

**Computation of VCA Charges (5<sup>th</sup> bi-monthly period 2018-19)**

**(A) CHFC :-**

Month	KTPS	HTPS	DSPM TPS	Korba(W)Extn.	Total Amt. In Rs
Dec-18	25653870	41633160	12544283	33631975	113463288
Jan-19	57923434	8749692	-537653	4968655	71104128
<b>Total</b>	<b>83577304</b>	<b>50382852</b>	<b>12006630</b>	<b>38600630</b>	<b>184567416</b>

**(B) CHPP :-**

(i)	Total units purchased from NTPC and NSPCL	: 126,61,37,987 KWh
(ii)	Amount paid against units purchased	: Rs. 409,14,12,615
	Rate per unit	: Rs. 3.23 /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.0.11 /KWh
(v)	CHPP (in Rs.) (i)x(iv)	: Rs. 13,92,75,179 ✓
C.	Gross VCA (A+B) in Rs	: Rs.32,38,42,595 ✓
D.	Total quantum of power purchased during the period	: 480,84,52,659 Kwh
E.	Quantum of power purchased for sale to retail consumers of the State	: 399,87,84,309 KWh
F.	Allowable VCA (in Rs.)(C*(E/D))	: Rs. 26,93,12,558
G.	Normative transmission & distribution losses as specified in Tariff order	: 16.54%
H.	Allowable VCA Charges(Rs./Kwh) (F/E*(1-G))	: <b>Rs. 0.08/KWh</b>

VCA Charge to be recoverable from monthly energy bills of various categories of consumers:

1	DLF consumers up to 40 units	Rs. 0.08 per unit
2	DLF consumers 41 to 200 units	Rs. 0.08 per unit
3	DLF consumers above 200 units	Rs. 0.08 per unit
4	Agriculture Consumers	Rs. 0.08 per unit
5	Rest all categories	Rs. 0.08 per unit

**To be recovered for the consumption in the months of March'19 and April'19 payable in the months of April'19 and May '19**

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## Computation of CHPP

Sno.	Particulars		
1	Scheduled energy purchased from CGs during Fifth bi-monthly period	MU	1266137987
2	Amount paid against units purchased	Rs.	4091412615
	Average rate of power purchase	Rs/Kwh	3.23
3	Average rate of Power Purchase as per Tariff Order	Rs/Kwh	3.12
4	Difference in the average rate of PP	Rs/Kwh	0.11
5	CHPP(Change in the cost of power purchased from CGs)	Rs.	139275179

## Computation of VCA

Sno.	Particulars		
1	CHFC	Rs	184567416
2	CHPP	Rs	139275179
3	Gross VCA(sub total in Rs.)	Rs	323842595
4	Allowable VCA(in Rs.)	Rs	269312558
5	Allowable VCA(in Rs/Kwh)	Rs/Kwh	0.08

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**CHHATTISGARH STATE POWER GENERATION COMPANY LIMITED**  
(A Govt. of C.G. Undertaking)

**Office of the Executive Director (C&RA)**

NO. 03-09/ Bills-15/ 159

Raipur Dtd.

28-Feb-2019

To,

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

CL (RA&PM) CSPDCL Raipur	
Letter Receipt	
No.	8452
Date	01.3.19

**Sub: Fuel Cost Adjustment calculation for the 5th 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. **442,076,682** /- for the 5th Bi-Monthly period of FY 2018-19 (Dec-18 & Jan- 19). As per CSERC order the above FCA amount shall be claimed in two installments w.e.f. **Apr-19**

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01/03/19

01/03/19

Executive Director (C&RA)  
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) under the link Fuel Cost Adjustment- 5th Bi Monthly of FY 2018-19 (Dec -2018 to Jan- 2019)
- 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

Shed No. 06, Vidyut Sewa Bhawan Complex, Dangania, Raipur 492013; CIN no. U40108CT2003SGC015821  
Phone No. 0771-2574097; Fax : 0771-2574806; Email : ce.cncp@gmail.com; Web site: www.cseb.gov.in/cspgcl

## Fuel Cost Adjustment calculation for the 5th Bi-Monthly period of FY 2018-19.

All Figures in Rs.

Name of Plant	Dec-18	Jan-19	Total
KTPS	25653870	57,923,434	83,577,304
HTPS	41633160	8,749,692	50,382,852
DSPM TPS	12544283	-537,653	12,006,630
KW Extn	33631975	4,968,655	38,600,630
MTTPS	182033145	75,476,121	257,509,266
<b>Total</b>	<b>295,496,433</b>	<b>146,580,249</b>	<b>442,076,682</b>

RUPEES FORTY FOUR CRORES TWENTY LAKHS SEVENTY SIX THOUSAND SIX HUNDRED EIGHTY 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
Apr-19	41,788,652	25,191,426	6,003,315	19,300,315	128,754,633	221,038,341
May-19	41,788,652	25,191,426	6,003,315	19,300,315	128,754,633	221,038,341
<b>Total</b>	<b>83,577,304</b>	<b>50,382,852</b>	<b>12,006,630</b>	<b>38,600,630</b>	<b>257,509,266</b>	<b>442,076,682</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 Dec- 18	For Month of Jan- 19	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.066702350	0.10610075	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.066702350	0.106100750	
d	Normative Transit & Handling Losses	%	1.15%	1.15%	1.15%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000767077	0.001220159	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.065935273	0.104880591	
g	Amount charged by the Coal / Lignite Company	(Rs.)		111,194,190.70	176,905,035.85	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)			18,795,828.92	
i	Net amount Charged by Coal Company (g+h)	( Rs.)		111,194,190.70	195,700,864.77	
j	Rate of Coal for the period Charged by Coal Company $= (i / (f * 10^6))$	Rs/MT		1686.41	1865.94	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal compnay (j+k)	Rs/MT		1686.41	1865.94	
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	1864.39	2043.92	
o	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,080.85	2,930	2,863	
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= $((p - (q * r)) / (o * (n / 1000)) / (1 - s))$	Rs/ KWh		2.215	2.486	
u	ECR as considered in Tariff order	Rs/ KWh	1.855	1.855	1.855	
v	Change in ECR (t-u)	Rs/ KWh		0.360	0.631	
w	Scheduled Generation during the Period	KWh		71,260,750	91,796,250	
aa	FCA Claim for the Period (vXw )	Rs		25,653,870	57923433.75	83,577,304

  
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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 Dec-18	For Month of Jan-19	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.342370	0.394295	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.342370	0.394295	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000684740	0.000788590	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.341685260	0.393506410	
g	Amount charged by the Coal / Lignite Company	(Rs.)		608051927.49	700271153.28	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)			-3320394.84	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		608051927.49	696,950,758.44	
j	Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1779.57	1771.13	
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	1779.57	1771.13	
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	1,860.32	1,851.88	
o	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,406.33	3,462	3,678	
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 = $((p-(qxr))/(0)*(n/1000))/(1-s)$	Rs/ KWh		1.572	1.473	
u	ECR as considered in Tariff order	Rs/ KWh	1.452	1.452	1.452	
v	Change in ECR (t-u)	Rs/ KWh		0.120	0.021	
w	Net Generation during the Period	KWh		346,943,000	416,652,000	
x	FCA Claim for the Period (vXw)	Rs		41633160	8749692	50,382,85

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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 Dec-18	For Month of Jan-19	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.14843697	0.17376241	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.14843697	0.17376241	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000296874	0.000347525	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.148140096	0.173414885	
g	Amount charged by the Coal / Lignite Company	(Rs.)		268492419.96	311,105,899.96	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		6,605,892.25	13,645,596.06	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		275,098,312.21	324,751,496.02	
j	Rate of Coal for the period Charged by Coal Company $= (i/(f \times 10^6))$	Rs/MT		1857.01454	1872.685243	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT		1857.01454	1872.685243	
m	Transportation Cost Paid to railways	Rs		36794382.00	46679671	
n	Transportation Charge rate paid to Railways $(m/(f \times 10^6))$	Rs/MT		248.38	269.18	
o	Other Charges (per Ton) towards transportation	Rs/MT				
p	Total per ton Transportation Charges (n+o)			248.38	269.18	
q	Landed Price of Coal per MT ((l+p)	Rs./MT	1,921.22	2105.39	2141.87	
r	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,449.20	3681.00	3852.44	
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		1.568	1.524	
x	ECR as considered in Tariff order	Rs/ KWh	1.527	1.527	1.527	
y	Change in ECR (w-x)	Rs/ KWh		0.041	-0.003	
z	Scheduled Generation during the Period	Kwh		305,958,120	179,217,500	
aa	FCA Claim for the Period (yX z)	Rs		12544282.92	-537,653	12,006,630

  
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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 Dec-18	For Month of Jan-19	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.168630	0.194205	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.168630	0.194205	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000337260	0.000388410	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.168292740	0.193816590	
g	Amount charged by the Coal / Lignite Company	(Rs.)		299,488,262.85	344,909,672.42	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)			-1635418.31	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		299,488,262.85	343,274,254.11	
j	Rate of Coal for the period Charged by Coal Company $= (i / (f \times 10^6))$	Rs/MT		1779.57	1771.13	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT	1,609.77	1779.57	1771.13	
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	1,860.32	1,851.88	
o	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,400.59	3,466	3,678	
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= $((p-(q \times r)) / (0) \times (n / 1000)) / (1-s)$	Rs/ KWh		1.343	1.259	
u	ECR as considered in Tariff order	Rs/ KWh	1.243	1.243	1.243	
v	Change in ECR (t-u)	Rs/ KWh		0.1	0.016	
w	Scheduled Generation during the Period	KWh		336,319,750	310,540,940	
x	FCA Claim for the Period (vXw)	Rs		33631975	4,968,655	38,600,630

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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 Dec- 18	For Month of Jan-19	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)	-	0.32497003	0.31730023	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)	-	0.00003856		
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.32500859	0.31730023	
d	Normative Transit & Handling Losses	%	0.80%	0.80%	0.80%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.002600069	0.002538402	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.322408521	0.314761828	
g	Amount charged by the Coal / Lignite Company	(Rs.)		713290326.75	702586336.16	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		4,035,951.88	-6,013,464.13	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		717326278.63	696572872.03	
j	Rate of Coal for the period Charged by Coal Company = (i/(fX10 <sup>6</sup> ))	Rs/MT		2224.90	2213.02	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT		2224.9	2213.02	
m	Transportation Cost Paid to railways	Rs		79865631.00	78837989.00	
n	Transportation Charge rate paid to Railways (m/(fX10 <sup>6</sup> ))	Rs/MT		247.72	250.47	
o	Other Charges (per Ton) towards transportation	Rs/MT				
p	Total per ton Transportation Charges (n+o)			247.72	250.47	
q	Landed Price of Coal per MT ((l+p)	Rs./MT	1,535	2,472.62	2,463	
r	Average GCV of coal / Lignite as fired	(kCal/Kg)	3,280.29	3,598	3,701	
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		1.721	1.667	
x	ECR as considered in Tariff order	Rs/ KWh	1.373	1.373	1.373	
y	Change in ECR (w-x)	Rs/ KWh		0.348	0.294	
z	Scheduled Generation during the Period	Kwh		523,083,750	256,721,500	
aa	FCA Claim for the Period (yX z)	Rs		182033145	75476121	257,509,266

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### Computation of Qpp and Qrs

S No.	Particulars			
1	Quantum of actual power purchased from CSPGCL thermal Power stations	$Q_1$	2838493560	KwH
2	Quantum of actual power purchased from CSPGCL hydro Power stations(Bango) ✓	$Q_2$	10380734	KwH
3	Quantum of actual power purchased from CSPGCL Renewable Power stations(Small Hydle Station of CSPGCL + CoGen Kawardha)	$Q_3$	2404720 ✓	KwH
4	Quantum of scheduled power purchased from CGs at state periphery (CSPTrdCL+NTPC+NSPCL+NPCIL+OHPCL+NHPCL+Bundle Power+SECI)	$Q_4$	1638134793	KwH
5	PGCIL actual losses for the bi-monthly period	$L_1$	2.86%	
6	Quantum of scheduled power purchased from CGs at state periphery	$Q_5=Q_4(1-L_1)$	1591284138 ✓	KwH
7	Quantum of actual power purchased from Renewable energy Sources	$Q_6$	208538350	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)	$Q_8$	124886200	KwH
10	Quantum of scheduled short term purchased through inter-state route at the State periphery	$Q_9=Q_8(1-L_1)$	121314455 ✓	KwH
11	Quantum of power purchased from other Sources(if any)(Short term + Border Village+Un schduled)	$Q_{10}$	36036702 ✓	KwH
12	Total Quantum of power purchased	$Q_{PP}=Q_1+Q_2+Q_3+Q_5+Q_6+Q_7+Q_9+Q_{10}$	4808452659 ✓	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)	$Q_{PT}$	809668350 X	KwH
15	Quantum of power purchased for sale to retail consumers of the State	$Q_{RS}=Q_{PP}-Q_{PT}$	3998784309 ✓	KwH

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