

CERC RE Tariff Order FY 2020-21

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.6I	
				State	Other States	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	600.00	
			Capital Cost	Rs. Lakh	600.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	600.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	420.00	
			Total Equity Amount	Rs. Lakh	180.00	
			Loan Amount	Rs. Lakh	420.00	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	180.00	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3557.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	

## CERC RE Tariff Order FY 2020-21

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Variable Cost	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		331.92	348.52	365.95	384.24	403.45	423.63	444.81	467.05	490.40	514.92	540.67	567.70	596.09	625.89	657.19	690.04	724.55	760.77	798.81	838.75	880.69	924.73	970.96	1019.51	1070.49
Fixed Cost	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		46.42	48.20	50.05	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.36	114.59
Depreciation	Rs Lakh		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
Interest on term loan	Rs Lakh		39.28	36.57	33.86	31.15	28.44	25.73	23.03	20.32	17.61	14.90	12.19	9.48	6.77	4.06	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		20.51	21.41	22.35	23.34	24.38	25.47	26.62	27.83	29.10	30.43	31.83	33.30	34.85	36.47	38.18	39.76	41.68	43.69	45.81	48.02	50.47	52.91	55.47	58.16	60.98
Return on Equity	Rs Lakh		30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>164.75</b>	<b>164.71</b>	<b>164.80</b>	<b>165.00</b>	<b>165.32</b>	<b>165.78</b>	<b>166.37</b>	<b>167.10</b>	<b>167.98</b>	<b>169.01</b>	<b>170.20</b>	<b>171.56</b>	<b>173.09</b>	<b>174.80</b>	<b>176.71</b>	<b>178.95</b>	<b>181.00</b>	<b>182.77</b>	<b>184.76</b>	<b>187.04</b>	<b>189.77</b>	<b>192.91</b>	<b>196.44</b>	<b>200.36</b>	<b>204.67</b>

Levilled tariff corresponding to Useful life																												
Per Unit Cost of Generation	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Per unit Variable Cost	Rs/kWh		8.38	5.38	5.65	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.73	16.52	17.35
O&M expn	Rs/kWh		1.05	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86
Depreciation	Rs/kWh		0.41	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
Int. on term loan	Rs/kWh		0.32	0.64	0.59	0.55	0.50	0.46	0.42	0.37	0.33	0.29	0.24	0.20	0.15	0.11	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh		0.50	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.56	0.59	0.62	0.64	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99
ROE	Rs/kWh		0.50	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	0.49	0.49	0.49	0.49	
<b>Total COG</b>	<b>Rs/kWh</b>		<b>11.16</b>	<b>8.05</b>	<b>8.32</b>	<b>8.60</b>	<b>8.90</b>	<b>9.22</b>	<b>9.55</b>	<b>9.90</b>	<b>10.28</b>	<b>10.67</b>	<b>11.08</b>	<b>11.52</b>	<b>11.98</b>	<b>12.46</b>	<b>12.97</b>	<b>13.51</b>	<b>13.84</b>	<b>14.48</b>	<b>15.15</b>	<b>15.86</b>	<b>16.60</b>	<b>17.51</b>	<b>18.32</b>	<b>19.18</b>	<b>20.07</b>	<b>21.01</b>

Variable Cost for FY 2020-21	5.38	Rs/kWh
Levilled Tariff (Fixed)	2.78	Rs/kWh
<b>Levilled Tariff -FY 2020-21</b>	<b>8.15</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
Depreciation amount	90.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	40.00%
Additional Depreciation	20.00%
Income Tax (MAT)	17.47%
Income Tax (Normal Rates)	34.94%
Capital Cost (Rs./Lakh)	600.00

Years	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	15.84	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	31.68	17.28	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30%	35%	14%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	180.00	210.00	84.00	50.40	30.24	18.14	10.89	6.53	3.92	2.35	1.41	0.85	0.51	0.30	0.18	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.79	-25.15	-27.76	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-31.74	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-11.06	-6.02	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.17
Per unit benefit	Rs/Unit	1.86	1.01	0.30	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.78	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.16	0.14	0.14

Tax Benefit Levilled	7.51	Rs/kWh
Electricity Generation (Levilled)	5.90	Rs/kWh
<b>Levilled benefit</b>	<b>0.13</b>	<b>Rs/kWh</b>

CERC RE Tariff Order FY 2020-21

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.7A	
				State	Andhra Pradesh	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3326.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	

## CERC RE Tariff Order FY 2020-21

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31

  

Variable Cost	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		310.37	325.89	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.24	614.51	645.23	677.49	711.37	746.94	784.28	823.50	864.67	907.91	953.30	1000.97

  

Fixed Cost	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		46.42	48.20	50.05	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.36	114.59
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51
Interest on term loan	Rs Lakh		40.00	37.24	34.48	31.72	28.96	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.90	4.14	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.42	20.26	21.14	22.07	23.04	24.07	25.14	26.28	27.46	28.71	30.03	31.41	32.86	34.38	35.98	37.44	39.25	41.14	43.12	45.21	47.51	49.80	52.21	54.73	57.38
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>165.44</b>	<b>165.31</b>	<b>165.28</b>	<b>165.37</b>	<b>165.58</b>	<b>165.92</b>	<b>166.39</b>	<b>166.99</b>	<b>167.74</b>	<b>168.64</b>	<b>169.69</b>	<b>170.91</b>	<b>172.29</b>	<b>173.86</b>	<b>175.60</b>	<b>162.42</b>	<b>167.35</b>	<b>172.50</b>	<b>177.86</b>	<b>183.45</b>	<b>189.75</b>	<b>203.82</b>	<b>210.15</b>	<b>216.75</b>	<b>223.64</b>

Levilled tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Per unit Variable Cost	Rs/kWh	7.66	4.92	5.16	5.42	5.69	5.98	6.28	6.59	6.92	7.27	7.63	8.01	8.41	8.83	9.27	9.74	10.22	10.73	11.27	11.83	12.43	13.05	13.70	14.38	15.10	15.86
O&M expn	Rs/kWh	1.03	0.74	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh	0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
Int. on term loan	Rs/kWh	0.32	0.63	0.59	0.55	0.50	0.46	0.42	0.37	0.33	0.28	0.24	0.20	0.15	0.11	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh	0.46	0.31	0.32	0.33	0.35	0.37	0.38	0.40	0.42	0.44	0.45	0.48	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.79	0.83	0.87	0.91
ROE	Rs/kWh	0.50	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	0.49	0.49	0.49	0.49	0.49
<b>Total COG</b>	<b>Rs/kWh</b>	<b>10.37</b>	<b>7.54</b>	<b>7.78</b>	<b>8.04</b>	<b>8.31</b>	<b>8.60</b>	<b>8.90</b>	<b>9.23</b>	<b>9.57</b>	<b>9.92</b>	<b>10.30</b>	<b>10.70</b>	<b>11.12</b>	<b>11.56</b>	<b>12.03</b>	<b>12.52</b>	<b>12.80</b>	<b>13.39</b>	<b>14.00</b>	<b>14.65</b>	<b>15.33</b>	<b>16.18</b>	<b>16.93</b>	<b>17.71</b>	<b>18.54</b>	<b>19.40</b>

Variable Cost for FY 2020-21		4.92	Rs/kWh
Levilled Tariff (Fixed)		2.71	Rs/kWh
<b>Levilled Tariff -FY 2020-21</b>		<b>7.63</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
Depreciation amount	90.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	40.00%
Additional Depreciation	20.00%
Income Tax (MAT)	17.47%
Income Tax (Normal Rates)	34.94%
Capital Cost (Rs./Lakh)	611.00

Years	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30%	35%	14%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-32.19	-17.56	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.78	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levilled		7.65	Rs/kWh
Electricity Generation (Levilled)		6.04	Rs/kWh
<b>Levilled benefit</b>		<b>0.13</b>	<b>Rs/kWh</b>

CERC RE Tariff Order FY 2020-21

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.7B	
				State	Haryana	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3786.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	

## CERC RE Tariff Order FY 2020-21

Determination of Tariff Components		Biomass (Rankine Cycle) Based Power Project																									
Units Generation	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Generation	MU		6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Variable Cost	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Biomass Cost	Rs. Lakh		353.29	370.96	389.50	408.98	428.43	450.90	473.45	497.12	521.97	548.07	575.48	604.25	634.46	666.19	699.49	734.47	771.19	809.75	850.24	892.75	937.39	984.26	1033.47	1085.15	1139.40
Fixed Cost	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
O&M Expenses	Rs Lakh		46.42	48.20	50.05	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.36	114.59
Depreciation	Rs Lakh		28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51
Interest on term loan	Rs Lakh		40.00	37.24	34.48	31.72	28.96	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.90	4.14	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		21.65	22.60	23.60	24.65	25.75	26.91	28.13	29.41	30.76	32.17	33.66	35.22	36.86	38.58	40.39	42.08	44.11	46.25	48.49	50.84	53.43	56.01	58.73	61.58	64.57
Return on Equity	Rs Lakh		31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09
<b>Total Fixed Cost</b>	<b>Rs Lakh</b>		<b>167.67</b>	<b>167.65</b>	<b>167.74</b>	<b>167.95</b>	<b>168.29</b>	<b>168.76</b>	<b>169.37</b>	<b>170.13</b>	<b>171.03</b>	<b>172.10</b>	<b>173.32</b>	<b>174.72</b>	<b>176.30</b>	<b>178.06</b>	<b>180.02</b>	<b>182.05</b>	<b>184.22</b>	<b>186.51</b>	<b>188.92</b>	<b>191.45</b>	<b>194.10</b>	<b>196.86</b>	<b>199.74</b>	<b>202.73</b>	<b>205.83</b>

Levilled tariff corresponding to Useful life																												
Per Unit Cost of Generation	Unit	Year→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Per unit Variable Cost	Rs/kWh		8.72	5.60	5.88	6.17	6.48	6.80	7.14	7.50	7.88	8.27	8.68	9.12	9.57	10.05	10.56	11.08	11.64	12.22	12.83	13.47	14.14	14.85	15.59	16.37	17.19	18.05
O&M expn	Rs/kWh		1.03	0.74	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh		0.40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
Int. on term loan	Rs/kWh		0.32	0.63	0.59	0.55	0.50	0.46	0.42	0.37	0.33	0.28	0.24	0.20	0.15	0.11	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Int. on working capital	Rs/kWh		0.51	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.02
RoE	Rs/kWh		0.50	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	0.49	0.49	0.49	0.49	
<b>Total COG</b>	<b>Rs/kWh</b>		<b>11.49</b>	<b>8.25</b>	<b>8.53</b>	<b>8.83</b>	<b>9.14</b>	<b>9.47</b>	<b>9.82</b>	<b>10.18</b>	<b>10.57</b>	<b>10.98</b>	<b>11.41</b>	<b>11.86</b>	<b>12.34</b>	<b>12.85</b>	<b>13.38</b>	<b>13.94</b>	<b>14.28</b>	<b>14.95</b>	<b>15.64</b>	<b>16.37</b>	<b>17.14</b>	<b>18.08</b>	<b>18.92</b>	<b>19.81</b>	<b>20.74</b>	<b>21.71</b>

Variable Cost for FY 2020-21	5.60	Rs/kWh
Levilled Tariff (Fixed)	2.76	Rs/kWh
<b>Levilled Tariff -FY 2020-21</b>	<b>8.36</b>	<b>Rs/kWh</b>

Determination of AD for Biomass based Power Project	
Depreciation amount	90.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	40.00%
Additional Depreciation	20.00%
Income Tax (MAT)	17.47%
Income Tax (Normal Rates)	34.94%
Capital Cost (Rs./Lakh)	611.00

Years	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	17.60	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	30%	35%	14%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	%	70%	35%	21%	13%	8%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	183.30	213.85	85.54	51.32	30.79	18.48	11.09	6.65	3.99	2.39	1.44	0.86	0.52	0.31	0.19	0.11	0.07	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.78	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-32.19	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.45	18.62	6.66	-0.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-11.25	-6.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31	6.31
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18	-0.18	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor	1.00	0.92	0.85	0.78	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14	0.14	
Applicable Discounting Factor	1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14	0.14	

Tax Benefit Levilled	7.65	Rs/kWh
Electricity Generation (Levilled)	6.04	Rs/kWh
<b>Levilled benefit</b>	<b>0.13</b>	<b>Rs/kWh</b>

CERC RE Tariff Order FY 2020-21

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.7C	
				State	Maharashtra	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3872.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	





CERC RE Tariff Order FY 2020-21

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.7D	
				State	Punjab	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3960.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



CERC RE Tariff Order FY 2020-21

Assumption for Biomass Based Rankine Cycle Project Parameters					State	Rajasthan
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3305.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					State	Tamil Nadu
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
	Depreciation Rate 16th years onwards	%	2.00%			
	4	O&M Expenses	Normative O&M expense	Rs. Lakh/MW	46.42	
O&M expenses p.a			Rs. Lakh	46.42		
Escalation factor			%	3.84%		
5	Working Capital	O&M expenses p.a	Month	1		
		Maintenance Spares	% of O&M exepenses	%	15.00%	
		Receivables	Days	1.5		
		Interest on Working Capital	% per annum	11.17%		
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3272.00	
			GCV Biomass	kcal/kg	3100.00	
			Biomass price escalation factor	%	5.00%	
7	Generation and Sale of Power	Number of Hours		Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.7G
				State	Telangana
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	10.00%
			Plant Load Factor	%	80.00%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00
			Capital Cost	Rs. Lakh	611.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	611.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	427.70
			Total Equity Amount	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
		Equity Component	Interest Rate	%	9.67%
			Equity Amount	Rs. Lakh	183.30
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
		Tax Rate	Discount Rate	%	8.61%
			Corporate Tax Rate	%	34.94%
Depreciation	MAT Rate	%	17.47%		
	Depreciation Rate for 1st 15 years	%	4.67%		
	Depreciation Rate 16th years onwards	%	2.00%		
	4	O&M Expenses	Normative O&M expense	Rs. Lakh/MW	46.42
O&M expenses p.a			Rs. Lakh	46.42	
Escalation factor			%	3.84%	
5	Working Capital	O&M expenses p.a		Month	1
		Maintenance Spares	% of O&M exepenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4125.00
			Fuel Price	Rs./T	3326.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00





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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.7H	
				State	Uttar Pradesh	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3384.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.71	
				State	Other States	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	10.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	611.00	
			Capital Cost	Rs. Lakh	611.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	611.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	427.70	
			Total Equity Amount	Rs. Lakh	183.30	
			Loan Amount	Rs. Lakh	427.70	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	183.30	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3557.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8A	
				State	Andhra Pradesh	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3326.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8B	
				State	Haryana	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3786.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	





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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8C	
				State	Maharashtra	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3872.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8D	
				State	Punjab	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3960.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					State	Rajasthan
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3305.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8F	
				State	Tamil Nadu	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3272.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	





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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8G
				State	Telangana
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	12.00%
			Plant Load Factor	%	80.00%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00
			Capital Cost	Rs. Lakh	652.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	652.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	456.40
			Total Equity Amount	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
		Equity Component	Interest Rate	%	9.67%
			Equity Amount	Rs. Lakh	195.60
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
		Tax Rate	Discount Rate	%	8.61%
			Corporate Tax Rate	%	34.94%
Depreciation	MAT Rate	%	17.47%		
	Depreciation Rate for 1st 15 years	%	4.67%		
	Depreciation Rate 16th years onwards	%	2.00%		
	4	O&M Expenses	Normative O&M expense	Rs. Lakh/MW	46.42
O&M expenses p.a			Rs. Lakh	46.42	
Escalation factor			%	3.84%	
5	Working Capital	O&M expenses p.a		Month	1
		Maintenance Spares	% of O&M exepenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4125.00
			Fuel Price	Rs./T	3326.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8H	
				State	Uttar Pradesh	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3384.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.8I	
				State	Other States	
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	12.00%	
			Plant Load Factor	%	80.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	652.00	
			Capital Cost	Rs. Lakh	652.00	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	652.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	456.40	
			Total Equity Amount	Rs. Lakh	195.60	
			Loan Amount	Rs. Lakh	456.40	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	195.60	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	46.42	
			O&M expenses p.a	Rs. Lakh	46.42	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	15.00%
			Receivables	Days	1.5	
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	Kcal/kWh	4125.00	
			Fuel Price	Rs./T	3557.00	
			GCV Biomass	kcal/kg	3100.00	
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%	
				Hours	8766.00	



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Assumption for Bagasse based Cogeneration Project Parameters					State	Annexure 3A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Andhra Pradesh	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW		1
			Aux Consumption	%		8.50%
			Plant Load Factor	%		45.00%
			Useful Life	Years		25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW		467.00
			Capital Cost	Rs. Lakh		467
			Capital Subsidy	Rs. Lakh		0
			Net Capital Cost	Rs. Lakh		467.00
3	Financial Assumption	Debt Equity	Tariff Period	Years		25
			Debt	%		70%
			Equity	%		30%
		Debt Component	Total Debt Amount	Rs. Lakh		326.90
			Total Equity Amount	Rs. Lakh		140.10
			Loan Amount	Rs. Lakh		326.90
			Moratorium Period	Years		0
			Repayment Period (including Moratorium)	Years		15
		Equity Component	Interest Rate	%		9.67%
			Equity Amount	Rs. Lakh		140.10
			Return on Equity for First 20 years	% p.a		16.96%
			Return on Equity after 20 years	% p.a		21.52%
		Tax Rate	Discount Rate	%		8.61%
			Corporate Tax Rate	%		34.94%
Depreciation	MAT Rate	%		17.47%		
	Depreciation Rate for 1st 15 years	%		4.67%		
4	O&M Expenses		Depreciation Rate 16th years onwards	%		2.00%
			Normative O&M expense	Rs. Lakh/MW		24.52
			O&M expenses p.a	Rs. Lakh		24.52
5	Working Capital		Escalation factor	%		3.84%
			O&M expenses p.a	Month		1
			Maintenance Spares	% of O&M exepenses		0.15
			Receivables	Days		1.5
			Bagasse Stock	Months		4
6	Fuel Related Assumptions	Bagasse Stock	Interest on Working Capital	% per annum		11.17%
			Heat Rate	kcal/kWh		3600.00
			Fuel Price	Rs./T		1878.00
			GCV Bagasse	kcal/kg		2250.00
7	Generation and Sale of Power	Number of Hours	Bagasse price escalation factor	%		5.00%
				Hours		8766.00





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<b>Assumption for Bagasse based Cogeneration Project Parameters</b>				<b>State</b>	<b>Annexure 3B</b>	
<b>S. No.</b>	<b>Assumption Head</b>	<b>Sub-Head</b>	<b>Sub-Head (2)</b>	<b>Unit</b>	<b>Haryana Parameter</b>	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	8.50%	
			Plant Load Factor	%	53.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	467.00	
			Capital Cost	Rs. Lakh	467	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	467.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	326.90	
			Total Equity Amount	Rs. Lakh	140.10	
			Loan Amount	Rs. Lakh	326.90	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	140.10	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	24.52	
			O&M expenses p.a	Rs. Lakh	24.52	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	0.15
			Receivables	Days	1.5	
			Bagasse Stock	Months	4	
6	Fuel Related Assumptions	Bagasse Stock	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	kcal/kWh	3600.00	
			Fuel Price	Rs./T	2671.00	
			GCV Bagasse	kcal/kg	2250.00	
7	Generation and Sale of Power	Number of Hours	Bagasse price escalation factor	%	5.00%	
				Hours	8766.00	



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<b>Assumption for Bagasse based Cogeneration Project Parameters</b>				<b>State</b>	<b>Annexure 3C</b>	
<b>S. No.</b>	<b>Assumption Head</b>	<b>Sub-Head</b>	<b>Sub-Head (2)</b>	<b>Unit</b>	<b>Maharashtra Parameter</b>	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	8.50%	
			Plant Load Factor	%	60.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	467.00	
			Capital Cost	Rs. Lakh	467	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	467.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	326.90	
			Total Equity Amount	Rs. Lakh	140.10	
			Loan Amount	Rs. Lakh	326.90	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	140.10	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	24.52	
			O&M expenses p.a	Rs. Lakh	24.52	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	0.15
			Receivables	Days	1.5	
			Bagasse Stock	Months	4	
6	Fuel Related Assumptions	Bagasse Stock	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	kcal/kWh	3600.00	
			Fuel Price	Rs./T	2632.00	
			GCV Bagasse	kcal/kg	2250.00	
7	Generation and Sale of Power	Number of Hours	Bagasse price escalation factor	%	5.00%	
				Hours	8766.00	



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<b>Assumption for Bagasse based Cogeneration Project Parameters</b>				<b>State</b>	<b>Annexure 3D</b>	
<b>S. No.</b>	<b>Assumption Head</b>	<b>Sub-Head</b>	<b>Sub-Head (2)</b>	<b>Unit</b>	<b>Punjab Parameter</b>	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	8.50%	
			Plant Load Factor	%	53.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	467.00	
			Capital Cost	Rs. Lakh	467	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	467.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	326.90	
			Total Equity Amount	Rs. Lakh	140.10	
			Loan Amount	Rs. Lakh	326.90	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	140.10	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	24.52	
			O&M expenses p.a	Rs. Lakh	24.52	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	0.15
			Receivables	Days	1.5	
			Bagasse Stock	Months	4	
6	Fuel Related Assumptions	Bagasse Stock	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	kcal/kWh	3600.00	
			Fuel Price	Rs./T	2351.00	
			GCV Bagasse	kcal/kg	2250.00	
7	Generation and Sale of Power	Number of Hours	Bagasse price escalation factor	%	5.00%	
				Hours	8766.00	



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<b>Assumption for Bagasse based Cogeneration Project Parameters</b>				<b>State</b>	<b>Annexure 3E</b>	
<b>S. No.</b>	<b>Assumption Head</b>	<b>Sub-Head</b>	<b>Sub-Head (2)</b>	<b>Unit</b>	<b>Tamil Nadu Parameter</b>	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	8.50%	
			Plant Load Factor	%	60.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	467.00	
			Capital Cost	Rs. Lakh	467	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	467.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	326.90	
			Total Equity Amount	Rs. Lakh	140.10	
			Loan Amount	Rs. Lakh	326.90	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	140.10	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
4	O&M Expenses		Depreciation Rate 16th years onwards	%	2.00%	
			Normative O&M expense	Rs. Lakh/MW	24.52	
			O&M expenses p.a	Rs. Lakh	24.52	
5	Working Capital		Escalation factor	%	3.84%	
			O&M expenses p.a	Month	1	
			Maintenance Spares	% of O&M exepenses	%	0.15
			Receivables	Days	1.5	
			Bagasse Stock	Months	4	
6	Fuel Related Assumptions	Bagasse Stock	Interest on Working Capital	% per annum	11.17%	
			Heat Rate	kcal/kWh	3600.00	
			Fuel Price	Rs./T	2023.00	
			GCV Bagasse	kcal/kg	2250.00	
7	Generation and Sale of Power	Number of Hours	Bagasse price escalation factor	%	5.00%	
				Hours	8766.00	





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<b>Assumption for Bagasse based Cogeneration Project Parameters</b>					<b>Annexure 3F</b>	
					<b>State</b>	<b>Telangana</b>
<b>S. No.</b>	<b>Assumption Head</b>	<b>Sub-Head</b>	<b>Sub-Head (2)</b>	<b>Unit</b>	<b>Parameter</b>	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			Aux Consumption	%	8.50%	
			Plant Load Factor	%	53.00%	
			Useful Life	Years	25	
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	467.00	
			Capital Cost	Rs. Lakh	467	
			Capital Subsidy	Rs. Lakh	0	
			Net Capital Cost	Rs. Lakh	467.00	
3	Financial Assumption	Debt Equity	Tariff Period	Years	25	
			Debt	%	70%	
			Equity	%	30%	
		Debt Component	Total Debt Amount	Rs. Lakh	326.90	
			Total Equity Amount	Rs. Lakh	140.10	
			Loan Amount	Rs. Lakh	326.90	
			Moratorium Period	Years	0	
			Repayment Period (including Moratorium)	Years	15	
		Equity Component	Interest Rate	%	9.67%	
			Equity Amount	Rs. Lakh	140.10	
			Return on Equity for First 20 years	% p.a	16.96%	
			Return on Equity after 20 years	% p.a	21.52%	
		Tax Rate	Discount Rate	%	8.61%	
			Corporate Tax Rate	%	34.94%	
Depreciation	MAT Rate	%	17.47%			
	Depreciation Rate for 1st 15 years	%	4.67%			
	Depreciation Rate 16th years onwards	%	2.00%			
	4	O&M Expenses	Normative O&M expense	Rs. Lakh/MW	24.52	
O&M expenses p.a			Rs. Lakh	24.52		
Escalation factor			%	3.84%		
5	Working Capital	O&M expenses p.a		Month	1	
		Maintenance Spares	% of O&M exepenses	%	0.15	
		Receivables		Days	1.5	
		Bagasse Stock		Months	4	
		Interest on Working Capital		% per annum	11.17%	
6	Fuel Related Assumptions	Bagasse Stock	Heat Rate	kcal/kWh	3600.00	
			Fuel Price	Rs./T	1877.00	
			GCV Bagasse	kcal/kg	2250.00	
			Bagasse price escalation factor	%	5.00%	
7	Generation and Sale of Power	Number of Hours		Hours	8766.00	

