

BIOMASS RANKINE

Description	CERC	Assam	Bihar	Chhattisgarh	Gujarat*	Haryana	J & K	Karnataka*	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram	Nagaland	Punjab*	Rajasthan	Sikkim	Tripura	Uttarakhand	Uttar Pradesh
Regulation	2017	2017	2017	(draft)2017	Order No.-1 of 2018	2010	2013	2018	2017	2015	2010	2014	2010	2011	2017	2015	2012	2015	2013	2014
Dated	17.04.2017	04.09.2018	24.10.2017	4.7.2017	na	03.02.2011	17.05.2013	14.05.2018	06.07.2017	1.11.2015	31.05.2010	11.11.2014	31.05.2010	30.08.2011	31.10.2017	07.05.2015	28.06.2012	16.10.2015	15.04.2013	20.10.2015
Last Amendment	na	na	na	na	na	05.10.2016	20.04.2016	na	na	04.01.2017	08.08.201	na	08.08.201	na	na	na	na	28.09.2016	08.09.2017	
Tariff Period (Yrs)	20	20	25	13(COD after April 2012)5(COD before April 2012)		20	20		20	13	13	20	13	13	20	20	20	13	20	
Control Period(yrs)	3	3	3	3			5		5	5	5	3	5	3	3	4	3	3	5	
(i) 1st Control Period							3(from 2011-12)													
(ii) 2nd Control Period							4(from 2013-14)													
w.e.f.	2017-18	2017-18	2017-18	2017-18	2018		2013-14	2018	2017	2015	2012-13	2014	2012-13	2011	2017-18	2015	2012	2015	2013-14	
Finanacial Parametres																				
Debt Equity Ratio	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30	70:30
Loan Tenure(Yrs)	13	13	10	13	10	10	12		10	12	12	12	12	10	13	12	12	12	12	12
Interest rate on loan capital (SBI basis points)	200	200	200	200	11.40%	300	300	10.50%	det. by comm.	300	300	150	300	150	200	300	150	300	300	300
Depreciation																				
(i)Starting Years	5.28%(13yrs)	5.28%(13yrs)	7%(10yrs)	5.28%(13yrs)	7% (10 Yrs)	7% (10 Yrs)	5.83% (12 Yrs)	5.28%(13yrs)	7% (10 Yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)	7% (10 Yrs)	5.28%(13yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)	5.83% (12 Yrs)
(ii)Remaining years					2% (11-35 Yrs)															
Salvage Value(%)	10%	10%	10%	10%			10%			10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Max Depreciation (% of capital cost)	90%	90%	90%	90%		90%	90%			90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Return on Equity																				
Value base of Cap. Cost	30%	30%	30%	30%		30%	30%			30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
% Normative ROE	14%	14%	14%	14%	14%	16%		14%	20%	16%		16%			14%	16%				
For 10 yrs							18%				20%		20%	19%			20%	20%	20%	20%
After 10 yrs							22%				24%		24%	24%			24%	24%	24%	24%
Capital Cost (in Lakh/MW)									475	494.32				445			445			445
Water cooled condenser (other than rice straw & juliflora/with rice straw & juliflora)	559.03/610.80	559.03/610.80	559.03/610.80	det. by comm.	477	540	540/590	576			540/590		540/590		559.03/610.80	540			610.44	
Air cooled condenser (other than rice straw & juliflora/with rice straw & juliflora)	600.44/ 652.20	600.44/ 652.20	600.44/ 652.20		507	5.8	580/ 630	586			580/ 630		580/ 630		600.44/ 652.20	575				
O&M Expenses (Rs Lakh/MW)	40	40	40	40		40	40		4% of C.C.	5.32% of C.C.	40	24	40	21.41	40		24		25.37	
Water cooled condenser					5 % of C.C.			5% of C.C.								35.64			44.71	
Air cooled condenser					5 % of C.C.			4% of C.C.								38				
Escalation (%) p.a	5.72%	5.72%	5.72%	5.72%	5.72%	5.72%	5.72%	5.72%	5.72%		5.72%	5.72%	5.72%	5.72%	5.72%	5.85%	5.72%	5.72%	5.72%	5.72%
Interest rate on working capital SBI basis points)	300	30000%	300	300	11.40%	300	350	11.50%	det. By comm.	350	350	100	350	150	300	250	350	300	350	350
Normative Parameters																				
PLF/CUF(%)				80% (for water cooled condenser				75%(for both water & air cooled)												
During stabilisation (6 month)	60%	60%	60%			60%	60%			60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
During remaining period of 1st Yrs	70%	70%	70%		70% (during 1st yr)	70%	70%		65%(during 1st yr)	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	65%(during 1st yr)
2nd Yr onwards	80%	80%	80%		80%	80%	80%		80%	80%	80%	80%	80%	80%	80%	75%	80%	80%	80%	80%
Aux. Consumption (%)				10%	10%				10%	10%		10%		10%			10%			10%
Water cooled condenser	11%(1st yr), 13%(>2yr)	11%(1st yr), 13%(>2yr)	11%(1st yr), 10%(>2yr)			1st Yr-11%, 2nd Yr on.-10%	1st Yr-11%, 2nd Yr on.-10%	10%			1st Yr-11%, 2nd Yr on.-10%		1st Yr-11%, 2nd Yr on.-10%		11%(1st yr), 13%(>2yr)	DS-10.5%, AS-10%		DS-11%, AS-10%		
Air cooled condenser	13%(1st yr), 12%(>2yr)	13%(1st yr), 12%(>2yr)	13%(1st yr), 12%(>2yr)			1st Yr-13%, 2nd Yr on.-12%	1st Yr-13%, 2nd Yr on.-12%	10%			1st Yr-13%, 2nd Yr on.-12%		1st Yr-13%, 2nd Yr on.-12%		13%(1st yr), 12%(>2yr)	DS-12.5%, AS-12%				
Station Heat Rate(kCal/kWh)				4000(for both water and air cooled)	water cooled-3800, air cooled-3950				3800(for both water and air cooled)	4200(for both water and air cooled)		4000		3800(for both water and air cooled)			4000(for both water and air cooled)	4200(for both water and air cooled)	4000(for both water and air cooled)	
Grate Boilers	4200	4200	4200			4200	4126				4200		4200		4200			DS-4300, AS-4200		
AFBC Boilers	4125	4125	4125			4063	4063				4125		4125		4125			DS-4540, AS-4440		
Specific Fuel consumption(kg/kWh)																				
Water cooled condenser								1.21												
Air cooled condenser								1.18												
Calorific Value(kCal/kg)	3100	3100	3174	3100	4423 (for both air cooled&water cooled)	3100	3174		3600	3611	3100	3467	3100	3467	3100	3400	3300	3144.8	3300	
Fuel Cost(Rs./MT)	2873.22(A.P), 3270.30(haryana), 3344.85(Maharashtra),3420.56(Punjab), 2854.60(Rajasthan), 2826.05(Tamil Nadu), 2922.86(UP), 3073.05 (Other States)	3073.05	3073.05	det. by Comm.	3764 (for both air cooled&water cooled)	3055	2500	2500(for both water and air cooled)	25	3987	2476	2018	2476	1855	3420.56	2550	2476			
Rebate																				
Through LoC (%)	2%	2%	2%	2%		2%	2%			2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
other than LoC within one month (%)	1%	1%	1%	1%		1%	1%			1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Late Payment Surcharge(%) Beyond 60 days	1.25%	1.25%	1.25%	1.25%		1.25%	1.25%			1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%(beyond 45 days)	1.25%		1.25%	

Biomass Existing (rice husk based) Projects Commissioned during FY 2014-15 to 2018-19; Total Tariff for FY 2018-19 year of Commissioning , FY 2014-15: 7.05, FY 2015-16: 7.16, FY 2016-17: 7.27, FY 2017-18: 7.39, FY 2018-19: 7.51

Remark: '* ' Notified Tariff Order