

Computation worksheet of Monthly Variable Cost Adjustment (MVCA) for December'2021

Accounting Month			December'2021
Effective month			January'2022
		Unit	
A Value as given in the Tariff order of 2017-18			
TL	Normative Transmission loss in %	%	3.40
DL	Normative Distribution loss in %	%	17.50
e_{sc}	Energy sale to consumer & licensee as per Tariff order	MU	25397.04
pp_{cost}	Power purchase cost allowed in the Tariff order	Rs	140350966000.00
fc	Fuel cost allowed in the Tariff order	Rs	0.00
pp_{cost_ex}	Power purchase cost for sale to person other than licensee & consumer as allowed in the Tariff order	Rs	24330346000.00
B Value for the month			
UI_{in}	Net power drawal in UI mode (see Annexure -I)	MU	348.681
UI_{out}	Net power exported in UI mode (see Annexure -I)	MU	255.118
E_p	Total power purchased (see Annexure -II)	MU	35391.183
E_G	Total sent out from own generation (see Annexure -I)	MU	1408.798
E_x	Energy sold to person other than licensee & consumer (see Annexure -I)	MU	4686.987
E_{p_PPSP}	Net power drawal for pumping power (see Annexure -I)	MU	1166.437
PP_{cost}	Total cost of power purchase (see Annexure -I)	Rs	135279456584.084
FC	Total fuel cost (proprated upto the month)	Rs	0.000
UI_{cost_in}	Power purchase cost in UI_{in} (see Annexure -I)	Rs	1813249191.610
CTU_{loss}	Loss through inter-state transmission system for import of power (see Annexure -I)	MU	417.167
$R-E_x$	Revenue earned on account of part of variable cost only due to Energy sold against E_x (see Annexure -I)	Rs	16760390102.560
$R-UI_{out}$	Revenue earned in Rs due to power exported in UI mode (see Annexure -I)	Rs	759503609.820
C Value of Adhoc variable cost			
$Adhoc_V_{cost}$	Adhoc variable cost	Rs/Kwh	0.0
D Value to be taken for balance period of the year:			
P_{Proj}	Projected power purchase cost during balance period of the year (see Annexure -II)	Rs	44266051404.650
FC_{Proj}	Projected Fuel cost during balance period of the year	Rs	0.000
E_{Proj}	Projected energy to be purchased during balance period of the year (see Annexure -II)	MU	11132.724
$E_{p_PPSP_Proj}$	Projected net drawal of pumping energy during balance period of the year(see Annexure -II)	MU	594.034
E_{G_Proj}	Projected sent out Generaion during balance period of the year(see Annexure -II)	MU	475.704
E_{x_Proj}	Projected Energy to be sold to person other than licensee & consumer during balance period of the year (see Annexure-II)	MU	1862.329
$R-E_{x_Proj}$	Projected Revenue earned on account of part of variable cost only due to Energy sold against E_{x_Proj} during balance period of the year	Rs	11769919053.53
E Computation of MVCA			
TL	Normative Transmission loss in % (for 2017-18)	%	3.40
DL	Normative Distribution loss in % (for 2017-18)	%	17.50
Tot_{ENR}	$E_p + E_G + UI_{in} - CTU_{loss} + E_{proj} + E_{G_Proj}$	MU	48339.92
$Tot_{ENR_Consumer}$	$Tot_{ENR} - UI_{out} - E_x - E_{x_Proj} - (E_{p_PPSP} + E_{p_PPSP_Proj}) / (1 - TL)$	MU	39713.05
Δ_{Adj}	Adjustment on the basis of cummulative total variable cost incurred from the start of the ensuing year upto the month	Rs	0.00
MVC	$PP_{cost} + FC + UI_{cost_in} + P_{Proj} + FC_{Proj} + \Delta_{Adj}$	Rs	181358757180
$MVC_{consumer}$	$MVC - (R - E_x + R - UI_{out} + R - E_{x_Proj})$	Rs	152068944414
E_{sc}	$Tot_{ENR_Consumer} \times (1 - TL \times 0.01) \times (1 - DL \times 0.01)$	MU	31649
$MVC_{unit_consumer}$	$MVC_{consumer} / (E_{sc} \times 10^6)$	Rs/KWh	4.80
$mvc_{consumer}$	$pp_{cost} + fc - pp_{cost_ex}$	Rs	116020620000
$mvc_{unit_consumer}$	$mvc_{consumer} / (e_{sc} \times 10^6)$	Rs/Kwh	4.57
MVCA	$(MVC_{unit_consumer} - mvc_{unit_consumer} - Adhoc_V_{cost}) \times 100$ Paisa/Kwh	paise/Kwh	23.65
		Rounded to 23 Paise/kwh integer value in lower side	

Name of Agency	upto Last Month(November'21) (1)			Current Month(December'21) (2)			Arrear /bill received after 15th of prev month (3)		Upto present Month (4= 1+2+3)		
	MU	Rs in Lakhs	Rate (P/Kwh)	MU	Rs in Lakhs	Rate (P/Kwh)	MU	Rs in Lakhs	MU	Rs in Lakhs	Rate (P/Kwh)
Long Term											
Index	A	B	C	D	E	F	G	H	J	K	L
NTPC Ltd. (FSTPS Stg I & II)	1350.315	61772.94	457.47	246.158	10058.92	408.64	0.000	2.988	1596.473	71834.85	449.96
NTPC Ltd. (TSTPS)	441.658	12376.02	280.22	27.600	870.54	315.41	0.000	23.856	469.258	13270.42	282.80
FSTPS U#6 (Share)	652.415	33135.07	507.88	103.669	4820.20	464.96	0.000	1.101	756.085	37956.36	502.01
Kahalgaoon STPS 1D	218.089	7906.25	362.52	24.612	974.13	395.79	0.000	0.298	242.702	8880.67	365.91
Darlipalli	961.509	27533.33	286.36	75.660	2938.60	388.40	0.000	66.451	1037.168	30538.39	294.44
Kanti Bijli	127.131	7719.28	607.19	23.010	1295.31	562.94	0.000	-0.599	150.141	9013.99	600.37
PTC (Chukha)	546.563	13126.25	240.16	20.083	482.30	240.16	0.000	0.000	566.645	13608.56	240.16
PTC (Kurichhu)	23.466	509.22	217.00	0.000	0.00	0.00	0.000	0.000	23.466	509.22	217.00
PTC (Tala)	1053.842	21637.36	205.32	1.443	32.75	227.00	0.000	0.000	1055.285	21670.11	205.35
N. H. P. C (Rangit)	76.640	2833.79	369.75	5.576	264.48	474.30	0.000	0.000	82.216	3098.26	376.84
N. H. P. C (Teesta-V)	542.607	11781.73	217.13	21.506	977.44	454.49	0.000	0.000	564.113	12759.17	226.18
NHPC (TLDP III)	519.978	25893.32	497.97	17.861	889.41	497.97	0.000	0.000	537.838	26782.73	497.97
NHPC (TLDP IV)	654.531	28187.38	430.65	21.558	928.41	430.65	0.000	0.000	676.089	29115.78	430.65
DVC (Mejia V)	140.968	7542.73	535.07	26.413	1223.507	463.22	0.000	0.000	167.382	8766.24	523.73
DVC (RTPS)	381.397	25486.61	668.24	88.158	4681.240	531.00	0.000	0.000	469.556	30167.849	642.48
DVC (Radial)	360.376	19178.17	532.17	37.561890	1897.45	505.15	0.000	0.000	397.938	21075.62	529.62
DPL. 220 KV	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	0.00
BTSP1	161.694	8793.56	543.84	28.800	1338.69	464.81	0.000	0.000	190.494	10132.25	531.89
KTPS	2350.835	99650.83	423.90	351.211	13323.01	379.34	0.000	0.000	2702.046	112973.84	418.10
BKTPS -Stg1	3636.927	128760.19	354.04	629.166	20173.374	320.64	0.000	0.000	4266.093	148933.57	349.11
BKTPS -Stg2	1240.378	45945.42	370.41	0.000	0.000	0.00	0.000	0.000	1240.378	45945.42	370.41
BTSPS-5	940.648	34305.78	364.70	98.731	3669.68	371.69	0.000	0.000	1039.378	37975.46	365.37
STPS STG-II	2485.283	94980.49	382.17	333.952	11606.389	347.55	0.000	0.000	2819.235	106586.88	378.07
SgTPS Stg -I	2480.512	78967.75	318.35	399.735	11428.86	285.91	0.000	0.000	2880.247	90396.61	313.85
SgTPS Stg-II	4263.258	161189.97	378.09	643.219	21215.62	329.84	0.000	0.000	4906.476	182405.60	371.76
SUB TOTAL: WBPDC	17559.534	652594.007	371.65	2484.814	82755.621	333.05	0.000	0.000	20044.349	735349.628	366.86
Sikkim	0.030000	1.65	550.00	0.000	0.00	0.00	0.203	11.176	0.233	12.82600	550.00
CESC Ltd.	11.740	767.85	654.07	1.454	95.09	654.00	0.000	0.000	13.193	862.94	654.07
WBREDA	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	0.00
NEORA HYDRO	9.032	325.17	360.00	0.247	8.89	360.00	0.000	0.000	9.279	334.06	360.00
Electro Steel	10.764	272.33	253.00	0.903	22.85	253.00	0.000	0.000	11.667	295.18	253.00
Nippon Power Ltd.	10.802	388.89	360.00	0.804	28.958	360.00	0.000	0.000	11.607	417.84	360.00
Shree Renuka sugar	7.024	193.16	275.00	0.000	0.00	0.00	0.000	0.000	7.024	193.16	275.00
Himadri Chemical Ltd (12MW)	2.120	42.333	199.64	0.127	2.54	199.67	0.000	0.000	2.248	44.87229	199.64
Himadri Chemical Ltd (8 MW)	33.244	1110.342	334.00	3.72512	124.42	334.00	0.000	0.000	36.969	1234.76	334.00
Rashmi Cement	2.267	46.25	204.00	0.166	3.38	204.00	0.000	0.000	2.433	49.63	204.00
Tata Power	0.000	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.00
Hiranmoyee(HEL)	632.130	30797.61	487.20	158.339	8611.274	543.85	0.000	0.000	790.469	39408.88	498.55
PTC (Baglihar)	172.013	6404.04	372.30	0.000	0.00	0.00	0.000	0.000	172.013	6404.04	372.30
PTC-Adhunik	468.082	25681.12	548.65	74.213	2212.20	298.09	0.000	0.000	542.294	27893.32	514.36
TPTCL (Mithon Right Bank)	1439.602	58659.33	407.47	173.887	7318.57	420.88	0.000	0.000	1613.489	65977.90	408.91
Bengal Energy Limited	190.628	5751.43	301.71	25.950	770.72	297.00	0.000	0.000	216.578	6522.15	301.15
NVVN (BP- Solar)	43.070	4604.59	1069.10	4.239	451.144	1064.39	0.000	0.000	47.308	5055.74	1068.68
NVVN (BP- Thermal)	190.943	7360.39	385.48	20.362	921.695	452.65	0.000	0.000	211.305	8282.08	391.95
Concast Bengal Ind. Ltd.	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	0.00
JBVNL	0.025	3.44	1403.76	0.006	0.87	1417.92	0.000	0.000	0.031	4.314	1406.59
APDCL	0.301	24.83	824.66	0.055	4.979	909.08	0.000	0.000	0.3559	29.81367	837.65
Soitaire	3.703	426.59	1152.00	0.471	54.236	1152.00	0.000	0.000	4.1738	480.82180	1152.00
RIL	5.023	111.51	222.00	1.144	25.401	222.00	0.000	0.000	6.1670	136.90962	222.00
PTC-Jhabua	318.203	13631.18	428.38	39.164	1680.127	429.00	0.000	0.000	357.3669	15311.30966	428.45
PTC-Jaiprakash	378.661	16184.86	427.42	43.924	1883.127	428.73	0.000	0.000	422.5848	18067.98902	427.56
PTC-Mangdechhu	833.863	34938.88	419.00	34.603	1449.848	419.00	0.000000	0.000000	868.4660	36388.72523	419.00

Annexure-1											
	upto Last Month(November'21) (1)			Current Month(December'21) (2)			Arrear /bill received after 15th of prev month (3)		Upto present Month (4= 1+2+3)		
Name of Agency											
Long Term	MU	Rs in Lakhs	Rate (P/Kwh)	MU	Rs in Lakhs	Rate (P/Kwh)	MU	Rs in Lakhs	MU	Rs in Lakhs	Rate (P/Kwh)
Index	A	B	C	D	E	F	G	H	J	K	L
TPTCL-Dagachu	493.026	18291.27	371.00	28.680	1064.028	371.00	0.000	0.000	521.7061	19355.29641	371.00
Total(Long Term)	30867.316	1185232.485	383.98	3838.145	141824.647	369.51	0.203	105.271	34705.665	1327162.403	382.41
Short Term:	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
Power Exchange	658.847	22272.02	338.05	26.671	681.48	255.51	0.000	0.000	685.519	22953.50	
SCL	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
MSEDCL	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
NVVN	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
PTC	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
TPTCL	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.00	0.00	
DVC short term	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
JSWPTC	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
AEL	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
DB power	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
GMR	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.000	0.000	0.00	
DPL Short-Term	0.000	0.00		0.000	0.00	0.00	0.000	0.000	0.000	0.00	
APPCL	0.000	0.00		0.000	0.00	0.00	0.000	0.000	0.000	0.00	
NHPC	0.000	0.00		0.000	0.00	0.00	0.000	0.000	0.000	0.00	
Short Term	658.847	22272.023	338.05	26.671	681.481	255.51	0.000	0.000	685.519	22953.504	334.83
Power Purchase Cost (Excl Swap)	31526.1638	1207504.51	383.02	3864.8164	142506.13	368.73	0.203	105.271	35391.183	1350115.907	381.48
Swap in @ Average power purchase cost (19-20)	0.000	0.00	0.00	0.000	0.00	0.00			0.000	0.00	0.00
Total	31526.164	1207504.51	383.02	3864.816	142506.13	368.73	0.203	105.27	35391.183	1350115.91	
CTU Grid loss (C)	373.823	0.00		43.344	0.00				417.167	0.00	0.00
Power drawal in UI mode	327.446	16524.83		21.235	1607.66	757.10	0.000	0.000	348.681	18132.49	520.03
Power exported in UI mode	222.103	6563.23		33.015	1031.80	312.52	0.000	0.000	255.118	7595.04	297.71
Energy sold to person other than licensee & consumer	3255.857	118479.31		1431.130	49124.59	343.26			4686.987	167603.90	357.59
Power drawal for PPSP pumping	1013.755	0.00		152.682	0.00		0.000	0.000	1166.437	0.00	
Net Own Generation							0.000				
Hydel	472.873			21.429			0.000		494.302		
PPSP	737.426			111.064			0.000		848.489		
Solar	60.023			5.983			0.000		66.006		
Total sent out generation	1270.322	0.00		138.476	0.00		0.000		1408.798	0.00	
PDCL Arrear		-2823.68		0.000						-2823.68	
HEML Arrear		4736.38			765.96028					5502.34	
Note: DPL purchase is not condidered in view of notification no.332/PO/O/C-IV/1E-60/13(PT-VA) dated 31.12.2018 of Govt.of West Bengal and subsequent order dated 31.12.2018 of WBERC											

	As per approved ARR	Projected for balance period		Applicable rate for balance energy	Projected for balance period
Name of Agency	2017-18		Projection Methodology Adopted #	Paise/ Kwh	Rs Lakhs
Long Term	MU	MU		N=Max of COL-G & COL M of Annexure-1	Q= Px N/ 10
Index	O	P =(O-J) or Ox3/12			
NTPC Ltd. (FSTPS Stg I & II)	3403.054	850.764	B	449.96	38280.92
NTPC Ltd. (TSTPS)	638.625	159.656	B	315.41	5035.75
FSTPS U#6 (Share)	1291.242	322.811	B	502.01	16205.48
Kahalgaoon STPS 1D		80.901		395.79	3201.96
Darlipalli		345.723		388.40	13427.80
Kanti Bijli		50.047		600.37	3004.66
PTC (Chukha)	553.673	20.250	C	240.16	486.33
PTC (Kurichhu)	20.000			217.00	0.00
PTC (Tala)	1296.930	241.645	A	216.00	5219.53
N. H. P. C (Rangit)	95.002	12.786	A	474.30	606.43
N. H. P. C (Teesta-V)	609.530	45.417	A	454.49	2064.13
NHPC (TLDP III)	588.149	50.311	A	497.97	2505.32
NHPC (TLDP IV)	712.800	36.711	A	430.65	1580.95
DVC (Mejia V)	338.793	84.698	B	523.73	4435.88
DVC (RTPS)		156.519		642.48	10055.95
DVC (Radial)	212.000	118.557	C	529.62	6279.04
DPL. 220 KV	5.000			0.00	0.00
BTPS1	488.603			531.89	0.00
KTPS	5018.000	1254.500	B	418.10	52451.24
BKTPS -Stg1	4340.000	1085.000	B	349.11	37878.43
BKTPS -Stg2	2824.000	706.000	B	370.41	26151.29
BTPS-5	1187.397	296.849	B	371.69	11033.47
STPS STG-II	3651.000	912.750	B	378.07	34508.36
SgTPS Stg -I	2409.000	602.250	B	313.85	18901.63
SgTPS Stg-II	3250.000	812.500	B	371.76	30205.90
SUB TOTAL: WBPDC	23168.000	5669.849		372.37	211130.31
Sikkim	0.050	0.000	C	660.00	0.00
CESC Ltd.	40.000	10.000	B	654.07	654.07
WBREDA	0.210	0.210	A	400.00	8.40
NEORA HYDRO	9.000	0.141	C	360.00	5.09
Electro Steel	70.000	17.500	B	253.00	442.75
Nippon Power Ltd.	11.000	0.934	C	360.00	33.62
Shree Renuka sugar	50.000	12.500	B	275.00	343.75
Himadri Chemical Ltd (12MW)	7.000	1.750	B	199.67	34.94
Himadri Chemical Ltd (8 MW)	43.000	10.750	B	334.00	359.05
Rashmi Cement	6.000	1.500	B	204.00	30.60
Tata Power	129.000			0.00	0.00
Hiranmoyee(HEL)		263.490		543.85	14329.92
PTC (Baglihar)	617.540		D	372.30	0.00
PTC-Adhunik	797.160	199.290	B	514.36	10250.63
TPTCL (Mithon Right Bank)	2088.603	522.151	B	420.88	21976.36
Bengal Energy Limited	227.000	56.750	B	301.15	1709.00
NVVN (BP- Solar)	68.800	21.492	A	1068.68	2296.80
NVVN (BP- Thermal)	361.200	90.300	B	452.65	4087.44
Concast Bengal Ind. Ltd.	5.000	1.250	B	319.00	39.88
JBVNL					
APDCL	3.500	0.875	B	909.08	79.54
Solitaire		1.391		1152.00	160.27
RIL		2.056		222.00	45.64
PTC-Jhabua		119.122		429.00	5110.35
PTC-Jaiprakash		140.862		428.73	6039.11
PTC-Mangdechhu		160.064		419.00	6706.68
TPTCL-Dagachu		51.704		371.00	1918.21
Total(Long Term)	37466.861	9932.724		402.89	400182.544
Short Term:				0.00	0.00
Power Exchange					0.00
SCL					0.00
MSEDCL					0.00
NVVN					0.00
PTC					0.00
TPTCL					0.00
DVC short term					0.00

	As per approved ARR	Projected for balance period	Projection Methodology Adopted #	Applicable rate for balance energy	Projected for balance period
Name of Agency	2017-18			Paise/ Kwh	Rs Lakhs
Long Term	MU	MU		N=Max of COL-G & COL M of Annexure-1	Q= Px N/ 10
Index	O	P =(O-J) or O x3/12			
JSWPTC					0.00
AEL					0.00
DB power					0.00
GMR					0.00
DPL Short-Term					
APPCL					
NHPC					
Short Term	2262.970	1200.000			40180.09
Power Purchase Cost (Excl Swap)	39729.83	11132.724			440362.63
Swap in @ Average power purchase cost (19-20)					
Total	39729.831	11132.724			440362.63
CTU Grid loss (C)					0.00
Power drawal in UI mode	0.000				0.00
Power exported in UI mode	0.000				0.00
Energy sold to person other than licensee & consumer	7418.110	1862.329			117699.19
Power drawal for PPSP pumping	1425.683	594.034			0.00
Net Own Generation					
Hydel	528.650	34.348			
PPSP	1037.070	432.113			
Solar	75.250	9.244			
Total sent out generation	1640.970	475.704			
PDCL Arrear					
HEML Arrear					2297.881
Note: DPL purchase is not condidered in view of notification no.332/PO/O/C-IV/1E-60/13(PT-VA) dated 31.12.2018 of Govt.of West Bengal and subsequent order dated 31.12.2018 of WBERC		# NB: 1. A = As per approved power purchase of tariff order (2017-18) -Actual power purchase upto the month 2. B = As per approved power purchase of tariff order (2017-18)x No of month of balance period /12. 3. C= As per Trend of power purchase of corresponding period of previous year.(Where actual power purchase upto the current month exceeded the approved power purchase) 4.D= PPA terminated/expired			