

Computation of VCA Charges (1st bi-monthly period 2018-19)

(A) CHEC :-

	KTPS	HTPS	DSPM TPS	Korba(W)Extn.	Total Amt. In Rs
Aprill18	2336565	-39035655	-9080080	-25728696	-71507866
May18.	8884684	86572857	-20603974	54218640	129072207
Total	11221249	47537202	-29684054	28489944	57564342

(B) CHPP :-

Total units purchased from NTPC and NSPCL = 1371177693 KWh

Amount paid against units purchased = Rs. 4127812644.00

Rate per unit(I) = Rs. 3.01 /KWh

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

Difference in rate (I-II) = Rs. (-)0.11/KWh

CHPP (in Rs.) = Rs.(-)150829546.00

(C) Gross VCA (A+B) in Rs. = Rs.(-)93265204.00

(D) Total quantum of power purchased during the period = 5561857212 Kwh

Quantum of power purchased for sale to retail consumers

(E) of the State = 4196282944 KWh

(F) Allowable VCA (in Rs.)(C*(E/D)) = Rs.(-)70366277.00

Normative transmission & distribution losses as specified in

(G) Tariff order = 16.54%

(H) Allowable VCA Charges(Rs./Kwh) (F/E*(1-G)) = Rs.(-)0.02/KWh

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

1) DLF consumers up to 40 units - Rs. (-) 0.02 per unit

2) DLF consumers 41 to 200 units - Rs.(-) 0.02 per unit

3) DLF Consumers above 200 units - Rs. (-) 0.02 per unit

4) Agriculture Consumers - Rs. (-) 0.02 per unit

5) Rest all categories - Rs. (-) 0.02 per unit

To be deducted from energy bill for the consumption in the months of July'18 and Aug'18 payable in the months of Aug'18 and Sep'18

Computation of CHPP

Sno.	Particulars		
1	Scheduled energy purchased from CGs during First bi-monthly period	MU	1371177693
2	Amount paid against units purchased	Rs.	4127812644
	Average rate of power purchase	Rs/Kwh	3.01
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.	-150829546

Computation of VCA

Sno.	Particulars		
1	CHFC	Rs	57564342
2	CHPP	Rs	-150829546
3	Gross VCA(sub total in Rs.)	CHFC+CHPP	-93265204
4	Allowable VCA(in Rs.)	Gross VCA(in Rs.)xQ _{rs} /Q _{app}	-70366277
5	Allowable VCA(in Rs/Kwh)	Allowable VCA(in Rs.)/[Qrs*(1-L)]	Rs/Kwh -0.02

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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	3574774810	KwH
2	Quantum of actual power purchased from CSPGCL hydro Power stations	Q_2	22328093	KwH
3	Quantum of actual power purchased from CSPGCL Renewable Power stations	Q_3	5030390	KwH
4	Quantum of scheduled power purchased from CGs	Q_4	1779615623 ✓	KwH
5	PGCIL actual losses for the bi-monthly period	L1	3.44%	
6	Quantum of scheduled power purchased from CGs at state periphery	$Q_5=Q_4(1-L1)$	1718396846	KwH
7	Quantum of actual power purchased from Renewable energy Sources	Q_6	185476829	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	Q_8	8116443 ✓	KwH
10	Quantum of scheduled short term purchased through inter state route at the State periphery	$Q_9=Q_8(1-L1)$	7837237	KwH
11	Quantum of power purchased from other Sources(if any)	Q_{10}	48013007	KwH
12	Total Quantum of power purchased	$Q_{pp}=Q_1+Q_2+Q_3+Q_5+Q_6+Q_7+Q_9+Q_{10}$	5561857212	KwH
13	Normative transmission and distribution losses as specified inth Tariff order	L	16.54%	
14	Quantum of power scheduled for interstate sale	Q_{PT}	1365574268	KwH
15	Quantum of power purchased for sale to rretail consumers of the State	$Q_{RS}=Q_{PP}-Q_{PT}$	4196282944	KwH

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CHHATTISGARH STATE POWER GENERATION COMPANY LIMITED
(A Govt. of C.G. Undertaking)
Office of the Chief Engineer (C&CP)

G. 03-09/ Bills-15/ 360

Raipur Dtd. 30-Jun-2018

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

RA & PM) CSPDCL Raipur
2435
02-07-18

Sub: Fuel Cost Adjustment calculation for the 1st 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. **437,390,117** /- for the 1st Bi-Monthly period of FY 2018-19 (Apr-18 & May- 18). As per CSERC order the above FCA amount shall be claimed in two installments w.e.f. **Aug-18**

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Chief Engineer (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.(FITC)CSPDCL, Raipur. Kindly upload the same in Company web site (espc.co.in/cspgcl) under the link Fuel Cost Adjustment- 1st Bi Monthly of FY 2018-19 (Apr-2018 to May- 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 1st Bi-Monthly period of FY 2018-19.

All Figures in Rs.

Name of Plant	Apr-18	May-18	Total
KTPS	2,336,565	8,884,684	11,221,249
HTPS	-39,035,655	86,572,857	47,537,202
DSPM TPS	-9,080,080	-20,603,974	-29,684,054
KW Extn	-25,728,696	54,218,640	28,489,944
MTTPS	176,967,966	202,857,810	379,825,776
Total	105,460,100	331,930,017	437,390,117

RUPEES FORTY THREE CRORES SEVENTY THREE LAKHS NINETY THOUSAND ONE HUNDRED SEVENTEEN 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
Aug-18	5,610,625	23,768,601	-14,842,027	14,244,972	189,912,888	218,695,059
Sep-18	5,610,624	23,768,601	-14,842,027	14,244,972	189,912,888	218,695,058
Total	11,221,249	47,537,202	-29,684,054	28,489,944	379,825,776	437,390,117


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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 Apr-18	For Month of May-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)	-	0.32798228	0.37494580	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)	-			
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.32798228	0.37494580	
d	Normative Transit & Handling Losses	%	0.80%	0.80%	0.80%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.002623858	0.002999566	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.325358422	0.371946234	
g	Amount charged by the Coal / Lignite Company	(Rs.)		647794765.62	746069736.04	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		7,522,151.38	2,657,119.20	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		655316917.00	748726855.24	
j	Rate of Coal for the period Charged by Coal Company = (i/(fX10 ⁶))	Rs/MT		2014.14	2013.00	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT		2014.14	2013	
m	Transportation Cost Paid to railways	Rs		74999408.00	85211764.00	
n	Transportation Charge rate paid to Railways (m/(fX10 ⁶))	Rs/MT		230.51	229.10	
o	Other Charges (per Ton) towards transportation	Rs/MT				
p	Total per ton Transportation Charges (n+o)			230.51	229.10	
q	Landed Price of Coal per MT ((l+p)	Rs./MT	1,535	2,244.65	2,242	
r	Average GCV of coal / Lignite as fired as per tariff order	(kCal/Kg)	3,280.29	3,758.00	3,666.000	
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))/t)*(q/1000)/(1-v)	Rs/ KWh		1.496	1.532	
x	ECR as considered in Tariff order	Rs/ KWh	1.20	1.20	1.20	
y	Change in ECR (w-x)	Rs/ KWh		0.296	0.332	
z	Net Generation during the Period	Kwh		597,864,750	611,017,500	
aa	FCA Claim for the Period (yX z)	Rs		176,967,966	202,857,810	379,825,776

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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 Apr-18	For Month of May 18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.124499620	0.136805310	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.124499620	0.136805310	
d	Normative Transit & Handling Losses	%	1.15%	1.15%	1.15%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.001431746	0.001573261	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.123067874	0.135232049	
g	Amount charged by the Coal / Lignite Company	(Rs.)		214,815,624.15	228,843,790.12	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		1,786,910.50	0.00	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		216,402,534.65	228,843,790.12	
j	Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1758.40	1692.23	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT		1758.40	1692.23	
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	1936.38	1870.21	
o	Average GCV of coal / Lignite as fired as per tariff order	(kCal/Kg)	3,080.85	3,601	3,386	
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 = $(p-(q \times r) / (10) \times (n/1000)) / (1-s)$	Rs/ KWh		1.872	1.923	
u	ECR as considered in Tariff order	Rs/ KWh	1.855	1.855	1.855	
v	Change in ECR (t-u)	Rs/ KWh		0.017	0.068	
w	Net Generation during the Period	KWh		137,445,000	130,657,120	
ax	FCA Claim for the Period (vXw)	Rs		2,336,565	8,884,624	11,221,249

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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 Apr-18	For Month of May-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.444478	0.454662	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.444478	0.454662	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000888956	0.000909324	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.443589044	0.453752676	
g	Amount charged by the Coal / Lignite Company	(Rs.)		789396572.75	807483440.25	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		-36955922.98	4534276.99	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		752440649.77	812,017,717.24	
j	Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1696.26	1789.56	
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	1696.26	1789.56	
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	1,777.01	1,870.31	
o	Average GCV of coal / Lignite as fired as per tariff order	(kCal/Kg)	3,406.33	3,817	3,305	
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		1.362	1.656	
u	ECR as considered in Tariff order	Rs/ KWh	1.452	1.452	1.452	
v	Change in ECR (t-u)	Rs/ KWh		-0.090	0.204	
w	Net Generation during the Period	KWh		433,729,500	424,376,750	
x	F-CA Claim for the Period (vXw)	Rs		-39,035,655	86,572,857	47,537,202

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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 Apr-18	For Month of May-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite Company	(MMT)		0.218922	0.223938	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.218922	0.223938	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000437844	0.000447876	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.218484156	0.223490124	
g	Amount charged by the Coal / Lignite Company	(Rs.)		388,807,267.23	397,715,724.35	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		-18202171.02	2233300.61	
i	Net amount Charged by Coal Company (g+h)	(Rs.)		370605096.21	399,949,024.96	
j	Rate of Coal for the period Charged by Coal Company = (i/(f*10^6))	Rs/MT		1696.26	1789.560	
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	1696.26	1789.56	
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	1,777.01	1,870.31	
o	Average GCV of coal / Lignite as fired as per tariff order	(kCal/Kg)	3,400.59	3,818	3,316	
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		1.164	1.411	
u	ECR as considered in Tariff order	Rs/ KWh	1.243	1.243	1.243	
v	Change in ECR (t-u)	Rs/ KWh		-0.079	0.168	
w	Net Generation during the Period	KWh		325,679,690	322,730,000	
x	FCA Claim for the Period (vXw)	Rs		-25,728,696	54,218,640	28,489,944

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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 Apr-18	For Month of May-18	Total for period
a	Quantity of Coal / Lignite supplied by Coal/Lignite	(MMT)		0.21563647	0.24615217	
b	Adjustment (+/-) in quantity supplied made by Coal/Lignite Company	(MMT)				
c	Coal supplied by Coal/Lignite Company (a+b)	(MMT)		0.21563647	0.24615217	
d	Normative Transit & Handling Losses	%	0.20%	0.20%	0.20%	
e	Normative Transit & Handling Losses (cXd)	(MMT)		0.000431273	0.000492304	
f	Net coal / Lignite Supplied (c-e)	(MMT)		0.215205197	0.245659866	
g	Amount charged by the Coal / Lignite Company	(Rs.)		399999254.60	446,500,156.59	
h	Adjustment (+/-) in amount charged made by Coal/Lignite Company	(Rs.)		6,065,615.51		
i	Net amount Charged by Coal Company (g+h)	(Rs.)		406,064,870.11	446,500,156.59	
j	Rate of Coal for the period Charged by Coal Company = (i/(fX10 ⁶))	Rs/MT		1886.87297	1817.554344	
k	Rate of Bonus payable to Coal Company	Rs/MT				
l	Net Rate of coal payable to coal company (j+k)	Rs/MT		1886.87297	1817.554344	
m	Transportation Cost Paid to railways	Rs		48633451.00	55988809.85	
n	Transportation Charge rate paid to Railways (m/(fX10 ⁶))	Rs/MT		225.99	227.91	
o	Other Charges (per Ton) towards transportation	Rs/MT				
p	Total per ton Transportation Charges (n+o)			225.99	227.91	
q	Landed Price of Coal per MT ((l+p)	Rs./MT	1,921.22	2112.86	2045.46	
r	Average GCV of coal / Lignite as fired as per tariff order	(kCal/Kg)	3,449.20	3875	3842	
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		1.495	1.460	
x	ECR as considered in Tariff order	Rs/ KWh	1.527	1.527	1.527	
y	Change in ECR (w-x)	Rs/ KWh		-0.032	-0.067	
z	Net Generation during the Period	Kwh		283,752,500	307,522,000	
aa	FCA Claim for the Period (yX z)	Rs		-9,080,080	-20,603,974	-29,684,054

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