

U.P. Rajya Vidyut Utpadan Nigam Ltd.
14th Floor, Shakti Bhawan Extn., Lucknow
GST Reg. No. 09AAACU4749D2Z9

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

Main Bill : UNL/Energy Bill (SG/ESO)/2020-06/01
Bill Date : 10/07/20
Due Date : 30 Days from the billing date
Reference: (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 & Harduagnaj 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		Capacity charges (Fixed Charges)					Energy Charge(E.C)		Total Amount Capacity Charges+ Energy Charges (Rs. Crs)	
			Target by UPERC (%)	Actual till current month w.e.f April,2020 (%)	Total capacity charges approved by UPERC (Rs. Crs)	Percentage to be recovered (%)	Amount of annual capacity charges corresponding to Column 6 (ACCC) (Rs. Crs)	Amount of capacity charges payable for the month (Rs. Crs)	Annual Cumulative Capacity Charge billed till last month (Rs. Crs)	Scheduled Generation by SLDC/ Energy Sent Out by Plants (MU)	Energy Charge Rate (ECR) (Rs/kuwh)		Total Energy Charges (Rs. Crs)
			3	4 #	5	6##	7-(Col 5X6)/100	8###	9	10	11		12=(Col 10x11)/10
Anpara 'A'	630	3	85	74.74	306.96	87.93	269.9099280	23.0654860	266.4719760	290.369845	1.87	54.2991610	77.3646470
Anpara 'B'	1000	3	85	85.11	307.88	100.00	307.8800000	27.1909353	298.6743880	570.831225	1.62	92.4746585	119.6655938
Anpara 'D'	1000	3	85	47.43	1088.75	55.80	607.5225000	53.2035833	592.0622500	328.575933	1.44	47.3149344	100.5185177
Obra 'B'	1000	3	80	57.07	421.89	71.34	300.9763260	23.1758240	312.4095450	278.707045	1.52	42.3634708	65.5392948
Harduaganj Extn	500	3	85	81.52	532.38	95.91	510.6056580	47.9896205	477.9707640	237.031938	2.67	63.2875274	111.2771479
Parichha Extn.	420	3	85	74.37	333.66	87.49	291.9191340	32.1175555	245.1733680	99.514668	3.21	31.9442084	64.0617639
Pari.Extn. Stage2	500	3	85	95.48	498.79	100.00	498.7900000	41.5658333	498.7900000	118.075318	3.21	37.9021771	79.4680104
Harduaganj (U#7)	105	3	65	54.41	78.98	83.71	66.1141580	3.3652062	78.9800000	0.000000	3.47	0.0000000	3.3652062
	5155				3569.29		2853.7177040	251.6740441	2770.5322910	1923.1059720		369.5861376	621.2601817

Total Amount Payable

Rs Crs. 621.2601817

(Rs. Six hundred and twenty one crore, twenty six lacs, one thousand, eight hundred and seventeen only)

From Commulative 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-(nxACCn-(n-i)xACCn-i)/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/CE(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/A-4, dt. 03.05.2018 is Rs 1088.75 Cts.

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
(Saurabh Grover)
EA (Comml.)

Sukesh Kr. Vij.
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AE (Comml.)

Gopa Pandey
(Gopa Pandey)
Accountant

Khyati Singh
(Khyati Singh)
Accounts Officer

Sandeep Agrawal
(Sandeep Agrawal)
AE(Comml.)

Abhishek Srivastava
(Abhishek Srivastava)
EE(Comml.)

Cumulative Availability for FY 2020-21

Month	Days	Cum. Days N	MW 630 AUXn 8.5				MW 1000 AUXn 6.55				MW 1000 AUXn 6.25				MW 1000 AUXn 9.7			
			Anpara "A"				Anpara "B"				Anpara D U6 & 7				Obra "B"			
			Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)	Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)	Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)	Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)
Apr-20	30	30	307.086000	12795	12795	73.99	632.033150	26335	26335	93.94	301.654625	12569	12569	44.69	432.018750	18001	18001	66.45
May-20	31	61	315.625750	13151	25946	73.79	496.153225	20673	47008	82.46	332.737250	13864	26433	46.22	351.065750	14628	32629	59.24
Jun-20	30	91	318.257000	13261	39207	74.74	608.867750	25369	72377	85.11	336.777875	14032	40465	47.43	342.416500	14267	46896	57.07
Jul-20	31	122																
Aug-20	31	153																
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			940.968750				1737.054125				971.169750				1125.501000			

Month	Days	Cum. Days N	MW 105 AUXn 9.5				MW 500 AUXn 9.0				MW 420 AUXn 9.0				MW 500 AUXn 9.0			
			#Harduaganj (U#7)				Harduaganj Extn U#8 & 9				Parichha Extn (2x210)				Parichha Extn Stage-2 (U#5&6)			
			Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)	Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)	Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)	Declared Cap (MW)	Declared Cap (MW)	Cum. Decl. Cap (MW)	Cum Ava (%)
Apr-20	30	30	68.414400	2851	2851	100.01	295.618750	12317	12317	90.23	137.589600	5733	5733	50.00	323.858125	13494	13494	98.86
May-20	31	61	44.493115	1854	4705	81.17	212.686375	8862	21179	76.31	211.889050	8829	14562	62.46	320.993750	13375	26869	96.81
Jun-20	30	91	0.000000	0	4705	54.41	301.757500	12573	33752	81.52	271.299400	11304	25866	74.37	303.987500	12666	39535	95.48
Jul-20	31	122																
Aug-20	31	153																
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				810.062625				620.778050				948.839375			

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

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.

Sawahl
 EA (Comml.)

909
 AE (Comml.)

Abhishek
 EE (Comml.)

U.P. Rajya Vidyut Utpadan Nigam Ltd.
14th Floor, Shakti Bhawan Extn.,
Lucknow - 226001
GST Reg. No.- 09AAACU4749D2Z9

Bill of supply of Power for Month: June, 2020
Name of Customer :- U.P. Power Corporation Ltd.
Shakti Bhawan, Extn.
14, Ashok Marg, Lucknow
GST Reg. No: 09AAACU5088M4ZM

FCA Bill No.- UNL/FCA/2020-06/02
Bill Date- 29.07.2020
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 June'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.	Pari Extn.	Pari Extn. Stage-2	Total
	Unit No.			U#1,2&3	U#4&5	U#6&7	U#9 to 13	U#8&9	U#3&4	U#5&6	
A	Energy Experted & Billed (ESO)	ESO	MU	290.369845	570.831225	328.575933	278.707045	237.031938	99.514668	118.075318	1923.105972
Normative Operating Parameters											
B	Gross Station Heat Rate (GSHR)	H	Kcal/kwh	2430	2390	2374	2755	2430	2430	2430	
C	Sp. Oil Cons.	(Qs)n	ml/kwh	0.50	0.50	0.50	2.10	0.50	0.50	0.50	
D	Auxiliary Energy Consumption	AUXn	%	8.50	6.55	6.25	9.70	9.00	9.00	9.00	
Fuel Data for the month											
E	Price of Primary fuel (Coal)	Pp	Rs. kg	2.38640	2.58174	2.69509	2.71498	4.55734	4.43647	4.43647	
F	Price of Secondary fuel (Oil)	Ps	Rs. ml	0.05112037	0.05112037	0.05112037	0.04708051	0.05272075	0.03469973	0.03469973	
G	Gross Calorific Value of Primary fuel (Coal)	Cp	Kcal/kg	3314.00	3638.00	3822.00	4069.00	3675.00	3295.00	3295.00	
H	Gross Calorific Value of Primary fuel (Coal) less 85 Kcal/kg on account of variation during storage (Cp1= Cp-85)	Cp1	Kcal/kg	3229.00	3553.00	3737.00	3984.00	3590.00	3210.00	3210.00	
I	Gross Calorific Value of Secondary fuel (oil)	Cs	Kcal/ltr	9639.63	9639.63	9639.63	8924.00	9482.00	9608.59	9608.59	
Formula of ECR				Rs./kwh $ECR = 100 \{ Pp * (H - (Qs)n * Cs / 1000) / Cp1 + Ps * (Qs)n \} / (100 - AUXn)$							
J	Energy Charge Rate for the month (ECR)	ECR	Rs./kwh	1.9868	1.8820	1.8498	2.1745	3.4122	3.7024	3.7024	
K	Already claimed energy charge rate (ECR1)	ECR1	Rs./kwh	1.8700	1.6200	1.4400	1.5200	2.6700	3.2100	3.2100	
L	Diff in ECR (J-K)	ECR2	Rs./kwh	0.1168	0.2620	0.4098	0.6545	0.7422	0.4924	0.4924	
M	Amt. of Energy Charge due to variation in fuel data (Axl)/10		Rs. Crs	3.3915198	14.9557781	13.4650417	18.2413761	17.5925104	4.9001023	5.8140287	78.3603571

Total Amount Payable (Cr)

78.3603571

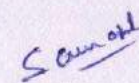
(Rs Seventy eight crore, thirty six lacs, three thousand, five hundred and seventy one only)

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

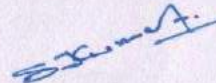
Prepared as per ESO/SG & Bills /Fuel data received from TPS

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

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



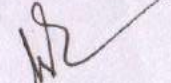
(Saurabh Grover)
EA (Comml.)



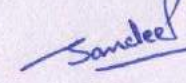
(Sukesh Kr. Vij)
AE (Comml.)



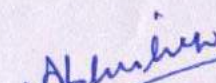
(Goga Pandey)
Accountant



(Khyati Singh)
Accounts Officer



(S.K. Yadav)
AE(Comml.)



(Abhishek Srivastava)
EE(Comml.)

Rate of Variable Cost for MOD of the month August'20 as per UPERC Order dt. 21.06.2016 against Petition no.- 1070/2015 according to Energy/FCA Bill of the month June-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 for month at 15.5% RoE	Amount of annual capacity charges at 2% RoE corresponding to Column 6	Total capacity charges for month at 2% RoE *	Foregoing Capacity Charges for the month	Energy Charge as per Maia Energy Bill *	Variable Charge as per FCA Bill **	Total Variable Cost - Foregoing Fixed Cost	Scheduled Generation by SLDC/ 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)	(Rs. Crs)	(MU)
	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)*10	
Anpara 'A'	630	3	85	74.74	339.55	306.96	87.93	298.5663150	25.5143529	269.9099280	23.0654860	2.4488669	54.2991610	3.3915198	55.2418139	290.369845	1.902
Anpara 'B'	1000	3	85	85.11	485.68	307.88	100.00	485.6800000	42.8936387	307.8800000	27.1909353	15.7027034	92.4746585	14.9557781	91.7277332	570.831225	1.607
Anpara 'D'	1000	3	85	47.43	1323.02	1088.75	55.80	738.245160	64.6515773	607.5225000	53.2035833	11.4479940	47.3149344	13.4650417	49.3319821	328.5759330	1.501
Obra 'B'	1000	3	80	57.07	453.56	421.89	71.34	323.5697040	24.9155627	300.9763260	23.1758240	1.7397387	42.3634708	18.2413761	58.8651082	278.707045	2.112
H'dnj. Extn	500	3	85	81.52	658.65	532.38	95.91	631.7112150	59.3718088	510.6056580	47.9896205	11.3821883	63.2875274	17.5925104	69.4978495	237.0319380	2.932
Pari.Extn.	420	3	85	74.37	381.95	333.66	87.49	334.1680550	36.7658704	291.9191340	32.1175555	4.6483149	31.9442084	4.9001023	32.1959958	99.514668	3.235
Pari.Extn. Stage-2	500	3	85	95.48	607.06	498.79	100.00	607.0600000	50.5883333	498.7900000	41.5658333	9.0225000	37.9021771	5.8140287	34.6937058	118.075318	2.938
H'dnj. (U#7) S	105	3	65	54.41	82.82	78.98	83.71	69.3255780	3.5286672	66.1141580	3.3652062	0.1634610	0.0000000	0.0000000	0.0000000	0.0000000	3.374
TOTAL					4249.47	3490.31		3488.3260270	290.6938356	2853.7177040	251.6740441	56.3923062	369.5861376	78.3603571	391.5541885	1923.1059720	

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 34(iv), for n month=(nxACCn-(n-1)xACCn-1)/12

S Harduaganj (U#7) remain closed in Mar'2020, hence SG is 0 (Zero). Therefore, rate of previous variable charge for MOD has been taken.

Sawant
EA (Comml.)

Sawant
AE (Comml.)

Abhishek
EE (Commercial), UPRVUNL