

Office of Chief Engineer
Commercial Unit



U.P. Rajya Vidyut Utpadan Nigam Ltd.
14th Floor, Shakti bhawan Extn.
Lucknow -226001
Tel No.- 0522-2288056 / 2287030
CIN : U 40101UP1980SGC005065
gm.commercial@uprvunl.org

No. 371 /UNL/CE(Comml.)/Energy Bill/FY (2020-21)

Date: 14, September, 2020

Superintending Engineer
Electricity Import-Export & Payment Circle
U.P. Power Corporation Ltd
11th floor, Shakti Bhawan Extn.
Lucknow-226001.

Subject: Provisional Main Energy Bill of various TPS of UPRVUNL for the month August-2020.

The Provisional Main Energy bill of various Thermal Power Stations of UPRVUNL against Electricity supplied by U.P. Rajya Vidyut Utpadan Nigam Ltd. to U.P. Power Corporation Ltd. during month **August-2020** as detailed below, is being enclosed for payment:-

Main Bill No.:-UNL/Energy Bill(SG/ESO)/2020-08/01, dt. 14.09.2020 **Rs. 679.1715565 Crs**
(Rs. Six hundred and seventy nine crore, seventeen lacs, fifteen thousand, five hundred and sixty five only)

It is therefore requested that the payment of this Bill in accordance with Operational parameters of UPERC Generation Regulation-2019 dt. 11.09.2019 & Fixed Cost as per Tariff Order dt. 29.04.2016 & 18.01.2017 and PPA signed between UPRVUNL and UPPCL may kindly be ensured.

Last Energy Account from SLDC/ABT received on dt. 14.09.2020 for Parichha Project.

(Avikshit Singh)
Chief Engineer (Commercial)

No. 371 /UNL/CE(Comml.)/Energy Bill/FY (2020-21)

Date: 14, September, 2020

Copy forwarded to the following for their kind information :-

1. PS to Managing Director, UPRVUNL, 7th floor, Shakti Bhawan, Lucknow.
2. Staff Officer to Director (Project & Commercial), UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow
3. Staff Officer to Director (Technical), UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow
4. Staff Officer to Director (Finance), UPRVUNL, 8th floor, Shakti Bhawan Ext, Lucknow.

Copy forwarded to the following for their kind information & necessary action :-

1. CE (TO/Fuel), UPRVUNL, 14th floor, Shakti Bhawan Extn, Lucknow.
2. Chief Engineer (Project Coordinator), Anpara/Obra/Harduaganj/Parichha TPS.
3. Dy CAO (Accounts), UPRVUNL, 9th floor, Shakti Bhawan Extn, Lucknow.
4. Dy CAO (Finance), UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow.
5. Chief Manager (CMU), UPRVUNL, 7th floor, Shakti Bhawan Extn, Lucknow.
6. Dy CAO (CFA&BO), Anpara/Obra/Harduaganj/Parichha TPS.

→ Summary file

(Avikshit Singh)
Chief Engineer (Commercial)

U.P. Rajya Vidyut Utpadan Nigam Ltd.
14th Floor, Shakti Bhawan Extn., Lucknow
GST Reg. No. 09AAACU4749DZ29

Bill of supply of Power of the month : Aug-20
Name of Customer : U.P. Power Corporation Ltd.
Shakti Bhawan, Extn.
14, Ashok Marg, Lucknow
09AAACU5088M4ZM

Main Bill : UNL/Energy Bill (SG/ESO)/2020-08/01
Bill Date : 14/09/20
30 Days from the billing date
(i) UPERC Tariff Order Dt.29.04.2016 & 18.01.2017
(ii) UPERC Gen Reg.'19 Dt. 11.09.2019
(iii) PPA for various Thermal Power Stations.

Provisional Main Energy Bill of UPRVUNL to UPPCL for Anpara A, Anpara B, Anpara D, Obra B, Parichha Extn, Parichha Extn Stage-2, Harduaganj & Harduaganj Extn on Schedule Generation (SG).

Projects	Approved Plant capacity as per UPERC T.O. (MW)	No. of Months w.e.f April 2020	Cum. Plant Availability		Total capacity charges approved by UPERC (Rs. Crs)	Percentage to be recovered (%)	Capacity charges (Fixed Charges)		Annual Cumulative Capacity Charges corresponding to last month (ACC-) (Rs. Crs)	Scheduled Generation by SLDC/ Energy Sent Out by Plants (MTL)	Energy Charge Rate (ECR) (Rs./kWh)	Total Energy Charges (Rs. Crs)	Total Amount Capacity Charges+ Energy Charges (Rs. Crs)
			Target by UPERC (%)	Actual till current month w.e.f April, 2020 (%)			Amount of annual capacity charges corresponding to Column 6 to Column 7 (ACC2) (Rs. Crs)	Amount of capacity charges payable for the month (Rs. Crs)					
Anpara 'A'	630	5	85	72.09	306.96	84.81	260.3327760	17.8062380	271.9972560	236.798815	1.87	44.2813784	62.0876164
Anpara 'B'	1000	5	85	84.37	307.88	99.26	305.6016880	24.7073700	307.8800000	522.901163	1.62	84.7099884	109.4173584
Anpara 'D'	1000	5	85	48.44	1088.75	56.99	620.4786250	53.3396771	615.5792500	330.957913	1.44	47.6579395	100.9976166
Obra 'B'	1000	5	80	55.86	421.89	69.83	294.6057870	26.9833813	287.3070900	367.782870	1.52	55.9029962	82.8863775
Harduaganj Extn	500	5	85	84.87	532.38	99.85	531.5814300	50.5272985	512.8948920	246.540423	2.67	65.8262929	116.3535914
Parichha Extn.	420	5	85	83.17	333.66	97.85	326.4863100	32.3678005	311.0044860	169.078758	3.21	54.2742813	86.6420818
Pari. Extn. Stage2	500	5	85	93.78	498.79	100.00	498.7900000	41.5658333	498.7900000	246.962775	3.21	79.2750508	120.8408841
Harduaganj (U#7)	105	5	65	32.36	78.98	49.78	39.3162440	-0.0539697	49.3072140	0.000000	3.47	0.0000000	-0.0539697
	5155				3569.29		2877.1928600	247.2436290	2854.7601880	2121.0227170		431.9279275	679.1715565

Total Amount Payable (Rs. Six hundred and seventy nine crore, seventeen laes, fifteen thousand, five hundred and sixty five only) Rs Crs. 679.1715565

* From Cumulative Availability Sheet
Column No. 6 : If Col. No. 4 is less than Col. No.3, then (Col. No.4/Col. No. 3)x100% else 100%
Column No.8 : Computed as per UPERC Generation Regulation 2019, dt 11.09.2019 para 25, for n month (nXACC2-(n-1)XACC1)/12
Effective Annual Capacity charges on 2% RoE of Harduaganj (U#7) TPS having capacity 105 MW due to deletion of U#5 as per O.M. NO. 592/CH(TO)/Harduaganj dt. 15.07.2017 = 124.11*105/165 = 78.98 Cr.
Effective Annual Capacity charges on 2% RoE of 2x500 MW Anpara 'D' TPS as per calculation sheet of Verified Bill of March'18 by UPPCL, letter no. 1512/EIE&PC/UPRVUNL/U-4, dt. 03.05.2018 is Rs 1088.75 Crs.

Prepared as per DC/SG received from ABT/SLDC & Bill from TPS

Checked as per DC/SG received from ABT/SLDC & Bill from TPS

Verified as per DC/SG received from ABT/SLDC & Bill from TPS

(Saurabh Grover)
E.A (Comm.)

(Sukesh Kr. Vij.)
AE (Comm.)

(Gopa Pandey)
Accountant

(Khyati Singh)
Accounts Officer

(Sandeep Agrawal)
AE(Comm.)

(Itari Shyam)
SE(Comm.)

Cumulative Availability for FY 2020-21

Month:	Days	Cum. Days	MW		AUXn		8.5		6.55		6.25		1000		AUXn		1000		AUXn		9.7		
			Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MU)	Cum Dec. Cap (MU)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)
Apr-20	30	30	307.0860000	12795	12795	73.99	632.033150	26335	93.94	301.654625	12569	44.69	432.018750	18001	18001	18001	18001	18001	18001	18001	18001	18001	18001
May-20	31	61	315.625750	13151	25946	73.79	496.153225	20673	47008	332.757250	13864	46.22	351.065750	14628	32629	14628	32629	14628	32629	14628	32629	14628	32629
Jun-20	30	91	318.257000	13261	39207	74.74	608.867750	25369	73777	336.777875	14032	47.43	342.416500	14267	46896	14267	46896	14267	46896	14267	46896	14267	46896
Jul-20	31	122	330.233250	13760	52967	75.32	590.581800	24608	96985	348.085438	14504	48.06	315.055750	13127	60023	13127	60023	13127	60023	13127	60023	13127	60023
Aug-20	31	153	254.728250	10614	63581	72.09	567.449000	23644	120629	348.181125	14508	48.44	411.612000	17151	77174	17151	77174	17151	77174	17151	77174	17151	77174
Sep-20	30	183																					
Oct-20	31	214																					
Nov-20	30	244																					
Dec-20	31	275																					
Jan-21	31	306																					
Feb-21	28	334																					
Mar-21	31	365																					
Total			1525.930250				2895.084925			1667.436313			1852.168750										

Month:	Days	Cum. Days	MW		AUXn		9.5		9.0		9.0		500		AUXn		500		AUXn		9.0		
			Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MU)	Cum Dec. Cap (MU)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)	Cum Dec. Cap (MW)	Declared Cap (MW)
Apr-20	30	30	68.414400	2851	2851	100.01	295.618750	12317	90.23	137.589600	5733	50.00	323.858125	13494	13494	13494	13494	13494	13494	13494	13494	13494	13494
May-20	31	61	44.493115	1854	4705	81.17	212.686375	8862	21179	211.889050	8829	62.46	320.993750	13375	26869	13375	26869	13375	26869	13375	26869	13375	26869
Jun-20	30	91	0.000000	0	4705	54.41	301.737500	12573	33752	271.299400	11304	74.37	303.987500	12666	39535	12666	39535	12666	39535	12666	39535	12666	39535
Jul-20	31	122	0.00000000	0	4705	40.58	280.937500	11706	45438	265.895625	11079	79.23	284.027875	11834	51369	11834	51369	11834	51369	11834	51369	11834	51369
Aug-20	31	153	0.000000	0	4705	32.36	326.955250	13623	59081	280.619100	11692	83.17	333.948125	13915	65284	13915	65284	13915	65284	13915	65284	13915	65284
Sep-20	30	183																					
Oct-20	31	214																					
Nov-20	30	244																					
Dec-20	31	275																					
Jan-21	31	306																					
Feb-21	28	334																					
Mar-21	31	365																					
Total			112.907515				1417.955375			1167.292775			1566.815375										

Cumulative Availability (%) = $10000 \times \sum_{i=1}^N DC_i / (N \times (100 - AUXn))$ %

DC_i = Average declared capacity for the ith day of the period in MW.

N = Number of days during the period, and

AUXn = Normative Auxiliary Energy Consumption as a percentage of gross generation.

Availability have been calculated as per new Auxiliary Consumption norms w.e.f. 01.04.2019 for MYT 2019-24 specified by UPERC (Terms & conditions of Generation Tariff) Regulation-2019, dt. 11.09.2019.

Handwritten signature

EA (Comml.)

Handwritten signature

SE (Comml.)

14-9-2020

Office of Chief Engineer
Commercial Unit



U.P. Rajya Vidyut Utpadan Nigam Ltd.
14th Floor, Shakti bhawan Extn.
Lucknow -226001
Tel No.- 0522-2288056 / 2287030
CIN : U 40101UP1980SGC005065
gm.commercial@uprvunl.org

No. ³⁹⁵/UNL/CE(Comm.)/FCA/FY (2020-21)

Date: 29, September, 2020

Superintending Engineer
Electricity Import-Export & Payment Circle
U.P. Power Corporation Ltd
11th floor, Shakti Bhawan Extn.
Lucknow-226001

Subject: Supplementary Bill of FCA of various TPS of UPRVUNL for August- 2020.

The Supplementary bill of Fuel Cost Adjustment (FCA) for variation in fuel data certified by Cost Accountants of various Thermal Power Stations of U.P. Rajya Vidyut Utpadan Nigam Ltd against electricity supplied to U.P. Power Corporation Ltd. during the month **August-2020**, is being enclosed herewith for payment :-

(1) FCA Bill No.: -UNL/FCA/2020-08/02, dt. 29.09.2020 **Rs 107.1148822 Crs**
(Rs One hundred seven crore, eleven lacs, forty eight thousand, eight hundred and twenty two only)

It is, therefore, requested that the payment of these Bills in accordance with UPERC Generation Tariff Regulation-2019, dt. 11.09.2019 and Power Purchase Agreements signed between UPRVUNL and UPPCL may kindly be ensured.

Last Fuel data received on dt. 29.09.2020 of Obra 'B' TPS.

The Calculation sheet for Rate of Variable Cost of MOD stack for the month of October 2020 is attached herewith.

Encl.: As above.

(Ayikshit Singh)

Chief Engineer (Commercial)

No. ³⁹⁵/UNL/CE(Comm.)/FCA/FY (2020-21)

Date: 29, September, 2020

Copy forwarded to the following for their kind information :-

1. PS to Managing Director, UPRVUNL, 7th floor, Shakti Bhawan, Lucknow.
2. Senior Advisor to MD, UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow.
3. Director (Technical), UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow.
4. Director (Finance), UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow.

Copy forwarded to the following for their kind information & necessary action :-

1. Chief Engineer (TO/Fuel), UPRVUNL, 14th floor, Shakti Bhawan Extn, Lucknow.
2. Chief Engineer (L-1/L-2), Anpara, Obra, Harduaganj, Parichha Thermal Power Project.
3. Dy CAO (Finance), UPRVUNL, 8th floor, Shakti Bhawan Extn, Lucknow.
4. Dy CAO (Accounts), UPRVUNL, 9th floor, Shakti Bhawan Extn, Lucknow.
5. Chief Manager (CMU), UPRVUNL, 7th floor, Shakti Bhawan Extn, Lucknow.
6. Dy CAO (CFA&BO), Anpara, Obra, Harduaganj, Parichha Thermal Power Project

→ Summary File

(Ayikshit Singh)

Chief Engineer (Commercial)

U.P. Rajya Vidyut Utpadan Nigam Ltd.
14th Floor, Shakti Bhawan Extn.,
Lucknow - 226001

GST Reg. No.- 09AAACU4749DZ9

August, 2020
U.P. Power Corporation Ltd.
Shakti Bhawan, Extn.
14, Ashok Marg, Lucknow
09AAACU5088M4ZM

Bill of supply of Power for Month:
Name of Customer :-

FCA Bill No.- UNL/FCA/2020-08/02
Bill Date- 29.9.2020
Due Date- 30 Days from the billing date
Reference- (i) UPERC Tariff Order Dt. 29.04.2016 & 18.01.2017
(ii) UPERC Gen Regu., 2019 Dt. 11.09.2019
(iii) Fuel data from Plants (certified by Cost Accountant)

Provisional Fuel Cost Adjustment Bill due to variation in Cost & GCV of fuel of various TPS of UPRVUNL for the month of August-2020 raised to UPPCL as per UPERC Gen. Tariff Regu., 2019 Dt. 11.09.2019

S.No.	Parameters	Symbol	Unit	Anpara A	Anpara B	Anp D	Obra B	Harduaganj Extn. U#8&9	Pari Extn. U#3&4	Pari Extn. Stage-2 U#5&6	Total
A	Energy Exported & Billed (ESO)	ENO	MU	236.798815	522.901163	330.957913	367.782870	246.540423	169.078758	246.962775	2121.022717
Normative Operating Parameters											
B	Gross Station Heat Rate (GSHR)	H	Kcal/kwh	2430	2390	2374	2755	2430	2430	2430	2430
C	Sp. Oil Cons.	(Qs)/m	mi/kwh	0.50	0.50	0.50	2.10	0.50	0.50	0.50	0.50
D	Auxiliary Energy Consumption	AU:Xn	%	8.50	6.55	6.25	9.70	9.00	9.00	9.00	9.00
Fuel Data for the month											
E	Price of Primary fuel (Coal)	Pp	Rs. kg	2.44592	2.61913	2.80229	2.69924	4.56472	4.69933	4.69933	4.69933
F	Price of Secondary fuel (Oil)	Ps	Rs. ml	0.04196473	0.04196473	0.04196473	0.05564126	0.05272075	0.03469024	0.03469024	0.03469024
G	Gross Calorific Value of Primary fuel (Coal)	Cp	Kcal kg	3260.00	3603.00	3828.00	3956.00	3590.00	3410.00	3410.00	3410.00
H	Gross Calorific Value of Primary fuel (Coal) less 85 Kcal/kg on account of variation during storage (Cp1 - Cp-85)	Cp1	Kcal kg	3175.00	3518.00	3743.00	3871.00	3505.00	3325.00	3325.00	3325.00
I	Gross Calorific Value of Secondary fuel (oil)	Cs	Kcal lit	9584.34	9584.34	9584.34	9010.00	9482.00	9608.59	9608.59	9608.59
Formula of ECR											
J	Energy Charge Rate for the month (ECR)	ECR	Rs./kwh	2.0648	1.9227	1.9144	2.2422	3.4999	3.7857	3.7857	3.7857
K	Already claimed energy charge rate (ECR1)	ECR1	Rs./kwh	1.8700	1.6200	1.4400	1.5200	2.6700	3.2100	3.2100	3.2100
L	Diff in ECR (J-K)	ECR2	Rs./kwh	0.1948	0.3027	0.4744	0.7222	0.8299	0.5757	0.5757	0.5757
M	Amt. of Energy Charge due to variation in fuel data (AxtL)/10		Rs.Crs	4.6128409	15.8282182	15.7006434	26.5612789	20.4603897	9.7338641	14.2176470	107.1148822

Total Amount Payable (Cr)

107.1148822

(Rs One hundred seven crore, eleven lacs, forty eight thousand, eight hundred and twenty two only)

Normative Parameters have been taken as per UPERC Generation Tariff Regulation-2019, dt. 11.09.2019 for various TPS of UPRVUNL.

Prepared as per ESO/SG & Bills /Fuel data received from TPS

Checked as per ESO SG & Bills /Fuel data received from TPS

Verified as per ESO/SG & Bills /Fuel data received from TPS

Saurabh Grover
EA (Comm.)

Sukesh Kr. Vij
AE (Comm.)

Goga Pandey
Accountant

S.K. Yadav
AE (Comm.)

Hari Shyam
SE (Comm.)

Rate of Variable Cost for MOD of the month Oct'20 as per UPERC Order dt. 21.06.2016 against Petition no.- 1070/2015 according to Energy/FCA Bill of the month August-2020

Projects	Approved Plant capacity as per UPERC T.O. #	No. of Months	Target Availability by UPERC #	Cumulative Availability %	Total capacity charges at 15.5% RoE#	Total capacity charges at 2% RoE#	Percentage to be recovered *	Amount of annual capacity charges at 15.5% RoE corresponding to Column 6	Total capacity charges at 15.5% RoE	Amount of annual capacity charges corresponding to Column 6	Total capacity charges for month at 2% RoE	Freighting Charges for the month	Energy Charge as per Main Energy Bill	Variable Charge as per FCA Bill	Total Variable Cost - Forfeiting Fixed Cost	Scheduled Generation by SLD/ Energy Sent Out by Plants**	Revised Rate of Variable Cost for MOD
	(MW)		(%)	(%)	(Rs. Crs)	(Rs. Crs)	(%)	(Rs. Crs)	(Rs. Crs)	(Rs. Crs)	(Rs. Crs)	(Rs. Crs)	(Rs. Crs)	(Rs. Crs)	(Rs. Crs)	(MU)	(Rs/AWh)
		1	2	3	4	5	6	7=(Col.4X6)/100	8	9=(Col.5X6)/100	10	11=(Col.8,10)	12	13	14=(Col.12-13-11)	15	16=(Col.14/Col.15)*100
Anpara 'A'	630	5	85	72.09	339.55	306.96	84.81	287.9723550	19,696,7296	260,332,7760	17,806,2380	1,890,4916	44,281,3784	4,612,8409	47,003,7277	236,798,815	1.985
Anpara 'B'	1000	5	85	84.37	485.68	307.88	99.26	482,085,9680	38,975,8200	305,601,6880	24,707,3700	14,268,4500	84,709,9884	15,828,2182	86,269,7566	522,901,163	1.650
Anpara 'D'	1000	5	85	48.44	133.02	1088.75	56.99	753,989,098	64,816,9548	620,478,6250	53,339,6771	11,477,2777	47,657,9395	15,700,6434	51,881,3052	330,957,9130	1.568
Obra 'B'	1000	5	80	55.86	453.56	421.89	69.83	316,720,9480	29,008,9417	294,605,7870	26,983,3813	2,025,5604	55,902,9962	26,561,2789	80,438,7147	367,782,870	2.187
H'dnj. Exm	500	5	85	84.87	658.65	532.38	99.85	657,662,0250	62,511,3738	531,581,4300	50,527,2985	11,984,0753	65,826,2929	20,460,3897	74,302,6073	246,540,4230	3.014
Pari.Exm.	420	5	85	83.17	381.95	333.66	97.85	373,738,0750	37,052,3329	326,486,3100	32,367,8005	4,684,5324	54,274,2813	9,733,8641	59,336,130	169,078,758	3.509
Pari.Exm. Stage-2	500	5	85	93.78	607.06	498.79	100.00	607,060,0000	50,588,3333	498,790,0000	41,565,8333	9,022,5000	79,275,0508	14,217,6470	84,470,1978	246,962,775	3.420
H'dnj. (U#7) \$	105	5	65	32.36	82.82	78.98	49.78	41,225,9858	-0,056,5912	39,316,2440	-0,053,9697	-0,002,6215	0.0000000	0.0000000	0.0000000	0.0000000	3.374
TOTAL					4332.29	3569.29		3520,454,4548	293,371,2046	2877,192,8600	247,243,6290	55,350,2659	431,92,79275	107,11,48822	483,689,9223	2121,022,7170	

UPPCL letter no. 766/CE/PPA, dt. 23.05.2018

* Taken from Energy Bill of the month.

As per UPERC Tariff Order.

** Taken from FCA Bill of the month.

Column No. 8 & 10 computed as per UPERC Generation Regulation 2014, dt. 16.12.2014 para 3-(iv), for n month=(nACCn-(n-1)xACCn-1)/2
 \$ H'dnj. (U#7) remain closed in August 2020, hence SG is 0 (Zero). Therefore, rate of previous variable charge for MOD has been taken.

Thomas

EA (Comml.)

Soumya

AE (Comml.)

29.9.2020
 SE (Commercial), UPRVUNL