 2019-20, is shown in the Table below:

Table 8-2: Average Cost of Supply (Rs./kWh) for CSPDCL for FY 2019-20

Sr. No.	Particulars	Approved
1	Standalone Annual Revenue Requirement (Rs. crore)	11,047.54
2	Total estimated Sales (MU)	21,912.43
3	**Average Cost of Supply (Rs. /kWh)**	**5.04**
4	Adjusted ARR after considering cumulative revenue surplus (Rs. crore)	13,294.94
5	**Average Cost of Supply on adjusted ARR (Rs. /kWh)**	**6.07**

8.2 Voltage-wise Cost of Supply for FY 2019-20

CSPDCL's submission

CSPDCL submitted the following voltage-wise cost of supply for FY 2019-20:

Table 8-3: Voltage-wise Cost of Supply for FY 2019-20 as submitted by CSPDCL

Sr. No.	Particulars	FY 2019-20			
		EHV	33 kV	11 kV and LV	Total
1	Energy Sales (MU)		7,227.79	13,532.54	20,760.33
2	Distribution Loss (%)		4.85%	24.96%	19.00%
3	Distribution Loss (MU)		368.42	4,501.29	4,869.71
4	Energy input at 33 kV (MU)		7,596.21	18,033.83	25,630.03
5	Energy input to discom level (MU)		64.55	153.25	217.80
6	Net input at 33 kV Level (MU)		7,531.65	17,880.58	25,412.23
7	EHV Sales (MU)	2,735.63			
8	Energy requirement for Distribution (MU)	2,735.63	7,531.65	17,880.58	28,147.87
9	Transmission Loss (%)	3.22%	3.22%	3.22%	
10	Energy requirement at G<>T Interface (MU)	2,826.65	7,782.24	18,475.49	29,084.38
11	Avg. Power Purchase Cost Rate (Rs. /kWh)	3.66	3.66	3.66	
12	Power Purchase Cost (Rs. crore)	1,034.57	2,848.33	6,762.10	10,645.00
13	Other Cost (Rs. crore)	181.02	498.38	1,183.18	1,862.57
14	Gap Cost for only for FY 17 including Past Gaps as per latest petition (Rs. crore)	281.28	774.40	1,838.47	2,894.14
15	Total Cost (Rs. crore)	1,496.86	4,121.11	9,783.75	15,401.72
16	Energy Sales (MU)	2,735.63	7,227.79	13,532.54	23,495.96
17	**Voltage Wise Cost of Supply (Rs. /kWh)**	**5.47**	**5.70**	**7.23**	**6.56**

Commission's View

The Commission has computed voltage-wise cost of supply for FY 2019-20 as per the methodology adopted in tariff order for FY 2018-19, after taking into account the ruling of the Hon'ble APTEL in its Judgment dated March 24, 2015 in Appeal No. 103 of 2012. The framework prescribed by the Hon'ble APTEL requires that the category-wise tariff should be determined on the basis of ACoS as well as VCoS, and also that the tariff for all categories should be within ±20% of the overall ACoS.

The Commission notes that presently the voltage-wise losses are computed on the basis of assumptions and the actual losses would only be known after metered data at all distribution systems are properly captured. In view of the above, the Commission has no other option but to determine the VCoS on the basis of available data.

In its order, APTEL has directed the Commission to gradually move towards voltage wise tariff. Accordingly, the Commission has determined category-wise tariff on the basis of ACoS, while at the same time moving towards the philosophy wherein within the HT category, tariff for consumers taking supply at higher voltages has been kept lower compared to those taking supply at lower voltages. Thus, the gradual shift, contemplated in the MYT Order, has been continued in this order.

The estimated VCoS for FY 2019-20 is given in the Table below:

Table 8-4: VCoS for FY 2019-20 as calculated by Commission

Sr. No.	Particulars	FY 2019-20			
		EHV	33 kV	11 kV and LV	Total
1	Energy Sales (MU)	-	6,842.24	12,306.47	19,148.71
2	Distribution Loss (%)	-	4.85%	21.82%	16.50%
3	Energy input at 33 kV (MU)	-	7,191.01	15,741.58	22,932.59
4	Less: Direct Input to Distribution at 33/11 kV by CGPs and IPPs (MU)		69.93	147.87	217.80
5	Energy input to Discom level (MU)		7,121.08	15,593.71	22,714.79
6	EHV Sales (MU)	2,763.72	-	-	2,763.72
7	Energy requirement for Distribution (MU)	2,763.72	7,121.08	15,593.71	25,478.51
8	Transmission Loss (%)	3.00%	3.00%	3.00%	3.00%
9	Energy requirement at G<>T Interface (MU)	2,849.20	7,341.32	16,075.99	26,266.51
10	Avg. Power Purchase Cost Rate (Rs. /kWh)	3.56	3.56	3.56	3.56
11	Power Purchase Cost (Rs. crore)	1,013.36	2,611.06	5,717.69	9,342.11
12	Other Cost (Rs. crore)	184.99	476.65	1,043.78	1,705.42
13	Past revenue gaps (Rs. crore)	243.78	628.14	1,375.49	2,247.41
14	Total Cost (Rs. crore)	1,442.14	3,715.85	8,136.96	13,294.94
15	Energy Sales (MU)	2,763.72	6,842.24	12,306.47	21,912.43
16	**Cost of Supply (Rs. /kWh)**	**5.22**	**5.43**	**6.61**	**6.07**

8.3 Tariff Proposal for FY 2019-20

CSPDCL's Submission

CSPDCL has made the following submission regarding the proposed changes in tariff structure for FY 2019-20:

Introduction of LV 3A Agriculture Flat Rate

CSPDCL submitted that the Government of Chhattisgarh is providing subsidy to Agriculture consumers up to 5 HP since November 2, 2009. Subsequent to this, the Government of Chhattisgarh has issued directive vide Notification No. 2131/F 21/08/2009/13/2/U. V/K.J.JY. on September 19, 2013, conveying the decision of giving option of billing on flat rate basis to agriculture consumers. CSPDCL requested the Commission for creation of separate category LV 3A Agriculture Flat Rate for the consumers in line with the provisions of notification of Government of Chhattisgarh.

Revision in Standby Tariff for Zero Contract Demand consumers in Off-peak Hours

CSPDCL submitted that the current provisions of Standby tariff are as under:

> *"The Standby Charges for consumers availing open access (using transmission and/or distribution system of Licensee) and who draw power from the grid up to the contracted capacity of open access during the outage of generating plant/CPP shall be 1.5 times of the per kWh weighted average tariff of HV consumers, which is Rs. 11.06 per kWh (1.5 times of the average billing rate of Rs.7.38 per kWh). For drawal of power in excess of the contracted capacity of open access, the tariff for availing standby support from the grid shall be two times of the per unit weighted average tariff of HV consumers, which is Rs. 14.75 per kWh (2 times of the average billing rate of Rs. 7.38 per kWh). Further, in case of outage of CPP supplying power to captive/non-captive consumer who has reduced its contract demand to zero and also availed open access draws power of CSPDCL, then billing of such power drawn shall be done as per the standby charges mentioned above."*

However, CSPDCL requested the Commission to add the following proviso for drawl during night hours for Zero Contract Demand consumers so as to promote consumption within the state:

> *"Notwithstanding anything above, the drawl during the off-peak hours by captive/non-captive consumer who has reduced its contract demand to zero shall be billed at the energy charge rates (including ToD) applicable to their respective categories."*

Review of computation of load factor

CSPDCL submitted that, as per the current approach hours of load restriction enforced by CSPDCL/CSPTCL are excluded for calculation of Load Factor. However, this approach has led to implementation issues in past wherein there is difficulty of ascertaining the actual hours of load restrictions and agreement of same between various concerned agencies. In order to simply the approach, CSPDCL proposed to consider fixed 30 Hours as non-supply hours in a month under HV 4 tariff category to offset supply disturbance occurring mainly due to schedule maintenance and other interruptions including those mandated by SLDC.

Commission's View

As discussed earlier, the Commission has determined a cumulative Revenue Surplus of Rs. 539.92 crore for FY 2019-20. For adjusting the Revenue Surplus, the Commission has proposed reduction in tariff for consumer categories. The approach of the Commission for determination of tariff for FY 2019-20 for various consumer categories is discussed below:

LV 1: Domestic

At present, tariff for this category is telescopic in nature with four consumption slabs. The Commission has undertaken an in-depth analysis of the existing tariff structure of domestic consumers in terms of '*Effective Tariff',* factoring in the overall impact of telescopic nature of tariff, i.e., applying of each slab rate to respective units consumed in that slab. To illustrate, the effective tariff for the consumption of 650 kWh, as per existing tariff, will be calculated as follows:

For the first 40 kWh @ Rs. 3.70/kWh = Rs. 148

For > 40 ≤ 200 kWh @ Rs. 3.80/kWh = Rs. 608

For >200 ≤ 600 kWh @ Rs. 5.30/kWh = Rs. 2120

Above 600 kWh @ Rs. 7.35/kWh = Rs. 368

Total billed amount for 650 kWh = Rs. 3242

Effective Tariff = 3,243.50/650 = Rs. 4.79/kWh

It is settled practice to subsidise the low-income groups through cross-subsidy mechanism. However, from the existing tariff structure it appears that while there is a manifest intent to achieve the objective, the principle of equity is tilted in favour of the higher slabs. In other words, consumption at higher levels is charged at relatively moderate effective rate. For example, the net difference in existing effective rate between the lowest slab, i.e., 100 kWh, and the higher slab, i.e., 600 kWh, is approximately Rs. 0.98/kWh, which is 26% higher as compared to the lowest slab, whereas, the consumption is 500% higher. Therefore, the Commission has tried to address this issue by lowering the tariff for the low income groups.

Presently, there is a separate slab for BPL consumers, i.e., 0–40 units as Government of Chhattisgarh has been traditionally reimbursing the billed amount to CSPDCL. As per SNC-Lavalin study (2009), the average monthly consumption of this category is estimated at 89 units. Therefore, for tariff determination, it would be appropriate to categorise domestic consumers, including BPL, with consumption level up to 100 units. In view of the fact that BPL consumers are defined as BPL card holders only, the existing slab of up to 40 kWh has no relevance and is, therefore, merged with 0–100 units slab. Currently, the tariff for this category is Rs. 3.70 /kWh and Rs. 3.80/kWh, for 0-40 kWh and >40≤200 kWh respectively. The Commission proposes to rationalise this tariff structure and approve a tariff of Rs. 3.40/kWh for this newly created slab, i.e., 0 – 100 units.

Further, the existing structure has a consumption slab of 201 to 600 kWh, which appears to be too stretched and includes consumers ranging from lower middle to upper middle class. The Commission feels that it would be prudent to bifurcate this slab into two i.e. 201 - 400 kWh and above 400 - 600 kWh so as to segregate the consumers on the basis of their consumption level. The existing slab of 601 kWh and above is proposed to continue.

LV 2: Non-Domestic

At present, the Non-Domestic tariff category has been split into two sub-categories i.e. consumption-based and demand-based. It is noted that, in the two-part tariff for this category, i.e., the fixed charges and the energy charges, fixed charge component is computed on the basis of contracted load (kW). However, the actual operating load is invariably lower as compared to the contracted load with the result that the net effective tariff works out to be higher on account of higher fixed charges. This has been the grievance of the consumers, especially small commercial establishments.

Further, in the contracted load system, fixed charge component has been differentiated based on load up to 3 kW, and above 3 kW with the result that for consumers having lower energy consumption, the effective tariff is relatively higher because of high fixed charge component.

The Commission has addressed these issues by rationalising the tariff structure in the following manner:

(a) The consumers are being sub categorised into Single Phase and Three-Phase supply-based billing mechanism.

(b) The existing consumption slabs, along with tariff, are being rationalised, also taking into account the economic profile of the consumers.

It is noted that, the existing arrangement of contracted load-based billing was considered necessary in the past. However, with the installation of electronic meters for three-phase supply, which capture the maximum demand (load) along with energy consumed, there is no longer any relevance for retaining the contracted load-based billing mechanism. Therefore, the Commission is of the view that instead of the existing Contracted Load based fixed charge determination, the demand based fixed charge computation, which is currently available as an option for consumers having contract demand of 15kW and above, should be made applicable for all three-phase LV Non-Domestic consumers.

Accordingly, for *LV 2.2 Three Phase Non-Domestic,* the demand-based tariff has been made applicable instead of prevailing contracted load based fixed charges. The option for Demand-based tariff has been discontinued. Also, the Energy Charges are reduced from the existing level.

In order to promote Women's Empowerment, the commercial and industrial activities being run exclusively by registered Women self-help groups shall be entitled for 10% rebate on energy charges.

Also, in order to promote and incentivize telecom connectivity in the remote left-wing extremism affected districts, new mobile towers, to be set up in these areas after April 1, 2019, shall be eligible for 50% rebate in energy charges.

LV 3: Agriculture and LV 4: Agriculture Allied Activities

The Commission does not propose any change in tariff structure for LV3 and LV4 category. The existing fixed charges are continued for FY 19-20. However, the energy charges are reduced from the existing level by 30 paise per unit.

At present, it is mentioned that all new connections of above 3 HP load shall be served only after installation of capacitor of specified rating to maintain power factor of 0.85 and above. Further, all pump connections of above 3 HP load not provided with capacitors of specified rating and who do not maintain power factor of 0.85 and above, are required to pay surcharge of 35 paise per kWh. The Commission, as discussed in earlier Chapter, noted that there is higher percentage of assessed consumption and defective meters for Agriculture category. In such a scenario, the measurement of power factor for levying power factor surcharge would not be reliable and accurate. Hence, the Commission decides to discontinue levy of power factor surcharge of 35 paise/kWh for Agriculture Category.

For LV 4 Agriculture Category, the present Tariff Structure shall be continued. However, the tariff for this category has been rationalised. The option for demand-based tariff for agriculture allied activities category will continue.

LV 5: LT Industries

At present, this category has been further segregated into two sub-categories as LV 5.1 - tariff for Flour mills, Hullers, power looms, grinders for grinding masalas, terracotta, handloom, handicraft, agro-processing units, minor forest produce up to 15 HP and LV 5.2 - Tariff for Other Industries. There is an optional demand-based tariff for this category.

After taking into account submissions of the stakeholders, load limit has been extended up to 25 HP for LV 5.1 sub-category so as to accommodate expansion of small-scale units. Further, demand based tariff has been introduced under LV 5.2 Sub-category, in line with the approach adopted for Non-domestic category.

The following changes have been made in tariff structure to facilitate expansion in existing capacity of LT Industries:

(a) The existing sub-category *LV 5.2.3 Above 100 HP up to 150 HP* has been merged with LV 5.2.2 Above 25 HP up to 100 HP sub-category.

(b) The tariff for new sub-category *LV 5.2.2 Above 25 HP up to 150 HP* has been rationalised accordingly.

In accordance with Section 62(3) of EA, 2003 which provides inter-alia for differentiation in tariff based on geographical location, considerably lower tariff has been fixed for consumers located in the areas covered under **"Bastar avem Dakshin Kshetra Adivasi Vikas Pradhikaran"** and **"Sarguja avem Uttar Kshetra Adivasi Vikas Pradhikaran"**(both notified vide Order dated August 22, 2005).

LV-6: Public Utilities

The tariff for the Public Utilities category has been determined at 103% of Average Cost of Supply.

LV-7: Information Technology Industries

The tariff for Information Technology Industries category has been retained at existing level.

LV-8: Temporary Supply

The tariff for Temporary Supply category has been retained at existing level.

The Commission's approach for determination of tariff for FY 2019-20 for HV consumer category is discussed below:

HV-1: Railway Traction

The tariff for Railway Traction category has been retained at existing level.

HV-2: Mines

The tariff for HV Mines category has been retained at existing level.

HV-3: Other Industry and General Purpose Non-Industrial

Based on the submissions of the stakeholders, demand charges have been rationalised in view of lower consumption by the industries in this category. Accordingly, demand charges have been reduced to Rs. 350/kVA/month from the existing level of Rs.375/kVA/month for supply at 220 kV, 132 kV, 33 kV and 11 kV levels. Further, for consumers availing supply at 33 kV and 11 kV and having load factor below 15%, demand charges have been reduced to Rs. 150/kVA/month from the existing level of Rs. 190/kVA/month. Energy charges and demand charges have also been appropriately rationalised considering the ABR and cost of supply. Tariff for supply at higher voltage levels have been kept lower in line with the approach adopted in MYT Order.

HV-4: Steel Industries

Demand charges have been reduced to Rs. 365/kVA/month from the existing level of Rs. 375/kVA/month for supply at 220 kV, 132 kV, 33 kV and 11 kV levels. Further, for consumers availing supply at 33 kV and 11 kV and having load factor below 15% demand charges have been reduced to; Rs. 180/kVA/month from the existing level of Rs. 190/kVA/month. Energy charges have been retained at the existing levels.

Further, to boost industrialization in the areas covered under **"Bastar avem Dakshin Kshetra Adivasi Vikas Pradhikaran"** and "**Sarguja avem Uttar Kshetra Adivasi Vikas Pradhikaran"** (both notified vide Order dated August 22, 2005), the existing condition of special rebate of 7% on energy charge to the consumers starting production in these areas on or after April 1, 2017 will continue for FY 2019-20.

After analyzing the consumption data for stand-alone rolling mill consumers for FY 2017-18, it has been observed that 84% of consumers achieved load factor below 35% and only 67% consumers have load factor below 25% (which is the present limit for availing reduced demand and energy charges). Therefore, the prevailing load factor limit for stand-alone rolling mills consumers availing supply at 33 and 11 kV has been increased to 35% from the existing level of 15%.

Load factor Incentive for HV:4 Steel Industries

Commission has restructured existing scheme of load factor incentive based on the consumption pattern of the consumers in this category. Accordingly, the existing scheme of load factor incentive ‘starting from 65% to 79%’ has been restructured to ‘starting from 63% to 77%’ to enable relatively smaller units to come under the purview of load factor incentive. Also, the Commission has accepted the submission of CSPDCL and decides that flat 30 hours per month of power-off (non-supply) shall be considered for calculation of Load Factor.

The Load factor incentive applicable for FY 2019-20 is shown in the following Table:

Monthly Load Factor (LF)	Rebate
63% - 63.99%	rebate of 1% on normal Energy Charge calculated on entire energy consumption
64% - 64.99%	rebate of 2% on normal Energy Charge calculated on entire energy consumption
65% – 65.99%	rebate of 3% on normal Energy Charge calculated on entire energy consumption
66% - 66.99%	rebate of 4% on normal Energy Charge calculated on entire energy consumption
67% - 67.99%	rebate of 5% on normal Energy Charge calculated on entire energy consumption
68% - 68.99%	rebate of 6% on normal Energy Charge calculated on entire energy consumption
69% - 69.99%	rebate of 7% on normal Energy Charge calculated on entire energy consumption
70% -70.99%	rebate of 8% on normal Energy Charge calculated on entire energy consumption

Monthly Load Factor (LF)	Rebate
71%-71.99%	rebate of 9% on normal Energy Charge calculated on entire energy consumption
72%-72.99%	rebate of 10% on normal Energy Charge calculated on entire energy consumption
73%-73.99%	rebate of 11% on normal Energy Charge calculated on entire energy consumption
74%-74.99%	rebate of 12% on normal Energy Charge calculated on entire energy consumption
75% -75.99%	rebate of 13% on normal Energy Charge calculated on entire energy consumption
76% -76.99%	rebate of 14% on normal Energy Charge calculated on entire energy consumption
77% and above	rebate of 15% on normal Energy Charge calculated on entire energy consumption

Provided that in case the monthly load factor is 62.99% or below, then no load factor rebate shall be payable in that month:

Provided further that flat 30 hours per month of power-off (non-supply) shall be considered for calculation of Load Factor:

Provided also that the load factor rebate shall not be payable on the excess energy consumed corresponding to exceeding contract demand for that billing month:

Provided also that the monthly load factor shall be rounded off to the lowest integer.

HV-5: Irrigation, Agriculture Allied Activities & Public Water Works

The tariff for HV-5 category has been retained at existing level.

HV-6: Residential

The tariff for HV-6 category has been retained at existing level.

HV-7: Start up Power

The tariff for HV-7 category has been retained at existing level. The power requirement of solar and wind power generators shall be met by availing supply under HV-3 category.

HV-8: Industries related to manufacturing of equipment for power generation from renewable energy sources

The tariff for HV-8 category has been retained at existing level.

HV-9: Information Technology Industries

The tariff for HV-9 category has been retained at existing level.

Special Tariff for Charging Stations for Electric Vehicles

Electric Vehicle (EV) charging stations are required for recharging of electric vehicles, such as plug-in electric vehicles including electric cars, neighbourhood electric vehicles and plug-in hybrids. As plug-in hybrid electric vehicles and battery electric vehicle ownership are expanding, there is a growing need for widely distributed publicly accessible charging stations, some of which will need to support faster charging. Hence, in order to encourage the electric vehicles by providing publicly accessible charging stations, there is need to provide concessional tariff for such facility.

In order to incentivize sustainable eco-friendly transport system, flat rate single part tariff of Rs. 5/kWh for charging stations for electric vehicles has been approved for FY 2019-20.

8.4 Wheeling Charges

CSPDCL's submission

CSPDCL has proposed an allocation matrix for wheeling charges and retail supply, wherein the entire power purchase expenses including transmission charges, interest on CSD, and non-tariff income has been considered as part of the retail supply business, along with 50% of the employee expenses including interim wage relief, 70% of the A&G expenses, 10% of the R&M expenses, 50% of pension payment, 10% of interest expenses, 10% of depreciation, 10% of RoE, and 90% of the interest on working capital.

CSPDCL submitted the following Wheeling Charges for FY 2019-20:

Table 8-5: Wheeling Charges for FY 2019-20 as submitted by CSPDCL

Sr. No.	Particulars	FY 2019-20
1	Total Energy input to 33 kV distribution system (MU)	25,412.23
2	Distribution cost for wires business (Rs. crore)	1,342.18
3	Distribution cost for 33 kV voltage level (assuming 35% of cost at 33kV) (Rs. crore)	469.76
4	**Wheeling Charges for 33 kV voltage level (paise/kWh)**	**18.49**

Commission's View

The wheeling charges have been computed by considering 35% of the total ARR (excluding the power purchase expenses and the interest on consumer security deposit). Total energy requirement at 33 kV has been considered as 22,932.59 MU based on the approved energy balance for FY 2019-20.

For long-term, medium-term and short-term open access customers, wheeling charges shall be Rs. 235/MWh (or Rs. 0.235 per kWh) for the energy computed at 100% load factor for wheeling. The same charges shall be applicable for both collective and bilateral transaction at the point of injection.

Energy losses shall be applicable at the rate of 6% for the energy scheduled for distribution at the point or points of injection at 33 kV side of 33/11 kV sub-station.

8.5 Revenue at Approved Tariff

The revised tariff will be applicable with effect from April 1, 2019 for the consumers of the State for FY 2019-20. The category-wise revenue at revised tariffs approved in this order are shown in the Table below:

Table 8-6: Revenue in FY 2019-20 at Tariffs approved by the Commission

Sr. No.	Consumer Category	Revenue at proposed Tariff
A	**LV Categories**	**5,636.35**
1	Domestic including BPL	1,989.75
2	Non-Domestic (Normal Tariff & Demand Based Tariff)	755.03
3	Agriculture – Metered & Allied Activities	1,818.67
4	LT Industry	345.84
5	Public Utilities	270.28
6	Temporary	456.78
B	**HV Categories**	**7,658.60**
1	HV 1: Railway Traction	566.97
2	HV 2: Mines (Coals & others)	635.75
3	HV 3: Other Industry &General-purpose Industry	1,897.09
4	HV 4: Steel Industries	4,279.88
5	Others	278.92
C	**Total Revenue from LV and HV categories**	**13,294.94**

8.6 Cross-subsidy

The tariff of different consumer categories in relation to the approved adjusted ACoS of Rs. 6.07 per kWh is such that the tariff for some categories of consumers are higher than the ACoS while the tariff for other categories are lower than the ACoS. The Commission has reduced the cross-subsidy in this Order and ensured that the tariffs are within ±20% of the ACOS for most of the categories, as shown in the Table below:

Table 8-7: Cross-subsidy with Existing tariff and Approved tariff

Consumer Category		Approved in Tariff Order for FY 2018-19		Approved in Tariff Order for FY 2019-20	
		ABR (Rs. /kWh)	ABR/ACOS (%)	ABR (Rs. /kWh)	ABR/ACOS (%)
LV	Domestic	4.66	75%	3.92	65%
	Non-Domestic	8.52	138%	7.77	128%
	Agriculture	5.09	82%	4.79	79%
	Industry	7.32	118%	6.42	106%
	Public Utilities	6.27	101%	6.23	103%
HV	HV1: Railway Traction	5.79	93%	5.86	97%
	HV 2: Mines	8.02	129%	8.67	143%
	HV 3: Other Industrial & General Purpose Non-Industrial	8.20	132%	8.29	137%
	HV 4: Steel Industries	7.14	115%	7.31	121%

8.7 Cross-subsidy Surcharge

The Commission has determined the Cross-Subsidy Surcharge (CSS) to be paid by the open access consumers, in accordance with CSERC (Connectivity and Intra-State Open Access) Regulations, 2011 as under:

The approved CSS is as under:

a) Rs. 1.70 per kWh for 220 kV/132 kV consumers (which is 90% of the computed value of Rs. 1.89 per kWh).

b) Rs. 1.38 per kWh for 33 kV consumers (which is 90% of the computed value of Rs. 1.53 per kWh).

For Open Access consumers procuring power from renewable energy-based power generating plant (excluding solar power), the CSS payable shall be 50% of the CSS determined for that year.

Accordingly, Cross-subsidy Surcharge for renewable energy transactions is as under:

a) Rs. 0.85 per kWh for 220 kV/132 kV consumers (which is 50% of the computed value of Rs. 1.89 per kWh).

b) Rs. 0.69 per kWh for 33 kV consumers (which is 50% of the computed value of Rs. 1.53 per kWh).

Further, for promotion of solar energy, Commission decides to waive off CSS. Accordingly, no CSS shall be payable, in case a consumer receives power from solar power plants through open access,.

8.8 Applicability of Order

The approved Tariff Schedule for FY 2019-20 is given in **Chapter 11**.

The Order will be applicable from 1st April, 2019 and will remain in force till March 31, 2020 or till the issue of next Tariff Order, whichever is later. The Commission directs the Companies to take appropriate steps to implement the Tariff Order.

9 TARIFF SCHEDULE FOR FY 2019-20

9.1 Tariff Schedule for Low Voltage (LV) Consumers

This tariff schedule is applicable to all LV consumers as follows:

a) Single-phase, 230 Volts up to a maximum connected load of 3 kW, and

b) Three-phase, 400 Volts for maximum demand up to 112.5 kW in case of demand-based tariff or for maximum contracted load of 150 HP in case of other tariff, as applicable.

9.1.1 LV-1: Domestic

Applicability

This tariff is applicable to domestic light and fan and power used for all domestic appliances, in residential premises, orphanages, homes for old/physically challenged people and homes for destitute; dharamshalas; student hostels; working women's hostels; ashrams; schools and hospitals (including X-rays, etc.) run by charitable trusts; homes for differently abled and mentally retarded, de-addiction and rehabilitation centres, schools and hospitals run by non-profit organizations/ societies registered under the Firms and Societies Act; Government hospitals/dispensaries, (excluding private clinics and nursing homes); Government Schools; farm houses; mosques; temples; churches, gurudwaras; religious and spiritual institutions; water works and street lights in private colonies and cooperative societies; common facilities such as lighting in staircase, lifts, fire-fighting in multi-storied housing complex, light and fan in khalihan, kothar, byra where agriculture produce is kept, post office at residence of a villager; residential premises of professionals such as advocates, doctors, artists, consultants, weavers, bidi makers, beauticians, stitching and embroidery workers including their chambers; public toilets; fractional HP motors used for Shailchak by Kumhars in their residences; zero waste centre compost unit.

Tariff:

Category of Consumers	Units Slab	Fixed Charge (Rupees per kWh)	Energy Charge (Rs. per kWh)	Minimum Fixed Charge
LV-1: Domestic				
Domestic including BPL Consumers	0 -100 units	2.40	1.00	Single Phase Rs. 40/- per month
	101-200 units	2.50	1.10	

Category of Consumers	Units Slab	Fixed Charge (Rupees per kWh)	Energy Charge (Rs. per kWh)	Minimum Fixed Charge
	201 - 400 units	3.20	1.70	Three Phase Rs. 120/- per month
	401 – 600 units	3.50	2.00	
	601 and above units	4.85	2.45	

Notes:

i. Fixed Charges and Energy Charges are telescopic. For example, if consumption in any month is 150 units, then for first 100 units, rate of slab 0-100 shall be applicable and for remaining 50 units, rate of slab 101-200 shall be applicable.

ii. Domestic consumers shall be entitled for subsidy as per State Government Order, and their consumption shall be billed as per tariff LV-1.

iii. If a portion of the dwelling is used for the conduct of any business other than those stipulated above, the entire consumption shall be billed under Non-domestic tariff LV-2.

9.1.2 LV-2: Non-Domestic

Applicability

This tariff is applicable to light and fan and power to shops, showrooms, business houses, offices, educational institutions (except those included in LV-1 and LV-5), public buildings, Warehouses, town halls, clubs, gymnasium and health clubs, meeting halls, places of public entertainment, circus, hotels, cinemas, railway stations, private clinics and nursing homes including X-rays plant, diagnostic centres, pathological labs, carpenters and furniture makers, juice centres, hoardings and advertisement services, public libraries and reading rooms, typing institutes, internet cafes, STD/ISD PCO's, Mobile Towers, coaching centres, FAX/photocopy shops, tailoring shops, photographers and colour labs, laundries, cycle shops, compressors for filling air, toy making industry, nickel plating on small scale, restaurants, eating establishments, Government circuit houses/rest houses, guest houses, marriage gardens, farmhouses being used for commercial purposes, book binders, offset printers, bakery shop, banks, parlours, printing press, computer centre, petrol pumps and service stations, electric charging centres for Vehicles, [1][word "*Registered*

[1]*Vide Corrigendum Order dated 01.03.2019*

Women self-help group" deleted], HV industrial consumers seeking separate independent LV connection in the same premises of HV industrial connection and other consumers not covered under any other category of LV consumers.

Tariff:

Category of Consumers	Units Slab	Fixed Charge (Rs per kW of Contracted load/Billing Demand)	Energy Charge (Rs. per kWh)
LV-2.1: Single Phase Non-Domestic- (up to 3 kW)	0 – 100 units	Rs. 50 per kW per month	5.40
	101 - 400 units		6.50
	401 and above units		7.90
LV-2.2: Three Phase Non-Domestic			
(A) Upto 15 kW	0-400 units	Demand Charges- Rs 120/kW/month on billing demand	6.50
	401 and above units		7.80
(B) Above 15 kW	All units	Demand Charges- Rs 180/kW/month on billing demand	7.25

Note:

i. Fixed Charges of LV-2.1 and Demand Charge on contract demand of tariff LV-2.2 is a monthly minimum charge, whether any energy is consumed during the month or not.

ii. For charging stations of electric vehicles, a flat rate single part tariff of Rs. 5 per unit shall be applicable.

iii. A discount of 50% on Energy Charges shall be applicable for new mobile towers, to be set up, in left-wing extremism affected districts, after 1st April 2019.

iv. A discount of 10% on Energy Charges shall be applicable for commercial activities being run exclusively by registered women self-help groups.

9.1.3 LV-3: L.V. Agriculture

Applicability

This tariff is applicable to agricultural pumps/tube wells used for irrigation (including drip and sprinkler system) for crops, nursery, horticulture crops (growing vegetables and fruits), floriculture (growing flowers), growing of herbs/medicinal plants and mushroom, jatropha plantation, chaff cutters, thresher, winnowing machines, sugarcane crushers used on agricultural land, lift irrigation pumps/tube wells of State Government or its agencies; water drawn by agriculture pumps used by labour, cattle, and farm houses in the premises of agriculture farms for drinking purposes only and packaging of agriculture produce at farm, khalihan, etc.

Tariff:

Category of Consumers	Fixed Charge	Energy Charge (Rs. per kWh)
LV-3: L.V. Agriculture	Rs. 80/HP/month	4.40

The load of 100 W is permitted at or near the motor pump set.

Notes:

i. Fixed Charge is monthly minimum charge whether any energy is consumed or not during the month.

ii. For non-subsidized agriculture pump connection, a concession of 10% on energy charge shall be allowed.

9.1.4 LV- 4: L.V. Agriculture Allied Activities

Applicability

This tariff is applicable to pump/tube well connections, other equipment and light and fan for tree plantation, fisheries, hatcheries, poultry farms, dairy, cattle breeding farms, sericulture, tissue culture, aquaculture laboratories[2][words "*food processing units*" deleted] and milk chilling plant.

Tariff:

Category of Consumers	Fixed Charge	Energy Charge (Rs. per kWh)
LV-4.1 (A): Up to 25 HP	Rs. 80 per HP per month or Rs. 107per kW per month	4.40
LV-4.1 (B): Above 25 HP up to 150 HP	Rs. 90 per HP per month or Rs.121 per kW per month	5.20
LV-4.2: Demand based tariff for Contract Demand of 15 to 112.5 kW	Rs. 180 per kW per month on billing demand	5.10

[2] *Vide Corrigendum Order dated 01.03.2019*

Note:

i. All connections shall be required to maintain average monthly power factor of 0.85 by providing capacitors of suitable rating, failing which they shall be required to pay surcharge of 35 paise per kWh.

ii. For tariff LV-4.1, Fixed Charge is monthly minimum charge and for tariff LV-4.2 Demand Charge on contract demand is monthly minimum charge, whether any energy is consumed during the month or not.

9.1.5 LV-5: L.V. Industry

Applicability

These tariffs are applicable to power, light and fan for industries such as flour mills, hullers, grinders for grinding masala, power looms, rice mills, dall-mills, oil mills, ice factories, cold storage plants, ice candies, terracotta, handloom, handicraft, agro-processing units, minor forest produce, laboratories of engineering colleges, ITIs and polytechnics and industrial institutions, aluminium based factory, bakery/biscuit industries, bottling plant, cable/insulation industries, Cement Based Factory, Chemical Plant, Coal Based Industries, Conductor Wire Industries, Cutting & Polishing Of Marble, Fabrication Workshop, Food Processing Industry, Forest Product based factory, GI Wire Industries, Glass Industries, Hot Mixing Plant, IT based industries, Mineral based factory, Plastic Industries, Plywood factory, Pulverize industries, Rolling Mill, Saw Mill, Stone Crusher, Toy Industries, Wire Drawing / Steel Industries, Wire Product, Registered Women self-help group, workshops and fabrication shop, etc.

Tariff:

Category of Consumers		Demand Charge	Energy Charge (Rs. per kWh)
LV-5: L.V. Industry			
5.1	Flour mills, Hullers, power looms, grinders for grinding masalas, terracotta, handloom, handicraft, agro-processing units, minor forest produce up to 25 HP or 18.7 kW	Rs. 65/kW/month on billing demand	3.60
a)	Bastaravem Dakshin Kshetra Adivasi Vikas Pradhikaran, and Sargujaavem Uttar KshetraAdivasi VikasPradhikaran*	Rs. 65/kW/month on billing demand	3.20

Category of Consumers		Demand Charge	Energy Charge (Rs. per kWh)
5.2	Other Industries		
5.2.1	Up to 25 HP or 18.7 kW	Rs. 100/kW/month on billing demand	4.75
a)	Bastaravem Dakshin Kshetra Adivasi Vikas Pradhikaran, and Sargujaavem Uttar KshetraAdivasi VikasPradhikaran*	Rs. 80/kW/month on billing demand	3.75
5.2.2	Above 25 HP up to 150 HP (18.7 kW to 112.5 kW)	Rs. 110kW/month on billing demand	5.50
a)	Bastar avem Dakshin Kshetra Adivasi Vikas Pradhikaran, and Sarguja avem Uttar Kshetra Adivasi Vikas Pradhikaran*	Rs. 90/kW/month on billing demand	5.00

*Notified Vide Order dated August 22, 2005

Notes:

i. For tariff LV-5.1 and LV-5.2, Demand Charge on contract demand is monthly minimum charge, whether any energy is consumed during the month or not.

ii. In order to give impetus to LT industries located in rural areas, a rebate of 5% in energy charges for consumers specified under tariff category shall be allowed for LV industries located in rural areas notified by Government of Chhattisgarh.

iii. In accordance with the Section 62(3) of EA 2003 providing for differentiation in tariff based on geographical position of any area, a new sub-category created under LV 5.1 and 5.2 has been continued, and considerably lower tariff has been determined for consumers located in the areas covered under **"Bastar avem Dakshin Kshetra Adivasi Vikas Pradhikaran"** (notified vide Order dated August 22, 2005) and "**Sarguja avem Uttar Kshetra Adivasi Vikas Pradhikaran"** (notified vide Order dated August 22, 2005).

iv. A rebate of 10% on Energy Charges shall be applicable for industrial activities being run exclusively by registered women self-help groups.

9.1.6 LV-6: Public Utilities

Applicability

This tariff is applicable to colonies developed by Chhattisgarh State Housing Board and public utilities such as water supply schemes, sewage treatment plants and sewage pumping installations, crematorium, traffic signals and lighting of public streets including public parks and archaeological and other monuments when requisition for supply is made by Public Health Engineering Department, Local Bodies, Gram Panchayats or any organization made responsible by the Government to maintain these services.

Tariff:

Category of Consumers	Fixed Charge	Energy Charge (Rs. per kWh)
LV-6: Public utilities	Rs. 125/HP/month or Rs. 168/kW/month	5.65

Note:

Fixed Charge is monthly minimum charge whether any energy is consumed during the month or not.

9.1.7 LV-7: Information Technology Industries

Applicability

This tariff is applicable to Information Technology Industries having minimum contract demand of 50 kW.

Tariff:

Category of Consumers	Fixed Charge	Energy Charge (Rs. per kWh)	Minimum Charge
LV-7: Information Technology Industries	Nil	4.50	Rs. 1500/- per month

Note:

Minimum Charge is monthly minimum charge whether any energy is consumed during the month or not.

9.1.8 LV 8: Temporary Supply

Applicability

This tariff is for connections that are temporary in nature. The tariff applicable shall be as given for the respective category of consumer.

Provided that for construction purpose, a consumer shall be given a temporary connection only.

Provided further that for a farmer requiring temporary agriculture pump connection more than once within a period of one year from the date of disconnection of the previous connection, no fresh paper formalities would be required.

Temporary supply cannot be demanded by a prospective consumer as a matter of right but will normally be arranged by the Licensee when a requisition is made subject to technical feasibility.

Tariff:

Fixed Charge and Energy Charge shall be billed at one and half times the normal tariff as applicable to the corresponding consumer categories.

Provided that for Agricultural pump connections, the Fixed Charge and Energy Charge shall be billed at the normal tariff applicable for LV 3 category.

Notes:

i. An amount equal to estimated bill for 3 months or for the period of temporary connection requisitioned, whichever is less, is payable before serving the temporary connection, subject to replenishment from time to time and adjustment in the last bill after disconnection.

ii. No temporary connection shall be served without a meter.

iii. Connection and disconnection charge shall be paid as per the schedule of miscellaneous charges.

iv. No rebates/concessions under any head shall be applicable to temporary connections.

v. A month for the purpose of billing of temporary supply shall mean 30 days from the date of connection or part thereof.

vi. In case connected load/maximum demand is found more than contracted load/contract demand, then the billing of excess load/supply shall be done for the amount calculated as per para 1.1.11.

vii. Any expenditure made by the Licensee for providing temporary supply up to the point of supply, shall be paid for by the consumer as per prescribed procedure.

viii. Temporary connections shall not be served unless suitable capacitors, wherever applicable, are installed so as to ensure Power Factor of not less than 0.85 lagging.

ix. Surcharge at the rate of 2% per month or part thereof on the outstanding amount of the bill shall be payable in addition, from the due date of payment of bill, if the bill is not paid by the consumer within the period prescribed.

9.1.9 Terms and Conditions of L.V. Tariff

1. Energy will be supplied to the consumer ordinarily at a single point for the entire premises of the consumer.

2. Contracted Load/Connected Load or Contract Demand/Maximum Demand infraction shall be rounded off to the next whole number.

3. If the bills are not issued consecutively for six months or more for any LT Consumer, billing on accumulated meter reading shall not be raised without approval of Divisional Engineer of CSPDCL.

4. For the purpose of separate independent LV connection to HV Industrial consumer in the same premises of HV industrial connection, to meet out its essential load during emergency or non-availability of supply in HV connection under LV 2 category, conditions as mentioned in Clause 4.40 of the Chhattisgarh State Electricity Supply Code and its amendment, if any, shall be applicable.

5. For the purpose of Demand Based Tariff (LV-2.2, LV-4.2 and LV-5)

   i. **Determination of Maximum Demand-** The maximum demand means the highest load measured by sliding window principle of measurement in average kVA or average kW as the case may be at the point of supply of a consumer during any consecutive period of 30 minutes during the billing period.

   ii. **Billing Demand** – The billing demand for the month shall be the actual maximum kW demand of the consumer recorded during the month or 75% of the Contract Demand, whichever is higher. The billing demand shall be rounded off to the next whole number.

   iii. **Minimum Charge** – The demand charge on contract demand (CD) is a monthly minimum charge whether any energy is consumed during the month or not.

9.1.10 Power Factor Incentive and Surcharge

1. Consumers, falling under tariff categories LV-4: LV Agriculture Allied Activities; LV 5- LV Industry; LV 6: Public Utilities and LV-7:Information Technology Industries shall arrange to install suitable low-tension capacitors of appropriate capacity at their cost. The consumer also shall ensure that the capacitors installed by them properly match with the actual requirement of the load so as to ensure average monthly Power Factor of 0.85 or above. A consumer who fails to do so shall be liable to pay Power Factor surcharge @ 35 paise per kWh on the entire consumption of the month.

2. All LV non-domestic consumers with Contracted Load of 15 kW or above shall arrange to install suitable Low-Tension capacitors of appropriate capacity at their cost. The consumer shall ensure that the capacitors installed by him properly match with the actual requirement of the load so as to ensure average monthly Power Factor of 0.85 or above. A consumer who fails to do so will be liable to pay Power Factor surcharge @ 35 paise per kWh on the entire consumption of the month.

3. All LV installations having welding transformer are required to install suitable Low-Tension capacitors so as to ensure Power Factor of not less than 0.85. Consumers not complying with the above shall have to pay Power Factor surcharge of 75 paise per kWh on the entire monthly consumption, provided the load of the welding transformer(s) exceeds 25% of the total connected load.

Note - For the purposes of computing the connected load of welding transformers in kW, a Power Factor of 0.6 shall be applied to the kVA rating of such welding transformers. The kVA rating can also be calculated on the basis of load voltage and maximum load current on secondary side of welding machine.

4. The average monthly Power Factor recorded in the meter shall be considered for billing of Power Factor surcharge or Power Factor incentive, as the case maybe.

5. Levy of Power Factor surcharge as indicated above, shall be without prejudice to the rights of CSPDCL to disconnect the consumer's installation after issue of 15 days' notice if the average monthly Power Factor remains 0.7 or below for a period of more than two consecutive months. It shall remain disconnected till the consumer makes suitable arrangements to improve the Power Factor.

6. Notwithstanding the above, if the average monthly Power Factor of a new consumer is found to be less than 0.85 at any time during the first six months from the date of connection and if he maintains average monthly Power Factor

continuously in subsequent three months at not less than 0.85, then the surcharge billed on account of low Power Factor during the said period shall be withdrawn and credited in next month's bill.

7. All categories of LV consumers in whose case Power Factor surcharge is applicable; shall also be eligible for Power Factor incentive. Such incentive shall be payable @ 5 paise per kWh on the entire consumption of that month in which he maintains an average monthly Power Factor equal to or above 0.85, payable @ 10 paise per kWh on the entire consumption of that month in which he maintains an average monthly Power Factor equal to or above 0.90 and @ 15 paise per kWh of entire consumption of that month in which he maintains an average monthly Power Factor of 0.95 or above.

9.1.11 Provisions of billing in case of Excess Supply

i. <u>For connected load-based tariff</u>

1. The consumers, except the domestic (LV-1) consumers, availing supply at connected load-based tariff shall restrict their actual connected load within the contracted load. However, in case the actual connected load in any month exceeds the contracted load, the connected load-based tariff shall apply only to the extent of contracted load and corresponding units of energy. The connected load in excess of contracted load and corresponding units of energy shall be treated as excess supply. The excess supply so consumed in any month, shall be charged at the rate of one and half times of the connected load based tariff applicable to the consumer (fixed and energy charges and VCA charges) for the excess connected load to the extent of 20% of contracted load and at the rate of two times of connected load based tariff if the excess connected load is found beyond 20% of contracted load for actual period of enhancement of load or 6 months whichever is less, including the month in which the existence of excess load is detected and shall be continued to be billed till excess load is removed or contract load is enhanced.

2. Where the recording facility of demand is available, the billing on account of excess supply shall be restricted to the recorded month only.

ii. <u>For Demand Based tariff consumers</u>

Consumers availing supply at demand-based tariff (LV-2.2/LV-4.2/LV- 5) should at all times restrict their maximum demand to the contract demand or contracted load whichever is applicable. However, contract demand for the demand-based tariff consumer can be less than connected load. In case the maximum demand in any month exceeds the contract demand, the said demand-based tariff (LV–2.2/LV-4.2/LV- 5) shall apply only to the extent of the contract demand and corresponding units of energy. The demand in excess of contract demand and corresponding units of energy shall be treated as excess supply. The excess supply so availed in any month, shall be charged at the rate of one and half times of the normal tariff applicable to the consumer (fixed and energy charges and VCA charges) for the excess demand to the extent of 20% of contract demand and at the rate of two times of normal tariff if the excess demand is found beyond 20% of contract demand.

For the purpose of billing of excess supply, the billing demand and the units of energy shall be determined as under:

a) Billing Demand: The demand in excess of the contract demand in any month shall be the billing demand.

b) Units of Energy: the units of energy corresponding to kW portion of the demand in excess of the contract demand shall be: -

$$EU = TU\,(1 - CD/MD)$$

Where

EU – denotes excess units;

TU – denotes total units supplied during the month;

CD – denotes contract demand, and

MD – denotes actual maximum demand.

I. The excess supply availed in any month shall be charged along with the monthly bill and shall be payable accordingly.

II. The above billing of excess supply at one and half times/two times of the normal tariff shall be applicable to consumers without prejudice to CSPDCL's right to discontinue supply in accordance with the provisions contained in the Chhattisgarh State Electricity Supply Code, 2011, as amended from time to time.

1. **Delayed Payment Surcharge**

If the bill is not paid by the consumer within the period (due date) prescribed for payment of the bill, a surcharge @ 1.5% per month or part thereof, on the total outstanding amount of the bill (including arrears, if any, but excluding amount of surcharge), subject to minimum of Rs. 5 shall be payable in addition, from the due date of payment as mentioned in the bill.

2. **Additional Charges**

Every Local Body shall pay an additional charge equivalent to any tax or fee levied by it under the provisions of any law including the Corporation Act, District Municipalities Act or Gram Panchayat Act on the poles, lines, transformers and other installations through which the Local Body receives supply.

3. **Advance Payment Rebate**

For advance payment made before commencement of consumption period for which bill is to be prepared, a rebate @ 0.5% per month on the amount which remains with the Licensee at the end of the calendar month excluding security deposit, shall be credited to the account of consumer after adjusting any amount payable to the Licensee subject to the net amount of advance being not less than Rs.1000 and shall be adjustable in next month's bill.

4. **Rounding off**

The bill shall be rounded off to the nearest multiple of Rs.10. Difference, if any, between the bill amount before and after rounding off, shall be adjusted in next month's bill.

For example: - If the total amount of bill is Rs. 235.00, then the bill shall be rounded off to Rs. 240 and Rs. 5.00 will be credited in next month's bill, whereas if the total amount of bill is Rs. 234.95, then the bill will be rounded off to Rs. 230 and Rs. 4.95 will be debited in next month's bill. In view of the above provision, no surcharge will be levied on outstanding amount, which is less than Rs. 10.

5. **Applicability of tariff**

In case of any dispute about applicability of tariff to a particular LV category, the decision of the Commission shall be final and binding.

6. Tax or Duty

The tariff does not include any tax or duty, etc., on electrical energy that may be payable at any time in accordance with any law in force. Such charges, if any, shall be payable by the consumer in addition to tariff charges.

7. Meter Hire

Meter hire shall be charged as per the schedule of miscellaneous charges to all categories of LV consumers except the consumers of domestic light and fan category. Domestic light and fan category consumer shall not be required to pay such charges.

8. Variable Cost Adjustment (VCA) Charge

VCA charge on consumption from April 1, 2019 [3][word *"2018"* replaced by*"2019*] as per the formula and conditions specified in the CSERC MYT Regulations, 2015 shall be levied in addition to energy charge on all the LV categories including temporary supply.

However, from the date of applicability of this Order, the base values for computation of VCA for succeeding period shall be revised in accordance to this Order.

9. Conditions to have over-riding effect

All the above conditions of tariff shall be applicable to the consumer notwithstanding the provisions, if any, in the agreement entered into by the consumer with the Licensee.

9.2 Tariff Schedule for High Voltage (HV) Consumers

9.2.1 HV-1: Railway Traction

Applicability:

This tariff is applicable to the Railways for traction loads only.

Tariff:

Supply Voltage	Demand Charge (Rs. /kVA/month)	Energy Charge (Rs. per kVAh)
Railway Traction on 132 kV / 220 kV	350	4.20

[3]*Vide Corrigendum Order dated 01.03.2019*

Specific terms and conditions:

1. The maximum demand means the highest load measured by sliding window principle of measurement in average kVA at the point of supply of a consumer during any consecutive period of 15 minutes during the billing period.
2. Provided that if as a result of an emergency in the consumer's installation or in the transmission lines supplying energy to the said traction sub-station, extra load is availed by the consumer with prior intimation to the Licensee, the period of such emergency shall not be taken into account for the purpose of working out the maximum demand.
3. Provided further that as a result of emergency in the traction sub-station (TSS) or in the transmission line supplying power, if the entire load of the TSS or part thereof is transferred to adjacent TSS, the maximum demand (MD) of the TSS for the month shall not be taken as less than the average MD recorded for the previous three months during which no emergency had occurred.
4. In order to give impetus to electrification of railway network in the State, a rebate of 10% in energy charges for new railway traction projects shall be allowed for a period of five years from the date of connection for such new projects for which Agreements for availing supply from the Licensee are finalised during FY 2018-19.
5. Other terms and condition shall be as mentioned in the general terms and conditions of HV tariff.
6. For traction sub-stations of Indian Railways, if Load Factor for any month is above 20%, then a rebate of 30% shall be allowed on Energy Charge calculated on entire energy consumption for that month.

9.2.2 HV-2: Mines

Applicability

This tariff is applicable to all types of mines, mines with stone crusher unit, coal mines, coal washery, etc., for power, lights, fans, cooling ventilation, etc., which shall mean and include all energy consumption for mining purpose, and consumption for residential and general use therein including offices, stores, canteen compound lighting, etc.

Tariff:

Supply Voltage	Demand Charge (Rs. /kVA/month)	Energy Charge (Rs. per kVAh)
220 kV supply	500	6.00
132 kV supply	500	6.15
33 kV supply	500	6.40
11 kV supply	500	6.70

9.2.3 HV-3: Other Industrial and General Purpose Non-Industrial

Applicability

1. This tariff is applicable to all types of industries including cement industries and industries not covered under HV-1, HV-2 and HV-4 for power, lights, fans, cooling ventilation, etc., which shall mean and include all energy consumption in factory; and consumption for residential and general use therein including offices, stores, canteen compound lighting, etc.
2. This tariff is also applicable for bulk supply at one point to establishment such as Railways (other than traction), hospitals, offices, hotels, shopping malls, electric charging centres for Vehicles, power supplied to outside of State (border villages), educational institutions, mixture and/or stone crushers and other institutions, etc., having mixed load or non-industrial and/or non-residential load. This tariff is also applicable to all other HT consumers not covered specifically in any other HV tariff category.

Tariff:

Supply Voltage HV- 3	Demand Charge (Rs. /kVA/month)	Energy Charge (Rs. per kVAh)
220 kV supply	350	5.91
132 kV supply	350	6.01
33 kV supply (Load factor >15%)	350	6.36
33 kV supply (Load factor <=15%)	150	6.51
11 kV supply (Load Factor >15%)	350	6.71
11 kV supply (Load Factor <=15%)	150	6.91

Note: -

i. For charging stations of Electric Vehicles, a flat rate single part tariff of Rs. 5 per unit shall be applicable.

9.2.4 HV-4: Steel Industries

Applicability

This tariff is applicable to steel industries, mini-steel plant, rolling mills, sponge iron plants, ferro alloy units, steel casting units, pipe rolling plant, iron ore pellet plant, iron beneficiation plant and combination thereof including wire drawing units with or without galvanizing unit; for power, lights, fans, cooling ventilation, etc., which shall mean and include all energy consumption in factory, and consumption for residential and general use therein including offices, stores, canteen compound lighting, etc.

Tariff:

Supply Voltage HV- 4	Demand Charge (Rs. /kVA/month)	Energy Charge (Rs. per kVAh)
220 kV supply	365.00	5.30
132 kV supply	365.00	5.45
33 kV supply (Load factor >15%) *	365.00	5.85
33 kV supply (Load factor <=15%)*	180.00	6.35
11 kV supply (Load Factor >15%)*	365.00	5.95
11 kV supply (Load Factor <=15%)*	180.00	6.75

Note: -

*The applicable Load Factor limit for 33 kV and 11 kV supply for exclusive Rolling mills consumers shall be 35%.

Further, to boost industrialization in the areas covered under **"Bastar avem Dakshin Kshetra Adivasi Vikas Pradhikaran"** (notified vide Order dated August 22, 2005) and "**Sarguja avem Uttar Kshetra Adivasi Vikas Pradhikaran"** (notified vide Order dated August 22, 2005), a special rebate of 7% on energy charge is being provided to the consumers starting production on or after April 1, 2017.

Load Factor Rebate

The consumers of this category shall be eligible for Load Factor rebate on Energy Charges:

Monthly Load Factor (LF)	Rebate
63% - 63.99%	rebate of 1% on normal Energy Charge calculated on entire energy consumption

Monthly Load Factor (LF)	**Rebate**
64% - 64.99%	rebate of 2% on normal Energy Charge calculated on entire energy consumption
65% – 65.99%	rebate of 3% on normal Energy Charge calculated on entire energy consumption
66% - 66.99%	rebate of 4% on normal Energy Charge calculated on entire energy consumption
67% - 67.99%	rebate of 5% on normal Energy Charge calculated on entire energy consumption
68% - 68.99%	rebate of 6% on normal Energy Charge calculated on entire energy consumption
69% - 69.99%	rebate of 7% on normal Energy Charge calculated on entire energy consumption
70% -70.99%	rebate of 8% on normal Energy Charge calculated on entire energy consumption
71%-71.99%	rebate of 9% on normal Energy Charge calculated on entire energy consumption
72%-72.99%	rebate of 10% on normal Energy Charge calculated on entire energy consumption
73%-73.99%	rebate of 11% on normal Energy Charge calculated on entire energy consumption
74%-74.99%	rebate of 12% on normal Energy Charge calculated on entire energy consumption
75% -75.99%	rebate of 13% on normal Energy Charge calculated on entire energy consumption
76% -76.99%	rebate of 14% on normal Energy Charge calculated on entire energy consumption
77% and above	rebate of 15% on normal Energy Charge calculated on entire energy consumption

Provided that in case the monthly Load Factor is 62.99% or below, then no Load Factor Rebate shall be payable in that month:

Provided further that flat 30 hours per month of power-off (non-supply) shall be considered for calculation of Load Factor:

Provided also that the Load Factor Rebate shall not be payable on the excess energy consumed corresponding to exceeding contract demand for that billing month:

Provided also that the monthly Load Factor shall be rounded off to the lowest integer.

9.2.5 HV-5: Irrigation & Agriculture Allied Activities, Public Water Works

Applicability

i. This tariff shall be applicable for Chhattisgarh State Housing Board and agriculture pump connections, irrigation pumps of lift irrigation schemes of State Government or its agencies/co-operative societies, including colonies developed and energy used for lighting pump houses.

ii. This tariff is also applicable to the consumer availing supply at HV for the purpose of pump/tube well connections, other equipment for tree plantation, fisheries, hatcheries, poultry farms, dairy, cattle breeding farms, sericulture, tissue culture and aquaculture laboratories and milk chilling plant and bakery for power, lights, fans, coolers, etc., which shall mean and include all energy consumed in factory, offices, stores, canteen, compound lighting, etc., and residential use therein.

iii. This tariff shall be applicable for public utility water supply schemes, sewerage treatment plants and sewage pumping installations run by P.H.E. Department, Local Bodies, Gram Panchayat or any organization made responsible by the Government to supply/maintain public water works/sewerage installation including energy used for lighting pump house.

Tariff:

Supply Voltage	Demand charge (Rs. /kVA/month)	Energy charge (Rs. per kVAh)
Irrigation, Agriculture Allied Activities & Public Water Works	375	5.30

9.2.6 HV-6: Residential

Applicability

This tariff shall be applicable for bulk supply at one point to colonies, multi-storied residential buildings, townships, including townships of industries provided that consumption of non-domestic nature for other general-purpose load (excluding drinking water supply, sewage pumping and street light) shall not be more than 10% of total monthly energy consumption.

In case the consumption of non-domestic nature for other general-purpose load exceeds 10% of total monthly energy consumption, the tariff of HV-3: Other Industrial and General Purpose Non-Industrial, shall be applicable on entire consumption.

Tariff:

Category of Consumers	Demand charge (Rs. /kVA/month)	Energy charge (Rs. per kVAh)
Residential	375	5.70

9.2.7 HV-7: Start-Up Power Tariff

Applicability

The tariff shall be applicable to those consumers who avail supply for start-up power for their power plant (generating station and captive generating plant) at 400/220/132/33/11 kV.

Tariff:

Supply Voltage	Demand charge (Rs. /kVA/month)	Energy charge (Rs. per kVAh)
400/220/132/33/11 kV	200	8.05

Conditions for start-up power consumers:

i. Contract demand shall not exceed 10% of the highest capacity of generating unit of the generating station/captive generating plant

ii. Captive generating plants, which do not have any co-located industrial load and who use the grid for transmission and wheeling of electricity can avail start up-power tariff.

iii. Captive generating plants, which have co-located industrial load are also entitled for start-up power tariff.

iv. Drawal of power shall be restricted to within 10% of Load Factor based on the Contract Demand in each month. In case the Load Factor in a month is recorded beyond 10%, the demand charge shall be charged at double the normal rate. Supply can also be disconnected if the monthly Load Factor exceeds 10% in any two consecutive months. Load Factor shall be computed from contract demand.

v. Start-up power shall also be made available to the generator/captive generating plant connected to CTU grid with proper accounting.

vi. This tariff shall also be applicable to generators for the consumption upto COD of the plant.

vii. Generators who have not availed start-up connection but eventually draw power from the grid shall be billed @ Rs 12 per kVAh. In case of captive generating plant, which do not have any co-located industrial load and who use the grid for transmission and wheeling of electricity, such CGP's, if they have not availed start-up connection but eventually draw power, shall be billed @ Rs. 12 per kVAh.

viii. In case of captive generating plant, which have co-located industrial load and who have not availed start-up connection but eventually draws start-up power [4][word *"power"* to be read as *"start-up power"*] from the grid shall be billed @ Rs. 12 per kVAh. All renewable generators (biomass, small hydro[5][words "*solar and wind"* deleted]) are exempted from payment of demand charge for the first five years from the date of commercial operation of their power plant, i.e., they will be required to pay only energy charge during first five years from COD and full start-up tariff from sixth year onwards. However, in case during first five years from the date of its connection, if the actual demand exceeds the contract demand, the billing for that month shall be as per other start-up power consumers exceeding contract demand. In case if the Load Factor is within 10% but actual demand exceeds the contract demand then also the billing for that month shall be as per other start-up power consumer exceeding contract demand. In case, it is established that the biomass based generator has used biomass in the lesser ratio than as mentioned in the guidelines of the Ministry of New and Renewable Energy during any financial year in first five years from the date of availing start up power tariff then demand charge as per this tariff category (HV–7) shall also become payable for the whole of such financial year and such payable amount will be billed in three equal instalments after such happening comes to the notice of CSPDCL.

9.2.8 HV-8: Industries related to manufacturing of equipment for power generation from renewable energy sources

Applicability

This tariff is applicable to consumers availing supply at 220/132/33/11 kV for manufacturing of plant, machinery and equipment used for generation of power from renewable sources of energy including for the manufacturing of hydel turbine, generator and related auxiliaries needed for small hydel plants up to 25 MW but excluding manufacturing of boilers, turbines, generators, and the related auxiliaries, which otherwise can be used for generation of power from conventional source of

[4]*Vide Corrigendum Order dated 30.4.2019*
[5]*Vide Corrigendum Order dated 30.4.2019*

energy. This tariff shall also not be applicable for manufacturing of such common machines/equipment/and other items such as electrical motors, structural items, nuts bolts, etc. which can be used for other purposes also.

Tariff:

Supply Voltage	Demand charge (Rs. /kVA/month)	Energy charge (Rs. per kVAh)
220/132/33/11 kV	110	3.70

9.2.9 HV-9: Information Technology Industries

Applicability

This tariff is applicable to Information Technology Industries having minimum contract demand of 50 kW.

Tariff:

Category of Consumers	Fixed Charge	Energy Charge (Rs. per kVAh)	Minimum Charge
HV-8: Information Technology Industries	Nil	4.50	Rs. 3000/-per month

Note:

Minimum Charge is monthly minimum charge whether any energy is consumed during the month or not.

9.2.10 HV-10: Temporary Connection at HV

Applicability

This tariff is applicable to all HV connections (other than the consumers availing Start up power Tariff (HV-7)), of temporary nature at 220/132/33/11 kV.

Provided that for construction purpose, a consumer shall be given a temporary connection only.

Temporary supply cannot be demanded by a prospective consumer as a matter of right but will normally be arranged by the Licensee when a requisition is made subject to technical feasibility.

Tariff:

One and half times of the normal Tariff applicable for the corresponding category of consumer for demand and energy charge shall be applicable.

Notes

i. An amount equal to estimated bill for 3 months or for the period requisitioned, whichever is less; shall be payable in advance before the temporary connection is served subject to replenishment from time to time and adjustment in the last bill after disconnection.

ii. If maximum demand is found more than the contract demand in any billing month, the billing shall be done at one and half times/two times of the energy charges and Demand Charges as applicable, in case of exceeding contract demand in permanent connection, and shall be calculated as per Clause 10 of Terms & Conditions of HV tariff.

iii. Any expenditure made by CSPDCL up to the point of supply for giving temporary connection shall be payable by the consumer as per prescribed procedure.

iv. Connection and disconnection charges shall be paid separately.

v. No rebates/concessions under any head shall be applicable to temporary connections.

vi. Month for the purpose of billing of temporary supply shall mean 30 days from the date of connection or for part thereof.

vii. Other terms and conditions of the relevant category of tariff shall also be applicable.

viii. Surcharge at 2% per month or part thereof on the outstanding amount of the bill shall be payable in addition from the due date of payment of bill, if the bill is not paid by the consumer within the period prescribed.

9.2.11 Time of Day Tariff

This tariff is applicable to HV-2, HV-3, and HV-4 tariff category. Under the Time of Day (TOD) Tariff, electricity consumption in respect of HV industries for different periods of the day, i.e., normal period, peak load period and off-peak load period, shall be recorded by installing a TOD meter. Consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer:

Period of Use		Normal rate of Demand Charge Plus
(i)	Normal period (5:00 a.m. to 6:00 p.m.)	Normal rate of Energy Charges
(ii)	Evening peak load period (6:00 p.m. to 11:00 p.m.)	120% of normal rate of Energy Charge

Period of Use	Normal rate of Demand Charge Plus
(iii) Off-peak load period (11:00 p.m. to 5:00 am of next day)	75% of normal rate of Energy Charge

Applicability and Terms and Conditions of TOD tariff:

i. The terms and conditions of the applicable tariff (such as monthly tariff minimum charge, etc.) shall continue to apply to a consumer to whom TOD tariff is applicable.

ii. In case, the consumer exceeds the contract demand, the demand in excess and the corresponding energy shall be billed at one and half/two times (as per methodology specified in Para "Additional Charges for Exceeding Contract Demand" of the Terms and Conditions of HV Tariff) of the normal tariff applicable for the day time (i.e., 5.00 a.m. to 6.00 p.m.) irrespective of the time of use.

9.2.12 Terms and Conditions of HV Tariff

The maximum and minimum contract demand for different supply voltages is governed as per provisions of the Chhattisgarh State Electricity Supply Code, 2011 and its amendments thereof. Presently, the minimum and maximum permissible load at respective supply voltage are as below:

Supply Voltage	Minimum	Maximum
11 kV	60 kVA	500 kVA
33 kV	60 kVA	15 MVA
132 kV	4 MVA	40 MVA
220 kV	15 MVA	150 MVA

Deviation in contract demand, if any, in respect of the above provisions on account of technical reasons, may be permitted with the approval of the Commission and billing shall be done accordingly. The HV consumers having contract demand exceeding the maximum limit mentioned above for respective voltage of supply shall be billed as specified at Clause 7 of Terms and Conditions of HV Tariff.

Point of Supply

Power will be supplied to consumers ordinarily at a single point for the entire premises. In certain categories like coal mines, power may be supplied at more than one point on the request of consumer subject to technical feasibility. HV industrial consumers can avail separate LV supply as per Clause 4.40 of the Chhattisgarh State Electricity Supply Code, 2011 and its amendments thereof, in the same premises.

Billing demand

The billing demand for the month shall be the maximum demand (in kVA) of the consumer recorded during the billing month or 75% of the contract demand or 60 kVA, whichever is higher, except for the consumers who have reduced their contract demand to zero. The billing demand shall be rounded off to the next whole number.

Determination of Demand

The maximum demand means the highest load measured by sliding window principle of measurement in average kVA at the point of supply of a consumer during any consecutive period of 15 minutes during the billing period.

1. Minimum Charge

The demand charge on contract demand (CD) is a monthly minimum charge whether any energy is consumed during the month or not.

2. Rounding off

The amount of HV energy bill shall be rounded off to the nearest multiple of Rs.10.

For example - the amount of Rs. 12345 will be rounded off to Rs. 12350 and Rs. 12344.95 shall be rounded off to Rs. 12340.

In view of the above provision no surcharge will be levied on outstanding amount, which is less than Rs. 10.

3. Delayed Payment Surcharge

If the bill is not paid by the consumer within the period prescribed (due date) for payment of the bill, a surcharge @ 1.5% per month or part thereof, on the total outstanding amount of the bill (including arrears, if any but excluding amount of surcharge), shall be payable in addition, from the due date of payment as mentioned in the bill.

4. Additional charges for Local Bodies

Every Local Body shall pay an additional charge equivalent to any tax or fee levied by it under the provisions of any law including the Corporation Act, District Municipalities Act or Gram Panchayat Act on the poles, lines, transformers and other installations through which the Local Body receives supply.

5. Advance Payment Rebate

For advance payment made before commencement of consumption period for which bill is to be prepared, a rebate @ 0.5% per month on the amount, which remains with the Licensee at the end of calendar month excluding security deposit, shall be credited to the account of consumer after adjusting any amount payable to the Licensee, subject to the net amount of advance being not less than Rs.20,000 and shall be adjustable in next month's bill.

6. Additional Charge for Exceeding Contract Demand

The consumers should restrict their maximum demand to the extent of contract demand. In case the maximum demand during any month exceeds the contract demand, the tariff at normal rate shall apply only to the extent of the contract demand and corresponding units of energy. The demand in excess of contract demand and corresponding units of energy shall be treated as excess supply. The excess supply so availed, if any, in any month shall be charged at one and half times of the normal tariff applicable to the consumer (demand and energy charges) for the excess demand to the extent of 20% of contract demand and at the rate of two times of normal tariff if the excess demand is found beyond 20% of contract demand.

Provided that in all categories where TOD is applicable:

i. During Off-Peak Hours, no additional charge will be levied on exceeding Contract Demand up to a maximum limit of 20%.

ii. Beyond 120% of contract demand, excess supply will be billed as per prescribed formula.

iii. Provided that maximum recorded demand during off peak load hours period will not be considered for the purpose of demand charges billing, i.e., demand charges will be levied on maximum recorded demand during normal and peak load hours.

For the purpose of billing of excess supply, the billing demand and the units of energy shall be determined as under: -

i. Billing Demand / Contract Demand:

The demand in excess of the contract demand in any month shall be the billing demand/ contract demand of the excess supply.

ii. **Units Energy:**

The units of energy corresponding to kVA of the portion of the demand in excess of the contract demand shall be:

EU= TU (1-CD/MD)

Where

EU - denotes units corresponding to excess supply;

TU - denotes total units supplied during the month;

CD - denotes contract demand; and

MD - denotes maximum demand.

The excess supply availed in any month shall be charged along with the monthly bill and shall be payable by the consumer.

The billing of excess supply at one and half times/two times of the normal tariff applicable to consumer is without prejudice to CSPDCL's right to discontinue the supply in accordance with the provisions contained in the Chhattisgarh State Electricity Supply Code, 2011 and its amendments thereof.

iii. No rebates/incentive is payable on such excess supply.

7. Additional Charge

The HV consumers having contract demand exceeding the maximum limit as prescribed in Clause 1 of terms and conditions of HV tariff shall be levied additional charges at the rate of 5% on Energy Charges of the respective consumer category.

8. Meter Hire

Meter hire shall be charged as per the schedule of miscellaneous charges to all categories of HV consumers.

9. Tax or Duty

The tariff does not include any tax or duty, etc., on electrical energy that may be payable at any time in accordance with any law/State Government Rules in force. Such charges, if any, shall be payable by the consumer in addition to tariff charges.

10. Variable Cost Adjustment (VCA) charge

VCA charge on consumption from April 1, 2019[6][word *"2018"* replaced by *"2019"*] as per the formula and conditions specified in the CSERC MYT Regulations, 2015 shall be levied in addition to energy charge on all the HV categories including temporary supply.

However, from the date of applicability of this Order, the base values for computation of VCA for succeeding period shall be revised in accordance to this Order.

11. Dispute on applicability of tariff

In case of any dispute on applicability of tariff on a particular category of HV industry/ consumer, the decision of the Commission shall be final and binding.

All the above conditions of tariff shall be applicable to the consumer notwithstanding the provisions, if any, in the agreement entered into by the consumer with the Licensee.

12. Parallel Operation Charges (POC)

Parallel Operation Charges shall be payable by CPP to CSPDCL for its captive and non-captive load at the rate Rs.21 per kVA/month.

13. Open Access Charges

a) Transmission Charges

The long-term and medium-term open access customers including CSPDCL shall be required to pay the Annual Transmission Charges approved by the Commission. Bills shall be raised for Transmission Charge on monthly basis by the STU (CSPTCL), and payments shall be made by the beneficiaries and long-term and medium-term open access customers directly to the CSPTCL. These monthly charges shall be shared by the long-term open access customers and medium-term open access customers as per allotted capacity proportionately. The monthly transmission charge is Rs. 68.07 crore.

For short-term open access customer: Rs. 296.3/MWh (or Rs. 0.2963 per kWh) for the energy computed as per the provisions made in Regulation 33 of the CSERC (Connectivity and Intra State Open access) Regulations, 2011 and its subsequent amendment(s)/revision, if any, at 100% Load Factor for transmission. The same charges shall be applicable for both collective and bilateral transactions at the point or points of injection.

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[6] *Vide Corrigendum Order dated 01.03.2019*

b) <u>Energy losses for transmission</u>

Transmission Losses of 3% for the energy scheduled for transmission at the point or points of injection shall be recoverable from open access customers.

c) <u>Wheeling Charges</u>

For long-term, medium-term and short-term open access customer: Rs. 235/MWh (or Rs. 0.235 per kWh) for the energy computed as per the provisions made in Regulation 33 of the CSERC (Connectivity and Intra State Open access) Regulations, 2011 and its subsequent amendment(s)/revision, if any, at 100% load factor for wheeling. The same charges shall be applicable for both collective and bilateral transactions at the point of injection.

d) <u>Energy losses for distribution</u>

Distribution Losses of 6% for the energy scheduled for distribution at the point or points of injection at 33 kV side of 33/11 kV sub-station shall be recoverable from open access customers.

e) <u>Operating Charges</u>

The short-term open access customer shall pay the Operating Charges to SLDC at the rate of Rs. 2000 per day.

f) <u>Reactive Energy Charges</u>

Reactive Energy Charges shall be levied at the rate of 27 paise/kVARh.

g) <u>Cross Subsidy Surcharge</u>

i. For 220 kV/132 kV consumers Rs. 1.70 per kWh (which is 90% of the computed value of Rs. 1.89 per kWh).

ii. For 33 kV consumers Rs. 1.38 per kWh (which is 90% of the computed value of Rs. 1.53 per kWh).

h) <u>Standby charges</u>

The Standby Charges for consumers availing open access (using transmission and/or distribution system of Licensee) and who draw power from the grid up to the contracted capacity of open access during the outage of generating plant/CPP shall be 1.5 times of the per kWh weighted average tariff of HV consumers, which is Rs. 11.25 per kWh (1.5 times of the average billing rate of Rs.7.50 per kWh). For drawal of power in excess of the contracted capacity of open access, the tariff for availing standby support from the grid shall be two times of the per unit weighted average tariff of HV consumers, which is Rs.15.00 per kWh (2 times of the average billing rate of Rs. 7.50 per kWh). Further, in case of outage of CPP supplying power to captive/non-captive consumer who has reduced its contract demand to zero and also availed open access draws power of CSPDCL, then billing of such power drawn shall be done as per the standby charges mentioned above.

14. Intra-State Open Access Charges for Renewable Energy transactions

a) Transmission Charges in cash for long-term/medium-term/short-term open access - NIL

b) Wheeling Charges in cash for long-term/medium-term/short-term open access - NIL

c) SLDC Charges (Operating Charges) for long-term/medium-term/short-term open access - NIL

d) Total Transmission Charges or Wheeling Charges or Combination thereof in kind (energy losses) for long-term/medium-term/short-term open access - 6%

e) Cross-Subsidy Surcharge

i. A consumer availing open access is required to pay the cross-subsidy surcharge.

ii. In case a generating company is an open access customer and is supplying power to a consumer of the State, the liability of paying cross-subsidy surcharge shall be on the consumer. If a captive generating plant avails open access for supplying power to its captive users, and if the captive users do not fulfil the requirement of captive users in a financial year as prescribed in the Electricity Rules, 2005, then that end user/s shall be liable to pay the Cross-Subsidy Surcharge.

iii. The Cross-Subsidy Surcharge payable is 50% of the Cross-Subsidy Surcharge determined for that year, which is as under:

a) For 220 kV/132 kV consumers Rs. 0.85 per kWh (which is 50% of the computed value of Rs. 1.89 per kWh).

b) For 33 kV consumers Rs. 0.69 per kWh (which is 50% of the computed value of Rs. 1.53 per kWh).

In case of a consumer receiving power from Solar power plants through open access, no Cross-Subsidy Surcharge shall be payable.

iv. In case of a consumer receiving power from biomass based power generating plants through open access, if it is established that the biomass based power generating plants supplying power to such consumer has used biomass in the lesser ratio than as mentioned in the guidelines of the Ministry of New and Renewable Energy during any financial year, then the relaxations at (iii) above given to the open access consumer shall be treated as withdrawn for that financial year and the biomass generator shall be liable to pay to CSPDCL full Cross Subsidy Surcharge.

10 DIRECTIVES

The directives passed in the previous Orders of the Commission, except the directive at paragraph 12.4(ix) at page No. 228 in tariff order for FY 2017-18 issued on 31.03.2017, shall be continued.

10.1 New directives to CSPTCL

(i) The Commission directs CSPTCL to consider joint meter reading data at outgoing feeders of EHV S/s for computation of transmission loss.

10.2 New directives to CSPDCL

(i) The Commission shall be provided access to SAP data through SAP terminal within three months of Order.

(ii) The Commission directs CSPDCL to undertake a field level study for determination of norms of consumption (units/HP/month) for agriculture category and submit its report to the Commission by December 31, 2019.

(iii) The Commission directs CSPDCL to undertake a study to reconcile the number of its LV-Non-Domestic consumers with number of commercial establishments registered with various Municipal Corporations in Chhattisgarh, and cover all such consumers in relevant category. Further, CSPDCL should also furnish the reasons for such mismatch, if any.

(iv) The Commission directs CSPDCL to prepare an action plan and take corrective measures to bring down percentage of defective meters and assessment-based billing within prescribed ceiling.

(v) The Commission directs CSPGCL, CSPTCL and CSPDCL to reconcile the quantum and cost power purchase/sale among themselves before finalization of annual accounts for each year and submit the same at time of true-up for such year.

(vi) The Commission directs CSPDCL to maintain a separate passbook which records the details of all banking transactions.

(vii) Commission directs CSPDCL to examine the possibility of optimum utilisation of surplus power within the State through appropriate incentive mechanism and CSPDCL should come up with a proposal for same by November 30, 2019.

(viii) The Commission directs CSPDCL to manage its R&M and A&G expenses within the normative ceiling.

(ix) In future tariff proceedings, CSPDCL should submit transmission charges by segregating ‘other transmission charges’ under two heads only, viz, Interstate Transmission Charges and Intra-state transmission charges.

(x) The Commission directs CSPDCL to appoint Relationship Manager to address the concerns of HV and EHV consumers.

ANNEXURE 1

LIST OF PERSONS WHO SUBMITTED WRITTEN SUBMISSIONS

Sr. No.	Name
1	Mr. Naga Suresh Kumar Y, Greenko Energies Private Limited
2	Shri S.K. Goyal, Director, Shri Bajrang Power and Ispat Limited
3	Dr. Anil Jain, Director, Indian Medical Association, Raipur (C.G.)
4	Shri Hitesh Varu, Director, Chhattisgarh Yuva Pragatishil Kisan Sangh
5	Shri Jain Jeetendra Barlota, State Secretary, Chhattisgarh Chamber of Commerce and Industries, Raipur, (C.G.)
6	Mr. Vikas Agrawal, President, Chhattisgarh Mini Steel Plant Association
7	Shri Shyam Kabra, Electricity Tariff and Regulatory Expert, Confederation of Electricity Consumers of Chhattisgarh.
8	Shri Rahul Morkhade, Energy Manager, Bharti Infratel Limited
9	Shri Pawan Kumar Agrawal, Director, Prime Ispat Limited
10	Shri Ashok Kumar Agrawal, Director, Prime Ispat Limited
11	Shri Manoj Agrawal, Director, Chhattisgarh Steel Re-Rollers Association, Raipur, (C.G.)
12	Shri Satish Jain, Director, Merchant Association, Raipur, (C.G.)
13	Director, Mahamaya Steel Industries Limited
14	Shri B.K. Bhargava, Senior General Manager (Engineering), Uniworth Limited
15	Shri Kamlesh Kukreja, Director, Chhattisgarh Poha Murmura Utpadak Mahasangh, Bhatapara (C.G.)
16	Shri A. Sahay, Chief Electrical Distribution Engineer for General Manager (Electrical), South-East Central Railway, Bilaspur, (C.G.)
17	Shri Ashwin Garg, President, Urla Industries Association
18	Shri Manish Dhuppad, General Secretary, Chattisgarh Mini Steel Plant Association
19	Shri Paresh Kalla, Vice President (Power Plant), Jayaswal Neco Industries Limited (Steel Plant Division)
20	Shri Sanjay Kumar Mishra, Certified Energy Auditor, Bureau of Energy Efficiency, EA 8696
21	Commissioner, Nagar Palik Nigam, Bhilai (C.G.)
22	Secretary, Chhattisgarh State Electricity Board Pension and Gratuity Fund Trust, Raipur (C.G.)
23	Shri S.G. Oak, General Secretary, Chhattisgarh Retired Power Engineers-Officers Association
24	Shri Amit Verma, State Secretary, Akhil Bhartiya Grahak Panchayat – Chhattisgarh
25	Shri Raja Ahmed, Objector

ANNEXURE 2

LIST OF PERSONS WHO SUBMITTED COMMENTS DURING HEARING

Sr. No.	Name
1	Shri Shyam Kabra
2	Shri Rajkumar Gupta
3	Shri Raza Ahmed
4	Shri Loknath Nayak
5	Dr. Anil Jain
6	Shri Rahul Morkhade
7	Shri Jia-ul-Haque
8	Shri Amar Parwani
9	Shri Ajay Kumar
10	Shri Kamlesh Kukreja
11	Shri Pawan Kumar Agrawal
12	Shri Manoj Agrawal
13	Shri Rajesh Agrawal
14	Shri Mukesh Pande
15	Shri Indrajeet Singhal
16	Shri B.K.Bhargav
17	Shri Mahesh Kakkad
18	Shri Paresh Kalla
19	Shri Dinesh Chandra Tiwari
20	Shri Jain Jitendra Barlota
21	Shri Sanjay Kumar Mishra

ANNEXURE 3

LIST OF STATE ADVISORY COMMITTEE (SAC) MEMBER WHO ATTENDED SAC MEETING ON 23.02.2019 ON THE TARIFF PETITION

Sr. No.	Name
1	Shri. Arun Choubey, President, Shram Kalyan Mandal, Raipur (CG)
2	Shri Dheeraj Kumar Pandey, President, Jai Prakah Memorial Center, Kirandul (CG)
3	Shri Kontaye Jaiswal, Ambikapur (CG)
4	Shri Sanjay Agarwal, General Secretary, Urla Industries Association, Raipur (CG)
5	General Secretary, Laghu Udhyog Bharti, Raipur (CG)