

## Computation of VCA Charges (4th bi-monthly period 2018-19)

**(A) CHFC :-**

	KTPS	HTPS	DSPM TPS	Korba(W)Extn.	Total Amt. In Rs
Oct. 18	31295356	64692825	-663055	46307974	141633100
Nov. 18	37173717	34358688	-8584544	21165252	84113113
<b>Total</b>	<b>68469073</b>	<b>99051514</b>	<b>-9247599</b>	<b>67473226</b>	<b>225746213</b>

**(B) CHPP :-**

(i) Total units purchased from NTPC and NSPCL = 1494862775 KWh

(ii) Amount paid against units purchased = Rs. 4650088406.00  
Rate per unit = Rs. 3.11 /KWh

(iii) Average rate approved by CSERC for purchase of power from Central generating stations = Rs. 3.12 /KWh

(iv) Diff. in rate (ii-iii) = Rs. -0.01 /KWh

(v) CHPP (in Rs.) (iv)x(v) = Rs.-14948628.00

(C) Gross VCA (A+B) in Rs. = Rs.210797585.00

(D) Total quantum of power purchased during the period = 5950523325 Kwh

(E) Quantum of power purchased for sale to retail consumers of the State = 4899710465 KWh

(F) Allowable VCA (in Rs.)(C\*(E/D)) = Rs.173572487.00

(G) Normative transmission & distribution losses as specified in Tariff order = 16.54%

(H) Allowable VCA Charges(Rs./Kwh) (F/E\*(1-G)) = Rs.0.04/KWh

(G) VCA Charge to be deducted from monthly energy bills of various categories of consumers:

- 1) DLF consumers up to 40 units - Rs. 0.04 per unit
- 2) DLF consumers 41 to 200 units - Rs. 0.04 per unit
- 3) DLF Consumers above 200 units - Rs. 0.04 per unit
- 4) Agriculture Consumers - Rs. 0.04 per unit
- 5) Rest all categories - Rs. 0.04 per unit

**To be recovered for the consumption in the months of Jan'19 and Feb'19 payable in the months of Feb'19 and Mar '19**

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## Computation of CHPP

Sno.	Particulars	MU	1494862775
1	Scheduled energy purchased from CGs during Fourth bi-monthly period	Rs.	4650088406
2	Amount paid against units purchased	Rs/Kwh	3.11
3	Average rate of power purchase	Rs/Kwh	3.12
4	Average rate of Power Purchase as per Tariff Order	Rs/Kwh	-0.01
5	Difference in the average rate of PP	Rs.	-14948628
	CHPP(Change in the cost of power purchased from CGs)		

## Computation of VCA

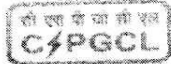
Sno.	Particulars	Rs	225746213
1	CHFC	Rs	-14948628
2	CHPP	Rs	210797585
3	Gross VCA(sub total in Rs.)	Rs	173572487
4	Allowable VCA(in Rs.)	Rs/Kwh	0.04
5	Allowable VCA(in Rs/Kwh)		

*Prepared*  
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### Computation of Qpp and Qrs

S No.	Particulars			
1	Quantum of actual power purchased from CSPGCL thermal Power stations	$Q_1$	3537064620	KwH
2	Quantum of actual power purchased from CSPGCL hydro Power stations(Bango)	$Q_2$	68331819	KwH
3	Quantum of actual power purchased from CSPGCL Renewable Power stations(Small Hydle Station of CSPGCL + CoGen Kawardha)	$Q_3$	3748760	KwH
4	Quantum of scheduled power purchased from CGs at state periphery (Trd.(Through CTU)+NTPC+NSPCL+NPCIL+OHPCL+NHPCL)+Bundle Power+SECI)	$Q_4$	1844789809	KwH
5	PGCIL actual losses for the bi-monthly period	L1	2.95%	
6	Quantum of scheduled power purchased from CGs at state periphery	$Q_5=Q_4(1-L1)$	1790368510	KwH
7	Quantum of actual power purchased from Renewable energy Sources	$Q_6$	162089164	KwH
8	Quantum of actual short term and long term power purchased from State IPPs and CGPs	$Q_7$	0	KwH
9	Quantum of scheduled short term purchased through inter state route (IEX)	$Q_8$	117231085	KwH
10	Quantum of scheduled short term purchased through inter state route at the State periphery	$Q_9=Q_8(1-L1)$	113772768	KwH
11	Quantum of power purchased from other Sources(if any)(Short term + Border Village+Un scheduled)	$Q_{10}$	275147684	KwH
12	Total Quantum of power purchased	$Q_{pp}=Q_1+Q_2+Q_3+Q_5+Q_6+Q_7+Q_9+Q_{10}$	5950523325	KwH
13	Normative transmission and distribution losses as specified inth Tariff order	L	16.54%	
14	Quantum of power scheduled for interstate sale(Sale through IEX+Sale to Telangana)	$Q_{PT}$	1050812860	KwH
15	Quantum of power purchased for sale to retail consumers of the State	$Q_{RS}=Q_{pp}-Q_{PT}$	4899710465	KwH

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CHHATTISGARH STATE POWER GENERATION COMPANY LIMITED

(A Govt. of C.G. Undertaking)

Office of the Executive Director (C&CP)

NO. 03-09/ Bills-15/ 749

Raipur Dtd.

28-Dec-2018

To,

The Chief Engineer (RA&PM)  
4<sup>th</sup> Floor Vidyut Seva Bhawan  
CSPDCL, Raipur

C.A.S. No. CSPDCL, Raipur	
Letter Ref. No.	
No.	6962
Date	31.12.18

Sub: **Fuel Cost Adjustment calculation for the 4th Bi-Monthly period of FY 2018-19.**

Ref: 1) CSERC MYT Regulations 2015.  
2) CSERC tariff order dtd. 31/03/2017

In compliance to the CSERC vide order referred above, please find enclosed FCA Calculation amounting to Rs. **432,853,452** /- for the 4th Bi-Monthly period of FY 2018-19 (Oct-18 & Nov- 18). As per CSERC order the above FCA amount shall be claimed in two installments w.e.f. **Feb-19**

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Executive Director (C&CP)  
CSPGCL: Raipur

Copy to :-

- 1 The Secretary, Chhattisgarh State Electricity Regulatory Commission, New Shanti Nagar Raipur. In compliance to directives given in tariff order dtd. 23/05/2015.
- 2 The E.D. (Fin) CSPGCL, Raipur
- 3 The E.D. (O&M:Gen) CSPGCL, Raipur
- 4 The C.E.(EITC)CSPDCL, Raipur. Kindly upload the same in Company web site ([cspc.co.in/cspgcl](http://cspc.co.in/cspgcl)) under the link Fuel Cost Adjustment- 4th Bi Monthly of FY 2018-19 (Oct -2018 to Nov- 2018)
- 5 The S.O. to M.D. CSPGCL, Raipur
- 6 The S.O. to M.D. CSPDCL, Raipur
- 7 The Manager (B&CM) CSPGCL, Raipur

## Fuel Cost Adjustment calculation for the 4th Bi-Monthly period of FY 2018-19.

All Figures in Rs.

Name of Plant	Oct-18	Nov-18	Total
KTPS	31295356	37,173,717	68,469,073
HTPS	64692825	34,358,688	99,051,513
DSPM TPS	-663055	-8,584,544	-9,247,599
KW Extn	46307974	21,165,252	67,473,226
MTTPS	91244228	115,863,011	207,107,239
<b>Total</b>	<b>232,877,328</b>	<b>199,976,124</b>	<b>432,853,452</b>

RUPEES FORTY THREE CRORES TWENTY EIGHT LAKHS FIFTY THREE THOUSAND FOUR HUNDRED FIFTY TWO ONLY

As per CSERC order the above amount of FCA shall be claimed as mentioned below:-

All Figures in Rs.

Month	KTPS	HTPS	DSPM TPS	KW Extn	MTTPS	Total
Feb-19	34,234,537	49,525,757	-4,623,800	33,736,613	103,553,620	216,426,727
Mar-19	34,234,536	49,525,756	-4,623,799	33,736,613	103,553,619	216,426,725
<b>Total</b>	<b>68,469,073</b>	<b>99,051,513</b>	<b>-9,247,599</b>	<b>67,473,226</b>	<b>207,107,239</b>	<b>432,853,452</b>

  
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Details/Information for Computation of Energy Charge Rates

Name of the Company : Chhattisgarh State Power Generation Company Limited

Name of the Power Station : Korba (East) Thermal Power Station - KTPS

	Description	Unit	Considered in Tariff order	For Month of Oct-18	For Month of Nov-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.129203400	0.10404275	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.129203400	0.104042750	
d	Normative Transit & Handling Losses	%	1.15%	1.15%	1.15%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.001485839	0.001196492	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.127717561	0.102846258	
g	Amount charged by the Coal / Lignite Company	(Rs.)		215,424,792.93	173,473,669.30	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)				
i	Net amount Charged by Coal Company (g+h)	(Rs.)		215,424,792.93	173,473,669.30	
j	Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1686.73	1686.73	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal compnay (j+k)	Rs/MT		1686.73	1686.73	
m	Transportation Charge per Ton	Rs/MT	177.98	177.98	177.98	
n	Landed Price of Coal per MT (l+m)	Rs./MT	1,641.03	1864.71	1864.71	
o	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,080.85	3,007	2,831	
p	Normative SHR	Kcal/ KWh	3,110	3,110	3,110	
q	Normative Specific Oil Consumption	ml/ KWh	2.00	2.00	2.00	
r	GCV of Secondary Fuel (Oil)	Kcal/ml	10	10	10	
s	Normative Auxiliary Consumption	%	11.25	11.25	11.25	
t	ECR for the Period= (((p-(qxr))/(0)*(n/1000))/(1-s)	Rs/ KWh		2.159	2.293	
u	ECR as considered in Tariff order	Rs/ KWh	1.855	1.855	1.855	
v	Change in ECR (t-u)	Rs/ KWh		0.304	0.438	
w	Scheduled Generation during the Period	KWh		102,945,250	84,871,500	
aa	FCA Claim for the Period (vXw)	Rs		31,295,356	37,173,717	68,469,073 ✓

  
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Details/Information for Computation of Energy Charge Rates

Name of the Company : Chhattisgarh State Power Generation Company Limited  
Name of the Power Station : Korba (West) Thermal Power Station - HTPS

Description	Unit	Considered in Tariff order	For Month of Oct-18	For Month of Nov-18	Total for period
a Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.406020	0.388131	
b Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.406020	0.388131	
d Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e Normative Transit & Handling Losses (cXd)	(MMT)		0.000812040	0.000776262	
f Net coal / Lignite Supplied (c-e)	(MMT)		0.405207960	0.387354738	
g Amount charged by the Coal / Lignite Company	(Rs.)		721094849.42	689323838.68	
h Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		2103796.87		
i Net amount Charged by Coal Company (g+h)	( Rs.)		723198646.29	689.323.838.68	
j Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1784.76	1779.57	
k Rate of Bonus payable to Coal Company	Rs/MT				
l Net Rate of coal payable to coal compnay (j+k)	Rs/MT	1,609.77	1784.76	1779.57	
m Transportation Charge per Ton	Rs/MT	80.75	80.75	80.75	
n Landed Price of Coal per MT (l+m)	Rs./MT	1,690.52	1,865.51	1,860.32	
o Average GCV of coal / Lignite as fired	(kCal/Kg)	3,406.33	3,407	3,562	
p Normative SHR	Kcal/ KWh	2,650.00	2,650	2,650	
q Normative Specific Oil Consumption	ml/ KWh	0.80	0.80	0.80	
r GCV of Secondary Fuel (Oil)	Kcal/ml	10	10	10	
s Normative Auxiliary Consumption	%	9.70	9.70	9.70	
t ECR for the Period= $(p-(qxr))/(0)*(r/1000)/(1-s)$	Rs/ KWh		1.602	1.528	
u ECR as considered in Tariff order	Rs/ KWh	1.452	1.452	1.452	
v Change in ECR (t-u)	Rs/ KWh		0.150	0.076	
w Net Generation during the Period	KWh		431,285,500	452,088,000	
x FCA Claim for the Period (vXw )	Rs		64692825	34358688	99,051,517 ✓

  
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Details/Information for Computation of Energy Charge Rates

Name of the Company : Chhattisgarh State Power Generation Company Limited

Name of the Power Station : - 1x500 MW KW Extn

Description	Unit	Considered in Tariff order	For Month of Oct-18	For Month of Nov-18	Total for period
a Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.199980	0.191169	
b Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.199980	0.191169	
d Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e Normative Transit & Handling Losses (cXd)	(MMT)		0.000399960	0.000382338	
f Net coal / Lignite Supplied (c-e)	(MMT)		0.199580040	0.190786662	
g Amount charged by the Coal / Lignite Company	(Rs.)		355,166,119.82	339,517,711.58	
h Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		1036198.52		
i Net amount Charged by Coal Company (g+h)	( Rs.)		356202318.34	339,517,711.58	
j Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1784.76	1779.57	
k Rate of Bonus payable to Coal Company	Rs/MT				
l Net Rate of coal payable to coal compnay (j+k)	Rs/MT	1,609.77	1784.76	1779.57	
m Transportation Charge per Ton	Rs/MT	80.75	80.75	80.75	
n Landed Price of Coal per MT (l+m)	Rs./MT	1,690.52	1,865.51	1,860.32	
o Average GCV of coal / Lignite as fired	(kCal/Kg)	3,400.59	3,383	3,559	
p Normative SHR	Kcal/ KWh	2,375	2,375	2,375	
q Normative Specific Oil Consumption	ml/ KWh	0.50	0.50	0.50	
r GCV of Secondary Fuel (Oil)	Kcal/ml	10	10	10	
s Normative Auxiliary Consumption	%	5.25	5.25	5.25	
t ECR for the Period= (p-(qxr))/(0)*(n/1000)/(1-s)	Rs/ KWh		1.379	1.307	
u ECR as considered in Tariff order	Rs/ KWh	1.243	1.243	1.243	
v Change in ECR (t-u)	Rs/ KWh		0.136	0.064	
w Scheduled Generation during the Period	KWh		340,499,810	330,707,060	✓
x FCA Claim for the Period (vXw )	Rs		46307974.16	21,165,252	67,473,226

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Details/Information for Computation of Energy Charge Rates

Name of the Company : Chhattisgarh State Power Generation Company Limited

Name of the Power Station : Dr. Shyama Prasad Mukharjee Thermal Power Station - DSPM TPS

	Description	Unit	Considered in Tariff order	For Month of Oct-18	For Month of Nov-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.26911151	0.26136799	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.26911151	0.26136799	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000538223	0.000522736	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.268573287	0.260845254	
g	Amount charged by the Coal / Lignite Company	(Rs.)		495133272.69	471,438,350.45	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		9,398,378.78	-654,498.80	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		504,531,651.47	470,783,851.65	
j	Rate of Coal for the period Charged by Coal Company = $(i/(f \times 10^6))$	Rs/MT		1878.56230	1804.83963	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT		1878.5623	1804.83963	
m	Transportation Cost Paid to railways	Rs		60911280.00	66363104.44	
n	Transportation Charge rate paid to Railways $(m/(f \times 10^6))$	Rs/MT		226.80	254.42	
o	Other Charges (per Ton) towards transportation	Rs/MT				
p	Total per ton Transportation Charges (n+o)			226.80	254.42	
q	Landed Price of Coal per MT ((l+p)	Rs./MT	1,921.22	2105.36	2059.26	
r	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,449.20	3784.24	3788.00	
s	Normative SHR	Kcal/ KWh	2,500	2,500	2,500	
t	Normative Specific Oil Consumption	ml/ KWh	0.50	0.50	0.50	
u	GCV of Secondary Fuel (Oil)	Kcal/ml	10.00	10.00	10.00	
v	Normative Auxiliary Consumption	%	9.00	9.00	9.00	
w	ECR for the Period= $((s-(tu))/(r) * (q/1000)) / (1-v)$	Rs/ KWh		1.525	1.498	
x	ECR as considered in Tariff order	Rs/ KWh	1.527	1.527	1.527	
y	Change in ECR (w-x)	Rs/ KWh		-0.002	-0.029	
z	Scheduled Generation during the Period	Kwh		331,527,500	296,018,750	
aa	FCA Claim for the Period (yX z)	Rs		-663055	-8,584,544	-9,247,599 ✓

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Details/Information for Computation of Energy Charge Rates

Name of the Company : Chhattisgarh State Power Generation Company Limited

Name of the Power Station : Marwa Thermal Power Plant - MTPP

Month	Unit	Considered in Tariff order	For Month of Oct-18	For Month of Nov-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)	-	0.45224397	0.40887411
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)	-		
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.45224397	0.40887411
d	Normative Transit & Handling Losses	%	0.80%	0.80%	0.80%
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.003617952	0.003270993
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.448626018	0.405603117
g	Amount charged by the Coal / Lignite Company	(Rs )		924820548.21	845283842.26
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs )		-66,136,343.60	-55,310,484.83
i	Net amount Charged by Coal Company (g+h)	( Rs. )		858684204.61	789973357.43
j	Rate of Coal for the period Charged by Coal Company = (i/(fX10 <sup>6</sup> ))	Rs/MT		1914.03	1947.65
k	Rate of Bonus payable to Coal Company	Rs/MT			
l	Net Rate of coal payable to coal compnay (j+k)	Rs/MT		1914.03	1947.65
m	Transportation Cost Paid to railways	Rs		103542367.00	109993138.00
n	Transportation Charge rate paid to Railways (m/(fX10 <sup>6</sup> ))	Rs/MT		230.80	271.18
o	Other Charges (per Ton) towards transportation	Rs/MT			
p	Total per ton Transportation Charges (n+o)			230.80	271.18
q	Landed Price of Coal per MT ((l+p)	Rs./MT	1,535	2,144.83	2,219
r	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,280.29	3,521	3,527
s	Normative SHR	Kcal/ KWh	2,378	2,378	2,378
t	Normative Specific Oil Consumption	ml/ KWh	0.50	0.50	0.50
u	GCV of Secondary Fuel (Oil)	Kcal/ml	10	10	10
v	Normative Auxiliary Consumption	%	5.25	5.25	5.25
w	ECR for the Period= ((s-(txu))/(r)*(q/1000))/(1-v)	Rs/ KWh		1.528	1.576
x	ECR as considered in Tariff order	Rs/ KWh	1.373	1.373	1.373
y	Change in ECR (w-x)	Rs/ KWh		0.153	0.203
z	Scheduled Generation during the Period	Kwh		596,367,500	570,753,750
z	FCA Claim for the Period (yX z)	Rs		91244227.5	115863011.3
					<b>207,107,239</b> ✓

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