

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 : **March- 2020**
 Name of Customer :- **U.P. Power Corporation Ltd.**
Shakti Bhawan, Extn.
14, Ashok Marg, Lucknow
09AAACU5088M4ZM

Bill No. : **UNL/Energy Bill (SG/ESO)/2020-03/01**
 Bill Date : **24.04.2020**
 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.

GST Reg. No: _____

Provisional Main Energy Bill of UPRVUNL to UPPCL for Anpara A, Anpara B, Anpara D, Obra B, Parichha, 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 19 n	Cum.Plant Availability		Capacity charges (Fixed Charges)					Energy Charge(E.C)			Total Amount
			Target by UPERC (%)	Actual till current month w.e.f April.19 (%)	Total capacity charges approved by UPERC (Rs. Crs)	Percentage to be recovered (%)	Amount of annual capacity charges corresponding to Column 6 (ACC2) (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)	Rate of Energy Charges (REC) (Rs/kwh)	Total Energy Charges (Rs. Crs)	Capacity Charges+ Energy Charges (Rs. Crs)
			3	4 #	5	6##	7=(Col 5X6)/100 8###	9	10	11	12=(Col 10x11)/10	13=(Col 8+12)	
	630	12	85	84.12	306.96	98.96	303.7676160	25.2295540	303.8597040	287.770848	1.87	53.8131486	79.0427026
Anpara 'A'	1000	12	85	82.52	307.88	97.08	298.8899040	30.0721790	293.2557000	565.076553	1.62	91.5424016	121.6145806
Anpara 'B'	1000	12	85	64.25	1088.75	75.59	822.9861250	17.4835104	878.7301250	89.543783	1.44	12.8943048	30.3778152
Anpara 'D'	1000	12	80	47.39	421.89	59.24	249.9276360	32.6226443	237.0599910	331.645410	1.52	50.4101023	83.0327466
Obra 'B'	500	12	85	94.55	532.38	100.00	532.3800000	44.3650000	532.3800000	195.135273	2.67	52.1011179	96.4661179
Harduaganj Extn	420	12	85	89.51	333.66	100.00	333.6600000	27.8050000	333.6600000	0.000000	3.21	0.0000000	27.8050000
Parichha Extn.	500	12	85	56.70	498.79	66.71	332.7428090	49.3095481	309.1999210	0.000000	3.21	0.0000000	49.3095481
Pari.Extn. Stage2	105	12	65	76.73	78.98	100.00	78.9800000	6.5816667	78.9800000	0.000000	3.47	0.0000000	6.5816667
Harduaganj (U#7)	110	9	75	71.17	64.39	0.00	0.0000000	0.0000000	0.0000000	0.000000	3.90	0.0000000	0.0000000
Parichha (U#2)	5265				3633.68		2953.3340900	233.4691025	2967.1254410	1469.171867		260.7610752	494.2301777

Rs Crs. 494.2301777

Total Amount Payable

(Rs. Four hundred ninety four crore, twenty three lacs, one thousand, seven hundred and seventy seven 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 2014, dt 16.12.2014 para 34(iv) , for n month=(nxACCn-(n-1)xACCn-1)/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/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
 (Saurabh Grover)
 EA (Comml.)

Hari Shyam
 24.4.2020
 (Sukesh K. Singh)
 AE (Comml.)

Goga Pandey
 (Goga Pandey)
 Accountant

S.P. Yadav
 (S.P. Yadav)
 Dy. CAO (F)

Sandeep Agrawal
 (Sandeep Agrawal)
 AF(Comml.)

Hari Shyam
 24.4.2020
 (Hari Shyam)
 SE(Comml.)

Cumulative Availability for FY 2019-20

Month	Days	Cumm 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.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)
Apr-19	30	30	355.216250	14801	14801	85.59	616.891500	25704	25704	91.69	674.898000	28121	28121	99.99	324.752000	13531	13531	49.95
May-19	31	61	354.966500	14790	29591	84.15	634.787500	26449	52153	91.49	644.881750	26870	54991	96.16	300.367250	12515	26046	47.29
Jun-19	30	91	340.985000	14208	43799	83.50	582.079000	24253	76406	89.85	506.140750	21089	76080	89.18	327.963250	13665	39711	48.33
Jul-19	31	122	334.340500	13931	57730	82.09	594.243000	24760	101166	88.74	538.767375	22449	98529	86.15	345.541250	14398	54109	49.12
Aug-19	31	153	369.592000	15400	73130	82.92	631.238750	26302	127468	89.15	628.430000	26185	124714	86.95	343.893000	14329	68438	49.54
Sep-19	30	183	331.978500	13832	86962	82.44	564.124250	23505	150973	88.28	570.369750	23765	148479	86.55	311.072250	12961	81399	49.26
Oct-19	31	214	361.899750	15079	102041	82.72	579.596250	24150	175123	87.57	664.219375	27676	176155	87.80	318.813500	13284	94683	49.00
Nov-19	30	244	346.311250	14430	116471	82.81	323.590000	13483	188606	82.72	444.720000	18530	194685	85.11	290.161250	12090	106773	48.46
Dec-19	31	275	382.872750	15953	132424	83.54	340.2450625	14177	202783	78.91	348.0695625	14503	209188	81.14	183.311500	7638	114411	46.07
Jan-20	31	306	374.774000	15616	148040	83.93	605.482150	25228	228011	79.74	150.071063	6253	215441	75.10	217.264000	9053	123464	44.68
Feb-20	29	335	346.835500	14451	162491	84.14	610.319000	25430	253441	80.96	0.000000	0	215441	68.60	300.217300	12509	135973	44.95
Mar-20	31	366	359.802000	14992	177483	84.12	690.888250	28787	282228	82.52	120.592375	5025	220466	64.25	495.786500	20658	156631	47.39
Total			4259.574000				6773.484713				5291.160000				3759.143050			

Month	Days	Cumm Days N	MW 105 AUXn 9.5				MW 500 AUXn 9.0				MW 110 AUXn 10.7				MW 420 AUXn 9.0				MW 500 AUXn 9.0			
			#Harduaganj (U#7)				Harduaganj Extn U#8 & 9				#Parichha (U#2)				Parichha Extn (U#210)				Parichha Extn Stage-2 (U#5&6)			
			Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)	Declared Cap.(MU)	Declared Cap.(MW)	Cum Decl. Cap.(MW)	Cum Ava (%)
Apr-19	30	30	67.658400	2819	2819	98.89	312.231010	13010	13010	95.31	66.240000	2760	2760	93.66	244.188075	10175	10175	88.74	245.096875	10212	10212	74.81
May-19	31	61	31.235130	1301	4120	71.08	310.030500	12918	25928	93.42	57.062000	2378	5138	85.75	241.783800	10074	20249	86.85	168.223750	7009	17221	62.05
Jun-19	30	91	0.000000	0	4120	47.65	301.757750	12573	38501	92.99	47.559250	1982	7120	79.65	253.856500	10577	30826	88.63	138.853750	5786	23007	55.57
Jul-19	31	122	6.69574750	279	4399	37.95	304.797375	12700	51201	92.24	51.557000	2148	9268	77.34	269.456375	11227	42053	90.19	128.628250	5360	28367	51.10
Aug-19	31	153	57.763030	2407	6806	46.81	307.476750	12812	64013	91.95	49.495500	2062	11330	75.39	264.507250	11021	53074	90.76	159.496500	6646	35013	50.30
Sep-19	30	183	65.2419525	2718	9524	54.77	315.690000	13154	77167	92.68	28.064500	1169	12499	69.53	263.345900	10973	64047	91.57	163.558625	6815	41828	50.23
Oct-19	31	214	67.897965	2829	12353	60.75	316.412250	13184	90351	92.79	49.129250	2047	14546	69.20	275.832900	11493	75540	92.36	169.067625	7044	48872	50.19
Nov-19	30	244	67.6584000	2819	15172	65.44	322.385000	13433	103784	93.48	57.600000	2400	16946	70.70	271.107300	11296	86836	93.11	163.768750	6824	55696	50.17
Dec-19	31	275	68.7768125	2866	18038	69.03	324.796875	13533	117317	93.76	54.711750	2280	19226	71.17	279.562875	11648	98484	93.70	168.500625	7021	62717	50.12
Jan-20	31	306	70.694880	2946	20984	72.17	336.305250	14013	131330	94.33					275.116450	11463	109947	94.01	168.947375	7039	69756	50.10
Feb-20	29	335	66.133920	2756	23740	74.58	299.865625	12494	143824	94.36					224.275550	9345	119292	93.17	253.361735	10557	80313	52.69
Mar-20	31	366	70.694880	2946	26686	76.73	327.321250	13638	157462	94.55					142.178400	5924	125216	89.51	338.520000	14105	94418	56.70
Total			640.451118				3779.069635				461.419250				3005.211375				2266.023860			

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

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.

Sourabh
EA (Comml.)

SD
AE (Comml.)

Suryawati
SE (Comml.) 24.4.2020

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: **March, 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/2020-03/02**
 Bill Date- **29.04.2020**
 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 March'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	Harduaganj Extn.	Parichha	Pari Extn.	Pari Extn. Stage-2	Total
	Unit No.			U#1,2&3	U#4&5	U#6&7	U#9 to 13	U#7	U#8&9	U#2	U#3&4	U#5&6	
A	Energy Exported & Billed (ESO)	ESO	MU	287.770848	565.076553	89.543783	331.645410	0.000000	195.135273	0.000000	0.000000	0.000000	1469.171867
	Normative Operating Parameters												
B	Gross Station Heat Rate (GSHR)	H	Kcal/kwh	2430	2390	2374	2755	2625	2430	2980	2430	2430	
C	Sp. Oil Cons.	(Qs)n	ml/kwh	0.50	0.50	0.50	2.10	2.50	0.50	2.60	0.50	0.50	
D	Auxiliary Energy Consumption	AUXn	%	8.50	6.55	6.25	9.70	9.50	9.00	10.70	9.00	9.00	
	Fuel Data for the month												
E	Price of Primary fuel (Coal)	Pp	Rs. kg	2.20095	2.46954	2.85063	3.01138	4.80405	4.80405	0.00000	4.95986	4.95986	
F	Price of Secondary fuel (Oil)	Ps	Rs. ml	0.05112037	0.05112037	0.05112037	0.05187965	0.05272075	0.05272075	0.00000	0.05173467	0.05173467	
G	Gross Calorific Value of Primary fuel (Coal)	Cp	Kcal kg	3506.00	3888.00	3689.00	3732.00	3784.00	3784.00	0.00000	3719.00	3719.00	
H	Gross Calorific Value of Primary fuel (Coal) less 85 Kcal/kg on account of variation during storage (Cp1= Cp-85)	Cp1	Kcal kg	3421.00	3803.00	3604.00	3647.00	3699.00	3699.00	0.00	3634.00	3634.00	
I	Gross Calorific Value of Secondary fuel (oil)	Cs	Kcal lit	9639.63	9639.63	9639.63	9027.00	9482.00	9482.00	0.00	9698.26	9508.70	
	Formula of REC												
			Rs./kwh	REC= 100{Pp*(H-(Qs)n*Cs/1000)/Cp1+Ps*(Qs)n}/(100-AUXn)									
J	Rate of Energy Charge for the month(REC)	REC	Rs./kwh	1.7332	1.6848	2.0261	2.6225	3.8787	3.4903	0.0000	3.6657	3.6659	
K	Already claimed rate of energy charge (REC1)	REC1	Rs./kwh	1.8700	1.6200	1.4400	1.5200	3.4700	2.6700	0.0000	3.2100	3.2100	
L	Diff in REC (J-K)	REC2	Rs./kwh	-0.1368	0.0648	0.5861	1.1025	0.4087	0.8203	0.0000	0.4557	0.4559	
M	Amt. of Energy Charge due to variation in fuel data (AxL)/10		Rs.Crs	-3.9367052	3.6616961	5.2481611	36.5639065	0.0000000	16.0069464	0.0000000	0.0000000	0.0000000	57.5440049

Total Amount Payable (Cr)

57.5440049

(Rs Fifty seven crore, fifty four lacs, forty thousand and forty nine 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
 (Saurabh Grover)
 EA (Comml.)

Sukesh Kr. Vij
 (Sukesh Kr. Vij)
 AE (Comml.)

Goga Pandey
 (Goga Pandey)
 Accountant

S.P. Yadav
 (S.P. Yadav)
 Dy CAO (F)

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

Hari Shyam
 (Hari Shyam)
 SE(Comml.)
 29.4.2020

Rate of Variable Cost for MOD for the month May'2020 as per UPERC Order dt. 21.06.2016 against Petition no.- 1070/2015 according to Energy/FCA Bill of the month March'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 Main 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=(Col. 7/12)	9=(Col. 5X6)/100	10=(Col. 9/12)	11=(Col. 8-10)	12	13	14=(Col. 12+13-11)	15	16= (Col 14/Col 15)*10	
Anpara 'A'	630	12	85	84.12	339.55	306.96	98.96	336.0186800	27.9081804	303.7676160	25.2295540	2.6786264	53.8131486	-3.9367052	47.1978170	287.7708480	1.640
Anpara 'B'	1000	12	85	82.52	485.68	307.88	97.08	471.4981440	47.4387940	298.8899040	30.0721790	17.3666150	91.5424016	3.6616961	77.8374827	565.0765530	1.377
Anpara 'D'	1000	12	85	64.25	1323.02	1088.75	75.59	1000.070818	21.2454962	822.9861250	17.4835104	3.7619858	12.8943048	5.2481611	14.3804801	89.5437830	1.540
Obra 'B'	1000	12	80	47.39	453.56	421.89	59.24	268.6889440	35.0715270	249.9276360	32.6226443	2.4488827	50.4101023	36.5639065	84.5251261	331.6454100	2.549
H'dnj. (U#7) S	105	12	65	76.73	82.82	78.98	100.00	82.8163636	6.9013636	78.9800000	6.5816667	0.3196969	0.0000000	0.0000000	0.0000000	0.0000000	3.374
H'dnj. Extn	500	12	85	94.55	658.65	532.38	100.00	658.6500000	54.8875000	532.3800000	44.3650000	10.5225000	52.1011179	16.0069464	57.5855643	195.1352730	2.951
Parichha(U#2)	110	9	75	71.17	69.72	64.39	94.89	66.1573080	5.8012850	61.0996710	5.3577846	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	Unit closed
Pari.Extn. S	420	12	85	89.51	381.95	333.66	100.00	381.9500000	31.8291667	333.6600000	27.8050000	4.0241667	0.0000000	0.0000000	0.0000000	0.0000000	3.174
Pari.Extn. Stage-2 S	500	12	85	56.70	607.06	498.79	66.71	404.9697260	60.0129398	332.7428090	49.3095481	10.7033917	0.0000000	0.0000000	0.0000000	0.0000000	2.926
TOTAL					4402.01	3633.68		3670.8199836	291.0962527	3014.4337610	238.8268871	51.8258652	260.7610752	57.5440049	281.5264702	1469.171867	

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

* Taken from Energy Bill of the month.

As per UPERC Generation Tariff Regulation-2019, dt. 11.09.2019.

** Taken from FCA Bill of the month .

Column No. 8 & 10 computed as per UPERC Generation Regulation 2019, dt. 11.09.2019 para 25, for n month=(nxACCn-(n-1)xACCn-1)/12

S Harduaganj (U#7), Parichha Extn & Parichha Extn Stage-II TPS remain closed due to Thermal Backing in Mar'2020, hence SG is 0 (Zero). Therefore, rate of previous variable charge for MOD has been taken.

Saukh
EA (Comml.)

Sandeep
AE (Comml.)

H. Sanyal
29.4.2020
SE (Commercial), UPRVUNL