

HERC FY 2017-18 TARIFF (Rs / kWh)
Bagasse generic tariff

Table of Parameters	
Capital cost (Rs. in Million / MW)	49.250
Residual value (10%)	4.93
Total depreciation (Rs in Million / MW)	44.33
Loan component (Rs in Million / MW)	34.48
Equity component (Rs in Million / MW)	14.78
CUF (stabilisation)	53%
CUF 1st year (Including Stabilisation)	53%
CUF 2nd year onwards	53%
O&M (Rs Million / MW)	0.21
O&M escalation	5.72%
Depreciation (first 13 years)	5.38%
ROE (1st 10 years)	14%
ROE (11th year onwards)	14%
Income tax (MAT) pass through	0.00%
Income tax (Corporate Tax) pass through	0.00%
Interest on term loan	10.17%
Interest on working capital	10.17%
Auxiliary consumption (1st year)	8.50%
Auxiliary consumption (2nd year onwards)	8.50%
Fuel cost (Rs. / MT)	2307
Fuel price escalation	5.00%
Heat rate (Kcal/kWh)	3600
GCV (Kcal/kg)	2250
Discount rate WACC without tax	11.32%
Levillised tariff	7.53

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Fuel cost escalation	2307	2422	2543	2671	2804	2944	3092	3246	3408	3579	3758	3946	4143	4350	4568	4796	5036	5288	5552	5830
O&M escalation	0.21	0.22	0.23	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.43	0.46	0.48	0.51	0.54	0.57	0.60
Outstanding Loan amount	34.48	31.82	29.17	26.52	23.87	21.22	18.56	15.91	13.26	10.61	7.96	5.30	2.65							
Loan repayment	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65							
Interest on loan	3.37	3.10	2.83	2.56	2.29	2.02	1.75	1.48	1.21	0.94	0.67	0.40	0.13							
Working Capital																				
Fuel cost for four months	5.71	6.00	6.30	6.61	6.94	7.29	7.66	8.04	8.44	8.86	9.31	9.77	10.26	10.77	11.31	11.88	12.47	13.09	13.75	14.44
One month O&M	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05
2 Months receivables	4.41	4.52	4.63	4.75	4.89	5.02	5.17	5.33	5.50	5.68	5.87	6.07	6.29	6.53	6.62	6.92	7.24	7.57	7.92	8.29
Maintenance spares 15% of O&M	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.09	0.09
Total	10.17	10.57	10.99	11.43	11.89	12.38	12.90	13.44	14.02	14.62	15.26	15.93	16.64	17.20	18.03	18.91	19.82	20.79	21.80	22.86
Interest on working capital	1.03	1.07	1.12	1.16	1.21	1.26	1.31	1.37	1.43	1.49	1.55	1.62	1.69	1.75	1.83	1.92	2.02	2.11	2.22	2.32

Parameters	Derivation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Capacity (MW)		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Generation (Million Units)	A	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64
Auxiliary Cons (%)		8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
Generation (Ex-bus Million Units)	A1	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Station Heat Rate (Kcal/KWh)	B	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
Calorific Value of fuel (Kcal/Kg)	C	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
Overall Heat (Gcal)	D= (A*B)	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714	16714
Fuel Consumption (MT)	E=(D*1000/C)	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428	7428
Cost of fuel per MT	F	2307	2422	2543	2671	2804	2944	3092	3246	3408	3579	3758	3946	4143	4350	4568	4796	5036	5288	5552	5830
Total Cost of fuel (Rs Million)	G=E*F/10 ⁶	17.14	17.99	18.89	19.84	20.83	21.87	22.97	24.11	25.32	26.59	27.92	29.31	30.78	32.32	33.93	35.63	37.41	39.28	41.24	43.31
Fuel Cost (Rs/kWh)	H=G/A1	4.03	4.24	4.45	4.67	4.90	5.15	5.41	5.68	5.96	6.26	6.57	6.90	7.24	7.61	7.99	8.39	8.81	9.25	9.71	10.19
Fixed Costs																					
O&M Expenses		0.21	0.22	0.23	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.43	0.46	0.48	0.51	0.54	0.57	0.60
Depreciation		2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65
Interest on Term Loan		3.37	3.10	2.83	2.56	2.29	2.02	1.75	1.48	1.21	0.94	0.67	0.40	0.13							
Interest on Working Capital		1.03	1.07	1.12	1.16	1.21	1.26	1.31	1.37	1.43	1.49	1.55	1.62	1.69	1.75	1.83	1.92	2.02	2.11	2.22	2.32
Return on Equity		2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07
Income tax on ROE		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost		9.33	9.12	8.90	8.69	8.48	8.28	8.08	7.88	7.68	7.49	7.31	7.13	6.95	5.66	5.77	5.89	6.01	6.13	6.27	6.41
Fixed cost (Rs/kWh)		2.20	2.15	2.10	2.05	2.00	1.95	1.90	1.85	1.81	1.76	1.72	1.68	1.64	1.33	1.36	1.39	1.41	1.44	1.48	1.51
Total cost (Fixed+variable)		26.47	27.11	27.79	28.53	29.31	30.15	31.04	31.99	33.00	34.08	35.23	36.44	37.73	37.98	39.70	41.51	43.42	45.41	47.51	49.71
Tariff (Rs/kWh)		6.23	6.38	6.54	6.72	6.90	7.10	7.31	7.53	7.77	8.02	8.29	8.58	8.88	8.94	9.35	9.77	10.22	10.69	11.18	11.70
Per unit tariff components																					
Per unit O&M Expenses		0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.12	0.13	0.13	0.14
Per Unit Depreciation		0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Per Unit Interest on term loan		0.79	0.73	0.67	0.60	0.54	0.48	0.41	0.35	0.29	0.22	0.16	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Per Unit Interest on working capital		0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.55
Per Unit Return on equity		0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Per unit income tax		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Levillised tariff																					
Discount factor		1.00	0.898	0.807	0.72	0.65	0.58	0.53	0.47	0.42	0.38	0.34	0.31	0.28	0.25	0.22	0.20	0.18	0.16	0.15	0.13
Discounted tariff components(variable)	5.64	4.03	3.81	3.59	3.39	3.19	3.01	2.84	2.68	2.53	2.38	2.25	2.12	2.00	1.89	1.78	1.68	1.58	1.49	1.41	1.33
Discounted tariff components(fixed)	1.89	2.20	1.93	1.69	1.48	1.30	1.14	1.00	0.88	0.77	0.67	0.59	0.52	0.45	0.33	0.30	0.28	0.25	0.23	0.21	0.20
Discounted tariff components (Total)		6.23	5.73	5.28	4.87	4.49	4.15	3.84	3.56	3.29	3.06	2.84	2.64	2.45	2.22	2.08	1.96	1.84	1.73	1.62	1.53

