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		5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31

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		359.72	377.70	396.59	416.42	437.24	459.10	482.06	506.16	531.46	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1002.15	1052.26	1104.88	1160.12

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		46.32	48.20	50.06	51.97	53.97	56.01	58.17	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		29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.36	8.83	6.31	3.79	1.26	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		21.68	22.83	23.85	24.92	26.05	27.23	28.46	29.79	31.16	32.60	34.12	35.71	37.38	39.13	40.98	42.72	44.75	46.98	49.24	51.63	54.25	56.88	59.64	62.54	65.58
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	**Rs Lakh**		159.41	159.64	159.98	160.45	161.06	161.79	162.66	163.62	164.83	166.18	167.65	169.34	171.16	173.19	175.41	164.01	169.21	174.66	180.29	186.19	200.09	206.50	213.19	220.17	227.44

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Fuel and Variable Cost	Rs/kWh	8.58	5.70	5.98	6.28	6.60	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38
O&M exp	Rs/kWh	1.03	0.74	0.75	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.00	1.07	1.11	1.15	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.52	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.69	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99	1.04
RoE	Rs/kWh	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	11.25	8.20	8.51	8.82	9.14	9.48	9.84	10.21	10.61	11.00	11.47	11.94	12.43	12.96	13.49	14.06	14.45	15.12	15.83	16.57	17.35	18.20	19.15	20.06	20.93	21.96

Variable Cost for FY 2020-21	5.70	Rs/kWh
Levelised Tariff (Fixed)	2.67	Rs/kWh
Levelised Tariff FY 2020-21	**8.37**	**Rs/kWh**

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)	569.20

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%	2.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	14.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
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	187.78	199.25	78.26	46.90	28.17	16.90	10.13	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	169.73	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.87	-27.32	-28.20	-28.73	-29.05	-29.23	-29.34	-29.41	-29.45	-16.96	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	59.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.93	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.15	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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	0.67	0.61	0.57	0.52	0.48	0.44	0.41	0.38	0.35	0.32	0.29	0.27	0.25	0.23	0.21	0.19	0.17	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 Levelised	7.60	Rs Lakh
Electricity Generation (Levelised)	6.34	MU
Levelised benefit	**0.12**	**Rs/kWh**

Annexure 2.1C

Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	**Financial Assumption**	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	**Fuel Related Assumptions**	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	**Generation and Sale of Power**	Number of Hours		Hours	8766.00

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		5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31

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		367.89	386.24	405.60	425.88	447.17	469.53	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1024.92	1076.17	1129.97	1186.47

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	65.11	67.34	70.24	72.93	75.73	78.54	81.56	84.79	88.04	91.42	94.93	98.57	102.35	106.25	110.36	114.57
Depreciation	Rs Lakh		29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	11.18	11.18	11.18	11.19	11.18	11.16	11.15	11.19	11.19	11.19
Interest on term loan	Rs Lakh		35.19	34.07	31.55	28.72	26.52	23.29	21.45	19.35	16.80	13.38	11.32	8.91	6.31	3.79	1.26	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.76	23.23	24.02	25.42	26.51	27.78	29.15	30.38	31.70	31.76	34.91	36.43	38.11	39.93	41.72	43.60	45.72	47.93	50.25	52.70	55.27	57.95	60.78	63.74	66.86
Return on Equity	Rs Lakh		28.46	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		159.63	160.08	160.45	162.94	161.57	162.12	162.22	164.26	165.40	166.82	168.34	170.04	171.92	173.99	176.26	164.83	170.18	175.61	181.36	187.26	201.23	207.62	214.43	221.47	228.81

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levellised	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	9.58	6.93	7.12	7.40	7.75	8.08	7.32	7.51	8.22	8.51	9.34	9.99	9.97	12.47	10.99	11.54	12.52	12.72	13.36	14.03	14.73	15.47	15.74	17.05	17.49	19.32
O&M expn	Rs/kWh	1.20	0.74	0.79	0.73	0.82	0.80	0.93	0.97	0.96	0.99	1.03	1.07	1.11	1.15	1.20	1.25	1.24	1.31	1.39	1.45	1.50	1.55	1.67	1.54	1.75	1.82
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.15	0.18	0.15	0.14
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.45	0.42	0.38	0.34	0.32	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	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	0.35	0.37	0.38	0.40	0.42	0.44	0.48	0.48	0.50	0.53	0.56	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.84	0.86	0.92	0.96	1.01	1.05
RoE	Rs/kWh	0.46	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	11.78	8.30	8.66	8.97	9.30	9.64	10.01	10.49	10.86	11.23	11.69	12.19	12.66	13.17	13.75	14.33	14.73	15.42	16.14	16.90	17.70	18.66	19.53	20.45	21.41	22.42

Variable Cost for FY 2020-21	5.93	Rs/kWh
Levellised Tariff (Fixed)	2.58	Rs/kWh
Levellised Tariff (FY 2020-21)	8.51	Rs/kWh

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)	[illegible]

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	157.70	195.36	78.25	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	142.94	166.13	48.74	17.44	-1.35	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-18.05	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	63.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-6.31	0.01	0.00	0.00	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
Per unit benefit	Rs/Unit	1.98	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.86	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	0.13
Applicable Discounting Factor		1.00	0.95	0.88	0.81	0.75	0.69	0.64	0.59	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levellised	7.00	Rs/kWh
Electricity Generation (Levellised)	6.04	Rs/kWh
Levellised benefit	0.12	Rs/kWh

Annexure 2.1 D

Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	**Financial Assumption**	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	**Fuel Related Assumptions**	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	**Generation and Sale of Power**	Number of Hours		Hours	8766.00

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		376.25	395.06	414.81	435.56	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.68	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1048.21	1100.62	1155.65	1213.44

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		46.17	48.31	50.55	51.97	53.97	56.54	58.19	61.47	62.74	65.34	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.35	[illegible]	[illegible]	[illegible]
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.36	8.83	6.31	3.79	1.26	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		22.57	23.73	24.30	25.97	27.05	28.31	29.63	31.09	32.43	33.93	35.51	37.16	38.92	40.75	42.68	44.51	45.57	48.23	51.11	53.58	55.51	[illegible]	[illegible]	[illegible]	[illegible]
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	35.99	[illegible]	[illegible]	36.09	[illegible]
Total Fixed Cost	**Rs Lakh**		159.27	160.54	165.93	161.45	162.09	162.86	163.80	164.91	166.16	167.49	169.05	170.78	172.70	174.64	177.11	183.79	171.08	176.60	182.36	188.36	202.37	206.88	215.70	222.81	230.21

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	9.22	5.96	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23
O&M exp.	Rs/kWh	1.00	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.25	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.53	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.81	0.85	0.91	0.94	0.98	1.03	1.08
RoE	Rs/kWh	0.46	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	**11.88**	8.50	8.80	9.12	9.46	9.81	10.19	10.58	11.00	11.44	11.90	12.39	12.90	13.44	14.01	14.61	15.02	15.72	16.48	17.24	18.05	19.02	19.92	20.86	21.84	22.87

Variable Cost for FY 2020-21	5.96	Rs/kWh
Levelised Tariff (Fixed)	2.69	Rs/kWh
Levelised Tariff (FY 2020-21)	**8.65**	**Rs/kWh**

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)	559.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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**
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.43	58.06	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.86	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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	0.41	0.37	0.34	0.32	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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.00	Rs Lakh
Electricity Generation (Levelised)	6.04	Rs/kWh
Levelised benefit	**0.12**	**Rs/kWh**

Annexure 2.1 E

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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		4.73	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		206.22	329.72	346.21	363.51	381.69	400.77	420.81	441.85	463.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.46	719.73	755.71	793.50	833.18	874.83	918.57	964.50	1012.73

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		35.12	48.21	50.05	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.23	72.93	75.71	78.64	81.64	84.78	88.04	91.42	94.93	98.57	102.36	106.23	110.35	114.59
Depreciation	Rs Lakh		25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.16	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.07	26.50	23.98	21.46	18.93	16.40	13.88	11.36	8.84	6.31	3.79	1.26	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		19.45	20.74	21.29	22.15	23.17	24.30	25.50	26.65	27.86	28.92	30.25	31.65	33.12	34.65	36.25	37.79	39.51	41.52	43.50	45.53	47.65	50.27	52.70	55.25	57.93
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	**Rs Lakh**		152.64	157.15	157.37	157.71	158.17	158.75	159.47	160.33	161.33	162.48	163.79	165.26	166.89	168.71	170.71	159.67	164.03	169.19	174.58	180.19	193.79	199.65	206.25	212.87	219.79

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.71	4.36	5.22	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.11	8.51	8.93	9.38	9.85	10.34	10.86	11.40	11.97	12.57	13.20	13.86	14.55	15.28	16.05
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	1.55	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh	0.37	0.55	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	[illegible]	0.77	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	[illegible]	0.41	0.33	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.84	0.88	0.92
RoE	Rs/kWh	[illegible]	0.60	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	[illegible]	7.46	7.71	7.96	8.25	8.55	8.87	9.19	9.54	9.91	10.28	10.70	11.13	11.58	12.05	12.56	12.86	13.46	14.06	14.74	15.43	16.27	17.03	17.82	18.65	19.53

Variable Cost for FY 2020-21	4.97	Rs/kWh
Levelised Tariff (Fixed)	2.61	Rs/kWh
Levellised Tariff FY 2020-21	**7.58**	**Rs/kWh**

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)	[illegible]

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%	2.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.55	2.19	1.33	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.43	-1.35	-12.62	-19.37	-23.43	-25.96	-27.32	-28.20	-28.73	-29.04	-29.24	-29.34	-29.41	-29.45	-16.33	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.71	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	4.73	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	1.13	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.45	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.03	Rs Lakh
Electricity Generation (Levelised)	5.86	MU
Levellised benefit	**0.12**	**Rs/kWh**

					Annexure 2.1 F
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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	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

Determination of Tariff Components	Biomass (Rankine Cycle) Based Power Project																										
Unit 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		310.88	326.42	342.74	359.88	377.88	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1002.62

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		48.47	49.27	53.05	51.37	53.97	56.06	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		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.21	26.19	11.19	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.50	34.07	31.55	29.02	26.50	23.98	21.46	18.93	15.40	13.83	11.36	4.93	6.35	3.79	1.26	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		19.37	20.17	21.06	21.93	22.97	24.00	25.09	26.22	27.41	29.57	29.99	31.37	32.82	34.35	35.95	37.65	39.25	41.15	43.14	45.22	47.57	49.91	52.22	54.75	57.47
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.29	36.09	36.09	36.09
Total Fixed Cost	**Rs Lakh**		156.87	156.88	157.19	157.52	157.97	158.54	159.25	160.10	161.09	162.23	163.52	164.98	166.60	168.40	170.39	158.71	163.67	168.82	174.19	179.78	193.36	199.64	205.77	212.36	219.25

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.81	4.93	5.17	5.43	5.70	5.99	6.29	6.60	6.93	7.23	7.54	8.52	8.47	8.85	9.29	9.75	10.23	10.75	11.28	11.83	12.45	13.07	13.72	14.41	15.13	15.89
O&M expn	Rs/kWh	1.00	0.74	0.78	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	1.30	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	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	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.69	0.72	0.75	0.79	0.83	0.87	0.91
RoE	Rs/kWh	0.44	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	10.28	7.61	7.86	7.92	8.23	8.40	8.60	8.12	9.42	9.80	10.21	10.61	11.04	11.49	11.95	12.45	12.75	13.36	13.86	14.64	15.30	16.12	16.85	17.67	18.49	19.38

Variable Cost for FY 2020-21	4.93	Rs/kWh
Levellised Tariff (Fixed)	2.60	Rs/kWh
Levellised Tariff FY 2020-21	**7.53**	**Rs/kWh**

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)	559.00

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%	2.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	13.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	157.70	195.35	78.23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

		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**
Net Depreciation Benefit	Rs Lakh	142.94	165.83	48.71	17.43	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax Benefit	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levelised	7.92	Rs Lakh
Electricity Generation (Levelised)	6.84	Rs/kWh
Levellised benefit	**0.12**	**Rs/kWh**

Annexure 2.1 G

Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	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

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		315.61	331.41	348.40	365.82	384.11	403.32	423.49	444.66	466.89	490.24	514.75	540.49	567.51	595.89	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	50.06	51.97	53.97	56.04	58.19	60.42	62.74	65.15	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	110.35	114.59
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.36	8.83	6.31	3.79	1.26	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		19.70	20.46	21.25	22.10	23.29	24.34	25.41	25.70	27.50	29.02	30.12	31.47	33.30	34.93	36.51	38.00	39.84	41.75	43.73	45.84	48.22	50.56	53.06	55.57	58.25
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		157.14	157.28	157.48	157.83	158.39	158.86	159.61	160.47	161.48	162.64	161.35	165.43	167.08	168.61	170.82	159.23	164.26	169.43	174.83	180.45	184.66	202.18	208.55	213.20	220.12

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levelised	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
Variable Cost	Rs/kWh	7.80	5.01	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15
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	1.15	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.45	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92
RoE	Rs/kWh	0.48	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.41	7.60	7.76	8.02	8.30	8.59	8.91	9.24	9.59	9.96	10.34	10.75	11.18	11.64	12.12	12.32	12.90	13.53	14.16	14.82	15.51	16.38	17.12	17.92	18.76	19.64

Variable Cost for FY 2020-21	5.01	Rs/kWh
Levelised Tariff (Fixed)	2.61	Rs/kWh
Levelised Tariff FY 2020-21	**7.62**	**Rs/kWh**

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)	558.00

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%	[illegible]	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.35	-29.41	-29.46	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.06	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.15	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	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	7.00	Rs Lakh
Electricity Generation (Levelised)	5.84	Rs/kWh
Levelised benefit	**0.12**	**Rs/kWh**

Annexure 2.1 H

Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		321.52	337.59	354.45	372.20	390.81	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.40	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1036.94

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		45.42	48.27	50.65	53.97	56.95	55.54	58.13	62.47	52.74	55.14	57.64	75.29	77.79	75.73	78.04	81.66	84.79	88.01	91.42	94.93	98.57	102.36	105.29	110.32	114.59
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.15	11.15	11.15	11.15	11.15	11.15	11.15	11.15	11.15	11.15
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.52	23.98	21.45	18.93	16.40	13.88	11.35	8.83	6.31	3.79	1.26	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.88	20.75	21.66	22.61	23.61	24.70	25.82	26.99	28.23	29.52	30.88	32.31	33.82	35.39	37.05	38.80	40.46	42.41	44.47	46.62	48.88	51.55	53.84	56.45	59.13
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	**Rs Lakh**		157.43	157.56	157.80	158.16	158.64	159.25	159.99	160.84	161.90	163.08	164.42	165.92	167.58	169.45	171.49	159.64	164.89	170.09	175.51	181.17	194.82	200.96	207.39	214.07	221.06

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.94	5.09	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12	11.68	12.26	12.87	13.52	14.19	14.90	15.65	16.43
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	1.15	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.47	0.31	0.34	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.70	0.74	0.79	0.84	0.85	0.90	0.94
RoE	Rs/kWh	0.46	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	10.56	7.59	7.85	8.12	8.40	8.71	9.02	9.36	9.72	10.09	10.40	10.92	11.34	11.81	12.29	12.80	13.12	13.73	14.37	15.04	15.74	16.60	17.38	18.19	19.04	19.93

Variable Cost for FY 2020-21	5.09	Rs/kWh
Levellised Tariff (Fixed)	2.62	Rs/kWh
Levellised Tariff FY 2020-21	**7.71**	**Rs/kWh**

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)	569.00

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%	2.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	15.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.08	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-15.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.03	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.51	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.00	Rs Lakh
Electricity Generation (Levelised)	6.04	Rs/kWh
Levellised benefit	**0.12**	**Rs/kWh**

Annexure 2.1 L

Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		337.56	354.45	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1038.05	1089.95

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	114.58
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.36	8.83	6.31	3.79	1.26	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		20.73	21.54	22.51	23.57	24.58	25.79	26.96	28.20	29.49	30.85	32.27	33.77	35.35	37.00	38.74	40.57	42.52	44.37	46.52	48.79	51.25	53.73	56.34	59.07	61.91
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	35.69	35.69	35.69	35.69	35.69
Total Fixed Cost	Rs Lakh		158.28	158.45	158.74	159.15	159.68	160.34	161.14	162.08	163.16	164.41	165.81	167.38	169.13	171.06	173.18	161.86	166.74	172.04	177.57	183.33	196.69	203.05	208.80	215.79	223.83

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levellised	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	8.34	5.35	5.62	5.90	6.20	6.51	6.83	7.18	7.53	7.91	8.31	8.72	9.16	9.62	10.10	10.60	11.13	11.69	12.27	12.89	13.53	14.21	14.92	15.66	16.45	17.27
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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.43	0.33	0.34	0.35	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89	0.94	0.98
RoE	Rs/kWh	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.88	7.86	8.13	8.42	8.72	9.04	9.37	9.73	10.10	10.50	10.91	11.35	11.81	12.30	12.81	13.35	13.50	14.33	15.00	15.71	16.44	17.30	18.14	18.89	19.88	20.82

Variable Cost for FY 2020-21	5.35	Rs/kWh
Levellised Tariff (Fixed)	2.64	Rs/kWh
Levellised Tariff FY 2020-21	**7.99**	**Rs/kWh**

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)	559.00

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%	3.85%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	21.51	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.95	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.73	17.43	-1.35	-12.61	-19.37	-23.43	-25.86	-27.32	-28.21	-28.73	-29.04	-29.23	-29.34	-29.41	-21.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.86	-10.04	-10.15	-10.21	-10.25	-10.28	-7.50	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.12	-0.09	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.02	Rs Lakh
Electricity Generation (Levelised)	5.84	Rs/kWh
Levelised benefit	**0.12**	**Rs/kWh**

					Annexure 2.2A
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		315.61	331.41	348.40	365.80	384.11	403.37	423.48	444.66	466.89	490.24	514.75	540.48	567.51	595.89	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	48.27	50.20	52.27	53.37	55.25	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	102.36	106.29	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.29	36.57	33.92	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		19.39	20.34	21.34	22.18	23.38	24.42	25.62	26.87	27.96	29.15	30.49	31.89	33.36	34.91	36.54	38.04	39.83	41.40	43.50	45.93	48.47	50.59	53.05	55.62	58.31
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	35.74	35.74	35.74	35.74	35.74
Total Fixed Cost	Rs Lakh		163.92	163.85	163.69	164.01	164.32	164.72	165.26	165.94	166.76	167.72	168.95	170.15	171.61	173.24	175.07	162.23	167.20	172.38	177.72	183.40	197.59	203.08	210.07	216.71	223.64

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levellised	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	7.49	5.12	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.76	9.20	9.66	10.14	10.65	11.18	11.73	12.32	12.94	13.59	14.27	14.98	15.73	16.51
O&M expn	Rs/kWh	1.96	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.27	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94
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	0.58	0.58	0.58	0.58	0.58
Total COG	Rs/kWh	10.72	7.76	8.03	8.30	8.59	8.88	9.20	9.53	9.89	10.27	10.66	11.08	11.62	11.99	12.45	12.98	13.27	13.49	14.53	15.20	15.81	16.79	17.52	18.38	19.24	20.14

Variable Cost for FY 2020-21	5.12	Rs/kWh
Levellised Tariff (Fixed)	2.76	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	Rs/kWh

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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	-17.24	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	-0.52	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	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	-0.10	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	0.13
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	0.15	0.14

Tax Benefit Levellised	7.51	Rs/kWh
Electricity Generation (Levelised)	5.92	Rs/kWh
Levellised benefit	0.13	Rs/kWh

					Annexure 2.2B
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3786.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		359.72	377.70	396.59	416.42	437.24	459.10	482.06	506.16	531.45	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1002.15	1052.25	1104.89	1160.13

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		45.72	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
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		21.36	22.52	23.64	25.00	26.13	27.32	28.56	29.86	31.23	32.67	34.18	35.77	37.44	39.19	41.04	42.75	44.93	47.00	49.28	51.57	54.10	56.70	59.69	62.59	65.60
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	38.74	38.73	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		165.18	166.23	166.39	166.57	167.09	167.62	168.30	169.13	170.16	171.25	172.55	174.03	175.68	177.53	179.59	165.96	172.16	177.58	183.24	189.14	203.70	210.02	216.71	223.66	230.96

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	8.08	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80
O&M expn	Rs/kWh	1.06	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	0.61	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.53	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.61	0.64	0.66	0.69	0.73	0.75	0.80	0.84	0.88	0.92	0.97	1.01	1.07
RoE	Rs/kWh	0.89	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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	11.50	8.52	8.81	9.12	9.45	9.79	10.15	10.54	10.94	11.37	11.82	12.29	12.79	13.31	13.87	14.45	14.82	15.51	16.27	17.00	17.79	19.26	19.94	20.66	21.53	22.54

Variable Cost for FY 2020-21	5.83	Rs/kWh
Levellised Tariff (Fixed)	2.81	Rs/kWh
Levellised Tariff FY 2020-21	**8.64**	**Rs/kWh**

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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	-17.24	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	-11.04	-11.06	-6.02	0.01	0.00	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	-0.10	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
Applicable Discounting Factor		1.00	0.95	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	0.19	0.17	0.16	0.13

Tax Benefit Levellised	7.51	Rs/kWh
Electricity Generation (Levellised)	5.30	Rs/kWh
Levellised benefit	**0.15**	**Rs/kWh**

					Annexure 2.2C
Assumption for Biomass Based Rankine Cycle Project Parameters				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	600.00
			Capital Cost	Rs. Lakh	600.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	600.00
3	Financial Assumption		Tariff Period	Years	25
		Debt Equity	Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	420.00
			Total Equity Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components | Biomass (Rankine Cycle) Based Power Project

Unit 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		367.89	386.29	405.60	425.88	447.17	469.53	493.01	517.66	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1024.92	1076.17	1129.97	1186.47

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	102.36	106.29	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.29	36.57	33.86	31.16	28.44	25.73	23.02	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		22.38	23.37	24.41	25.50	26.65	27.86	29.13	30.46	31.86	33.33	34.88	36.50	38.20	40.00	41.88	43.64	45.75	47.98	50.30	52.74	55.42	58.11	60.93	63.89	67.00
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		166.61	166.68	166.86	167.16	167.59	168.16	168.87	169.73	170.74	171.91	173.24	174.75	176.45	178.33	180.40	167.84	173.08	178.55	184.28	190.21	204.73	211.20	217.95	224.99	232.30

Levelised tariff corresponding to Useful life

Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	9.29	5.96	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.81	12.40	13.02	13.67	14.35	15.07	15.82	16.61	17.44	18.31	19.23
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.37	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	0.00
Int. on working capital	Rs/kWh	0.54	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.85	0.90	0.94	0.99	1.04	1.09
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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	12.11	8.66	8.96	9.26	9.61	9.96	10.33	10.73	11.14	11.57	12.00	12.52	13.03	13.56	14.13	14.73	15.11	15.62	16.56	17.33	18.15	19.13	20.03	20.97	21.96	22.99

Variable Cost for FY 2020-21	5.96	Rs/kWh
Levelised Fixed Cost	2.82	Rs/kWh
Levelised Tariff FY 2020-21	**8.78**	**Rs/kWh**

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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	10.88	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

		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
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	-17.24	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	-6.02	0.01	0.00	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	-0.10	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	7.61	Rs Lakh
Electricity Generation (Levelised)	5.35	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

					Annexure 2.2D
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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 expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./T	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		379.25	396.03	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1048.21	1100.62	1155.65	1213.44

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	65.15	67.52	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	[illegible]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.29	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		22.81	23.83	24.89	25.99	27.16	28.41	29.71	31.07	32.50	34.00	35.58	37.24	38.98	40.81	42.73	44.66	46.71	48.87	51.06	53.34	55.66	59.37	62.26	65.23	68.40
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	35.74	35.74	35.74	35.74	35.74
Total Fixed Cost	Rs Lakh		167.65	167.43	167.33	167.66	168.12	168.72	169.46	170.34	171.36	172.58	173.95	175.50	177.23	179.14	180.26	168.74	174.03	179.55	185.36	191.31	205.48	212.41	219.22	226.12	233.72

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levellised	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	9.50	6.16	6.40	6.72	7.06	7.41	7.78	8.17	8.58	9.01	9.46	9.93	10.43	10.95	11.50	12.07	12.67	13.31	13.97	14.67	15.41	16.18	16.99	17.83	18.73	19.66
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.55	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.92	0.96	1.01	1.06	1.11
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	0.58	0.58	0.58	0.58	0.58
Total COG	Rs/kWh	12.34	8.86	9.11	9.43	9.77	10.13	10.52	10.92	11.34	11.78	12.26	12.75	13.27	13.82	14.40	15.01	15.41	16.13	16.88	17.58	18.51	19.51	20.43	21.39	22.39	23.45

Variable Cost for FY 2020-21	6.10	Rs/kWh
Levelised Tariff (Fixed)	2.83	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	Rs/kWh

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%	2.88%	0.00%	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	17.21	0.00	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

	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
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	-17.24	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	-6.02	0.01	0.00	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	-0.10	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
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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.93	MU
Levellised benefit	0.13	Rs/kWh

					Annexure 2.2E
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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		314.62	329.72	345.70	363.51	380.63	405.77	420.31	441.55	463.54	487.34	511.50	537.07	563.93	592.12	621.73	652.81	685.46	718.73	755.71	790.50	833.18	874.93	918.59	964.52	1012.73

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		46.47	48.20	50.66	51.97	53.97	56.64	58.49	60.47	62.74	65.11	67.34	70.21	72.93	75.73	78.64	81.55	84.79	88.04	91.42	94.93	98.57	102.36	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.28	36.57	33.86	31.15	28.44	25.73	23.02	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		19.58	20.43	21.32	22.26	23.25	24.29	25.38	26.52	27.72	28.99	30.32	31.71	33.18	34.72	36.34	37.93	39.75	41.56	43.57	45.57	49.00	50.32	52.75	55.20	57.78
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	38.74	38.74	38.74	38.74	39.74
Total Fixed Cost	Rs Lakh		163.82	163.74	153.77	153.92	154.19	154.99	165.12	165.73	155.66	167.57	166.43	158.87	171.42	170.65	174.03	162.02	159.87	172.14	177.52	183.44	197.31	203.42	208.76	216.33	273.30

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.30	5.09	5.34	5.51	5.82	6.15	6.43	6.67	7.15	7.52	7.39	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.25	12.86	13.50	14.19	14.88	15.63	16.41
O&M expn	Rs/kWh	1.06	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.05	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	0.31	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.37	0.64	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	0.00
Int. on working capital	Rs/kWh	0.47	0.32	0.33	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.71	0.74	0.78	0.82	0.85	0.90	0.94
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	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	10.68	7.74	8.00	8.25	8.55	8.85	9.16	9.48	9.85	10.22	10.61	11.02	11.45	11.92	12.40	12.91	13.20	13.61	14.46	15.12	15.83	15.70	17.47	18.28	19.14	20.03

Variable Cost for FY 2020-21	5.09	Rs/kWh
Levelised Tariff (Fixed)	2.75	Rs/kWh
Levellised Tariff - FY 2020-21	**7.84**	**Rs/kWh**

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%	2.88%	0.00%	0.00%	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	17.28	0.00	0.00	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	10.88	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

	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
Net Depreciation Benefit	Rs Lakh	164.16	178.32	52.32	18.72	-1.44	-13.54	-20.78	-25.15	-27.75	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.28	6.54	-0.50	-4.73	-7.26	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.01	-11.03	-6.02	0.01	0.00	0.00	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	-0.10	0.00	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	0.41	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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.93	Rs Lakh
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.2F
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	%	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		310.66	325.42	342.71	359.48	377.46	393.77	415.54	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.55	748.17	785.59	824.86	866.10	909.40	954.87	1002.62

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	48.27	50.04	51.97	53.97	55.04	58.19	60.12	57.74	55.14	67.64	70.24	72.93	75.73	78.64	81.22	84.79	88.04	91.42	94.93	98.57	102.36	106.29	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.28	36.57	33.86	31.15	28.41	25.73	23.02	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		19.42	20.29	21.14	22.07	23.05	24.08	25.15	26.29	27.49	28.74	30.05	31.43	32.87	34.41	36.08	37.49	39.23	41.19	43.18	45.26	47.57	49.99	52.27	54.60	57.45
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	36.74	36.71	36.74	36.74	36.71
Total Fixed Cost	Rs Lakh		163.65	163.57	163.59	163.73	164.00	164.34	164.80	165.56	166.32	167.31	168.42	169.68	171.13	172.74	174.54	161.68	166.62	171.72	177.13	182.73	186.87	207.05	200.29	215.83	222.78

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.85	6.04	6.28	6.63	6.95	7.30	[illegible]	[illegible]	7.09	7.44	7.81	8.21	9.92	9.09	9.50	9.97	10.47	11.09	11.55	12.12	12.73	13.37	14.03	14.74	15.47	15.95
O&M expn	Rs/kWh	1.05	0.75	0.79	0.81	0.87	0.87	0.91	0.94	0.96	1.02	1.09	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	1.74	1.89
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.17
Int. on term loan	Rs/kWh	0.32	0.64	0.59	0.55	0.50	0.46	0.41	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	0.00
Int. on working capital	Rs/kWh	0.37	0.31	0.30	0.34	0.36	0.37	0.39	0.41	0.41	0.45	0.47	0.49	0.51	0.53	0.55	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.81	0.85	0.89	0.93
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	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	10.60	7.66	7.94	8.29	8.44	8.78	9.05	9.42	9.77	10.14	10.53	10.93	11.37	11.80	12.30	12.80	13.09	13.74	14.33	14.99	15.69	15.56	17.02	18.13	18.97	19.86

Variable Cost for FY 2020-21	5.04	Rs/kWh
Levellised Tariff (Fixed)	2.75	Rs/kWh
Levellised Tariff FY 2020-21	7.79	Rs/kWh

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	%	2.60%	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%	4.64%	0.00%	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	17.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
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	84.02	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	-17.24	-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	-6.02	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/Unit	1.86	1.21	0.35	0.13	-0.01	-0.09	-0.14	-0.17	-0.19	-0.20	-0.20	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.12	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
Applicable Discounting Factor		1.00	0.95	0.88	0.81	0.75	0.69	0.63	0.58	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.02	Rs/kWh
Levelised benefit	0.15	Rs/kWh

					Annexure 2.2G
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		316.01	331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.49	567.51	595.89	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	81.65	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
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		19.39	20.54	21.44	22.38	23.38	24.42	25.52	26.67	27.88	29.15	30.49	31.89	33.36	34.91	36.54	37.94	39.53	41.30	43.67	45.91	47.27	50.60	53.05	55.62	58.31
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	34.78	38.74	38.74	38.71	36.74
Total Fixed Cost	**Rs Lakh**		163.92	163.86	163.69	164.01	164.32	164.72	165.26	165.94	166.78	167.73	168.95	170.16	171.61	173.24	175.07	162.23	167.70	172.38	177.77	183.40	197.58	206.66	210.07	216.71	223.63

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levellised	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	7.98	5.12	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	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	16.51
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.64	0.67	0.71	0.74	0.77	0.82	0.86	0.90	0.94
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	0.56	0.63	0.63	0.63	0.58
Total COG	**Rs/kWh**	10.73	7.76	8.03	8.32	8.62	8.92	9.20	9.54	9.89	10.27	10.66	11.08	11.52	11.98	12.46	12.98	13.27	13.69	14.53	15.20	15.91	16.79	17.57	18.36	19.24	20.14

Variable Cost for FY 2020-21	5.12	Rs/kWh
Levellised Tariff (Fixed)	2.75	Rs/kWh
Levellised Tariff FY 2020-21	**7.87**	**Rs/kWh**

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 Rate)	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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.30	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.58	-10.77	-10.89	-10.96	-11.00	-11.03	-11.05	-6.02	0.01	0.00	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	-0.10	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	0.17	0.16	0.15	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.63	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	0.15	0.14

Tax Benefit Levellised	7.51	Rs Lakh
Electricity Generation (Levellised)	5.90	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.2H
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		321.62	337.70	354.49	372.70	392.41	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1036.94

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	48.22	51.05	51.97	53.97	56.04	58.19	60.12	62.71	65.14	67.64	70.24	72.93	75.73	78.64	81.56	84.72	88.01	91.42	94.93	98.57	102.35	106.29	110.36	114.59
Depreciation	Rs Lakh		28.99	28.99	29.00	29.01	29.00	28.90	28.99	29.00	29.09	28.00	29.09	29.00	29.00	29.09	29.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
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		19.37	20.34	21.15	22.71	23.72	24.78	25.90	27.07	28.30	29.58	30.95	32.34	33.80	35.45	37.11	38.64	40.60	42.43	44.51	46.55	49.04	51.40	53.99	56.50	59.23
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	34.74	34.74	34.74	34.74	34.74
Total Fixed Cost	**Rs Lakh**		164.29	164.15	164.20	164.37	164.67	165.03	165.66	166.34	167.18	168.17	169.32	170.63	172.12	173.78	175.63	152.63	157.80	178.63	179.46	184.12	194.34	204.46	210.90	217.59	224.56

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	3.12	5.21	5.47	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.36	9.82	10.32	10.83	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80
O&M expn	Rs/kWh	1.09	0.75	0.78	0.83	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.64	0.59	0.56	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	0.00
Int. on working capital	Rs/kWh	0.49	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.75	0.79	0.83	0.87	0.92	0.96
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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	10.88	7.67	8.10	8.45	8.69	9.00	9.32	9.67	10.03	10.41	10.81	11.23	11.66	12.15	12.64	13.16	13.47	14.09	14.75	15.43	16.15	17.04	17.63	18.66	19.53	20.44

Variable Cost for FY 2020-21	5.21	Rs/kWh
Levelised Tariff (Fixed)	2.76	Rs/kWh
Levelised Tariff FY 2020-21	**7.97**	**Rs/kWh**

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%	2.58%	0.00%	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	17.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	-17.24	-0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.36	62.31	18.27	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	-11.04	-6.02	-0.01	0.00	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	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		1.00	0.96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.92	MU
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.2I
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		337.96	354.86	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.01	896.70	941.54	988.62	1038.05	1089.95

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	48.23	50.06	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.64	81.56	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.36	114.59
Depreciation	Rs Lakh		29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.28	36.57	33.88	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		20.83	21.74	22.70	23.70	24.76	25.87	27.04	28.27	29.56	30.92	32.34	33.84	35.41	37.05	38.78	40.41	42.39	44.31	46.56	48.62	51.30	53.79	56.39	59.17	61.95
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		165.06	165.04	165.14	165.36	165.70	166.16	166.78	167.54	168.44	169.50	170.71	172.10	173.65	175.39	177.30	164.05	167.68	174.89	180.52	185.23	200.61	206.87	213.49	220.21	227.32

Levelised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levellised	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
Fuel cost / Variable Cost	Rs/kWh	8.53	5.48	5.75	6.04	6.34	6.66	6.99	7.34	7.71	8.09	8.50	8.92	9.37	9.83	10.33	10.84	11.38	11.95	12.55	13.18	13.84	14.53	15.26	16.02	16.82	17.66
O&M expn	Rs/kWh	1.00	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.50	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.65	0.69	0.72	0.75	0.79	0.83	0.87	0.91	0.96	1.00
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	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.32	8.15	8.47	8.71	9.02	9.34	9.68	10.04	10.42	10.82	11.24	11.69	12.15	12.66	13.17	13.72	14.05	14.70	15.32	16.10	16.86	17.78	18.51	19.46	20.33	21.36

Variable Cost for FY 2020-21	5.43	Rs/kWh
Levellised Tariff (Fixed)	2.78	Rs/kWh
Levellised Tariff FY 2020-21	8.21	Rs/kWh

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%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	17.22	0.90	0.50	0.00	0.09	0.00	0.00	0.00

Accelerated Depreciation		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	-17.24	0.72	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	-6.02	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.08	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	-0.10	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
Discounting Factor (mid-year)		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	0.15	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.92	Rs/kWh
Levelised benefit	0.13	Rs/kWh

S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
					Annexure 2.3A
Assumption for Biomass Based Rankine Cycle Project Parameters				State	Andhra Pradesh
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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	183.30
			Return on Equity for First 20 years	% p.a	16.95%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3325.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		316.01	331.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.49	567.51	595.89	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	70.23	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.36	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.00	37.21	34.48	31.72	28.95	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		19.71	20.59	21.45	22.45	23.40	24.44	25.54	26.69	27.90	29.17	30.50	31.91	33.38	34.93	36.56	38.05	39.83	41.67	43.63	45.66	48.29	50.52	53.05	55.63	58.32
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		165.74	165.51	165.60	165.71	166.04	166.29	166.78	167.40	168.17	169.09	170.17	171.41	172.82	174.41	176.18	163.02	167.55	173.17	178.56	184.19	196.52	204.64	211.01	217.05	224.50

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.89	5.01	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.29	13.95	14.65	15.38	16.15
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	1.15	1.20	1.25	1.29	1.34	1.40	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.46	0.31	0.33	0.34	0.36	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.77	0.80	0.84	0.88	0.92
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.52	7.63	7.89	8.14	8.42	8.71	9.02	9.35	9.70	10.06	10.45	10.85	11.28	11.73	12.20	12.70	12.99	13.59	14.22	14.88	15.57	16.43	17.19	17.99	18.83	19.71

Variable Cost for FY 2020-21	5.01	Rs/kWh
Levellised Tariff (Fixed)	2.72	Rs/kWh
Levellised Tariff FY 2020-21	**7.72**	**Rs/kWh**

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%	2.88%	0.00%	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	17.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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%	1%	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%	1%	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

		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
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	-30.83	-31.42	-31.74	-31.95	-32.07	-32.15	-32.19	-17.58	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	-6.13	0.01	0.00	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
Per unit benefit	Rs/Unit	1.85	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	-0.10	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	0.41	0.37	0.34	0.32	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	0.95	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 Levellised	7.05	Rs Lakh
Electricity Generation (Levellised)	6.04	MU
Levellised benefit	**0.12**	**Rs/kWh**

					Annexure 2.3B
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3786.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		359.72	377.70	396.59	416.42	437.24	459.11	482.06	506.16	531.47	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1002.16	1052.26	1104.88	1160.12

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	88.05	91.43	94.93	98.57	102.36	106.29	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.00	37.24	34.48	31.72	28.96	26.20	23.44	20.69	17.93	15.17	12.41	9.65	6.89	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		21.04	22.95	23.97	24.93	26.15	27.34	28.56	29.88	31.25	32.69	34.20	35.73	37.40	39.21	41.05	42.77	44.64	47.01	49.29	51.58	54.31	56.94	59.70	62.50	65.64
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		166.01	168.09	168.31	168.34	168.70	169.19	169.92	170.60	171.63	172.65	173.87	175.29	176.90	178.09	180.68	167.74	172.56	178.37	184.63	189.80	204.55	210.96	217.68	224.63	231.90

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	8.98	5.70	5.98	6.28	6.59	6.93	7.27	7.64	8.02	8.42	8.84	9.28	9.75	10.24	10.75	11.28	11.85	12.44	13.06	13.72	14.40	15.12	15.88	16.67	17.51	18.38
O&M expn	Rs/kWh	1.03	0.74	0.76	0.79	0.82	0.85	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.32	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.66	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.95	0.99	1.04
RoE	Rs/kWh	0.60	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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	11.65	8.36	8.66	8.95	9.26	9.60	9.95	10.30	10.72	11.14	11.58	12.04	12.50	13.04	13.58	14.15	14.51	15.16	15.87	16.63	17.41	18.33	19.22	20.12	21.06	22.06

Variable Cost for FY 2020-21	5.70	Rs/kWh
Levellised Tariff (Fixed)	2.77	Rs/kWh
Levellised Tariff FY 2020-21	**8.47**	**Rs/kWh**

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%	2.88%	0.00%	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	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	-31.21	-31.74	-31.95	-32.07	-32.15	-32.19	-17.56	-0.02	-0.01	0.00	0.00	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	-10.90	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	-0.01	0.00	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
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	-0.10	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	0.41	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	0.89	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.25	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levellised	7.66	Rs/kWh
Electricity Generation (Levellised)	6.04	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.3C
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		367.40	385.74	405.02	425.28	447.17	469.50	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1024.92	1076.17	1129.97	1186.47

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		45.42	48.20	50.06	51.97	53.97	56.54	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	110.35	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.00	37.24	34.48	31.72	28.95	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		22.41	23.39	24.43	25.50	26.57	27.84	29.15	30.48	31.68	33.25	34.83	36.52	38.22	40.01	41.89	43.66	45.77	47.99	50.31	52.75	55.34	58.07	60.95	63.91	67.01
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		168.43	168.44	168.57	168.83	169.21	169.73	170.39	171.20	172.15	173.27	174.56	175.92	177.56	178.49	181.62	168.68	170.87	173.34	185.65	191.00	205.60	212.14	218.99	225.93	233.27

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	9.08	5.83	6.12	6.40	6.75	7.08	7.45	7.83	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80
O&M expn	Rs/kWh	1.00	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.50	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.61	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97	1.01	1.06
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	11.87	8.60	8.79	9.19	9.42	9.77	10.13	10.51	10.91	11.34	11.79	12.26	12.76	13.28	13.83	14.42	14.70	15.46	16.20	16.96	17.76	18.72	19.60	20.52	21.48	22.49

Variable Cost for FY 2020-21	5.83	Rs/kWh
Levelised Tariff (Fixed)	2.76	Rs/kWh
Levelised Tariff (FY 2020-21)	**8.61**	**Rs/kWh**

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)	611.60

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%	2.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.13	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	11.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	183.36	213.89	85.54	51.42	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	53.29	17.56	-1.47	-13.79	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-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	4.54	-4.51	-4.82	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.13	0.01	0.00	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
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.07	-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	-0.10	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.63	0.58	0.53	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.65	Rs Lakh
Electricity Generation (Levelised)	5.04	Rs/kWh
Levelised benefit	**0.15**	**Rs/kWh**

S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
					Annexure 2.3D
Assumption for Biomass Based Rankine Cycle Project Parameters				State	Punjab
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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		3.15	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		375.35	395.06	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.68	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1048.21	1100.62	1155.65	1213.44

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		47.32	48.21	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		14.25	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
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		11.03	23.35	24.51	25.01	27.20	28.43	29.73	31.09	32.52	34.00	35.60	37.26	39.00	40.83	42.75	44.76	46.72	49.02	51.38	53.85	56.45	59.14	62.22	65.74	68.41
Return on Equity	Rs Lakh		15.61	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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		166.87	168.20	169.05	169.33	169.74	170.24	170.97	171.81	172.85	173.96	175.27	176.76	178.44	180.31	182.38	169.54	174.62	180.34	186.69	197.10	206.89	213.35	220.08	227.27	234.67

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	8.29	5.95	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.23
O&M expn	Rs/kWh	1.13	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	0.30	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.53	0.35	0.34	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.81	0.85	0.89	0.94	0.99	1.03	1.08
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	12.08	8.64	8.94	9.29	9.58	9.94	10.31	10.70	11.11	11.55	12.03	12.49	13.00	13.53	14.10	14.38	15.00	15.76	16.52	17.32	18.11	19.00	19.89	20.83	21.56	22.64

Variable Cost for FY 2020-21	5.98	Rs/kWh
Levellised Tariff (Fixed)	2.77	Rs/kWh
Levellised Tariff FY 2020-21	**8.75**	**Rs/kWh**

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)	511.03

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%	2.58%	0.00%	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	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	213.86	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

		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**
Net Depreciation Benefit	Rs Lakh	167.17	181.59	53.28	19.06	-1.47	-13.79	-21.17	-25.61	-28.27	-29.87	-30.82	-31.40	-31.74	-31.95	-32.07	-32.15	-32.19	-11.56	-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	-4.04	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.15	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	0.30	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	-0.06	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	0.41	0.37	0.34	0.32	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	0.59	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 Levellised	7.65	Rs Lakh
Electricity Generation (Levellised)	5.93	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.3E
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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.33	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31

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		311.52	327.72	345.29	363.51	381.69	400.77	420.81	441.45	453.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.45	719.72	755.71	793.50	833.18	874.83	918.56	964.50	1012.73

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	50.06	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.64	81.65	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.09	37.24	34.46	31.72	28.95	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		19.51	20.45	21.35	22.29	23.27	24.31	25.40	26.54	27.74	29.01	30.34	31.73	33.20	34.75	36.36	37.94	39.67	41.57	43.58	45.68	47.91	50.33	52.75	55.31	57.99
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		165.63	165.51	165.49	165.59	165.84	166.16	166.64	167.26	168.02	168.93	170.09	171.23	172.83	174.21	175.98	162.81	167.26	172.93	176.32	180.93	198.25	204.06	210.71	217.34	224.25

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.75	4.93	5.22	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.10	8.51	8.93	9.38	9.85	10.34	10.86	11.40	11.97	12.57	13.20	13.86	14.55	15.28	16.04
O&M expn	Rs/kWh	1.03	0.73	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	1.69	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.63	0.58	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	0.00
Int. on working capital	Rs/kWh	0.57	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.88	0.92
RoE	Rs/kWh	0.30	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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.47	7.60	7.85	8.11	8.38	8.67	8.96	9.31	9.55	10.01	10.39	10.80	11.22	11.67	12.14	12.64	12.92	13.52	14.14	14.59	15.19	16.34	17.00	17.82	18.70	19.60

Variable Cost for FY 2020-21	4.98	Rs/kWh
Levellised Tariff (Fixed)	2.71	Rs/kWh
Levellised Tariff FY 2020-21	**7.69**	**Rs/kWh**

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)	540.00

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%	2.88%	0.00%	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	17.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	163.30	213.85	85.53	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

		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**
Net Depreciation Benefit	Rs Lakh	147.17	181.58	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	-17.50	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	51.42	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	-6.12	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	[illegible]	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31
Per unit benefit	Rs/Unit	1.45	1.61	0.29	0.11	-0.01	-0.08	-0.12	-0.14	-0.16	-0.17	-0.17	-0.17	-0.18	-0.19	-0.19	-0.19	-0.18	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.90	0.81	0.73	0.72	0.66	0.61	0.55	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
Levellised Discounting Factor		1.00	0.95	0.86	0.81	0.75	0.69	0.64	0.59	0.54	0.50	0.46	0.42	0.38	0.35	0.32	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levellised	7.65	Rs Lakh
Electricity Generation (Levellised)	5.74	MU
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.3F
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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		309.92	325.42	342.74	359.88	377.86	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1002.62

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	78.63	81.65	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		39.99	37.21	34.48	31.72	28.56	25.21	23.45	20.59	17.93	15.27	12.61	9.95	6.92	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		19.44	20.29	21.17	22.10	23.07	24.10	25.18	26.31	27.50	28.76	30.07	31.45	32.90	34.43	35.99	37.60	39.31	41.26	43.19	45.27	47.58	49.89	52.28	54.81	57.45
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		165.47	165.58	165.31	165.42	165.61	165.95	166.42	167.03	167.78	168.68	169.74	170.96	172.31	173.91	175.66	162.47	167.41	172.56	177.92	183.51	197.82	203.86	210.23	216.84	223.72

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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
Variable Cost	Rs/kWh	7.68	4.91	5.17	5.40	5.70	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.42	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.63	0.59	0.55	0.50	0.45	0.40	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	0.00
Int. on working capital	Rs/kWh	0.45	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.45	0.48	0.50	0.52	0.55	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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.32	7.55	7.79	8.05	8.32	8.61	8.92	9.24	9.58	9.94	10.31	10.71	11.13	11.56	12.04	12.54	12.81	13.40	14.02	14.67	15.35	16.20	16.96	17.74	18.56	19.43

Variable Cost for FY 2020-21	4.93	Rs/kWh
Levellised Tariff (fixed)	2.71	Rs/kWh
Levellised Tariff FY 2020-21	**7.63**	**Rs/kWh**

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%	2.88%	0.00%	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	17.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	-17.58	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	-6.15	0.01	0.00	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
Per unit benefit	Rs/Unit	1.85	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	-0.10	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	0.41	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 Levellised	7.65	Rs Lakh
Electricity Generation (Levellised)	5.84	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.3G
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		316.01	331.81	348.40	365.82	384.11	403.32	423.48	444.65	466.89	490.23	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	48.22	50.05	51.97	53.97	56.04	58.19	60.42	[illegible]	[illegible]	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		45.00	37.24	34.48	31.72	29.95	28.21	20.45	20.62	[illegible]	[illegible]	12.41	9.65	6.90	4.14	1.38	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.71	20.56	21.46	22.41	23.40	24.44	25.54	26.69	27.90	[illegible]	30.50	31.91	33.38	34.93	36.55	38.26	39.87	41.86	43.80	45.95	48.22	50.52	53.05	55.63	58.32
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		165.74	165.51	165.60	165.71	165.94	166.29	166.78	167.40	169.17	168.09	170.17	171.41	172.82	174.41	176.18	163.02	167.95	173.17	176.52	184.18	196.52	204.64	211.01	217.65	224.38

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.89	5.01	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.56	8.99	9.44	9.91	10.41	10.93	11.48	12.05	12.65	13.28	13.95	14.65	15.38	16.15
O&M expn	Rs/kWh	1.00	0.74	0.76	0.79	0.82	0.86	0.89	0.92	0.96	[illegible]	[illegible]	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.63	0.59	0.55	0.50	0.46	0.42	0.37	0.33	[illegible]	[illegible]	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	0.00
Int. on working capital	Rs/kWh	0.46	0.31	0.33	0.34	0.36	0.37	0.39	0.40	0.42	0.44	[illegible]	0.48	[illegible]	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.77	0.80	0.84	0.88	[illegible]
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.52	7.63	7.82	8.14	8.42	8.71	9.05	9.35	9.75	10.09	10.45	10.85	11.28	11.74	12.22	12.70	12.97	13.58	14.27	14.88	15.57	16.43	17.15	17.92	18.83	19.71

Variable Cost for FY 2020-21	5.01	Rs/kWh
Levellised Tariff (Fixed)	2.72	Rs/kWh
Levellised Tariff FY 2020-21	**7.72**	**Rs/kWh**

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%	2.38%	0.00%	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	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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

		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
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	-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	-6.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.15	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	-0.10	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	0.41	0.37	0.34	0.32	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 Levelised	7.65	Rs Lakh
Electricity Generation (Levelised)	5.04	MU
Levelised benefit	**0.15**	**Rs/kWh**

					Annexure 2.3H
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		321.52	337.60	354.46	372.26	390.81	410.35	430.87	452.41	475.03	498.79	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1036.94

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	60.43	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.90	37.24	34.48	31.72	28.96	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		20.90	20.87	21.74	22.74	23.75	24.81	25.92	27.09	28.32	29.61	30.97	32.40	33.90	35.47	37.12	38.66	40.51	42.47	44.52	46.67	49.06	51.42	53.90	56.51	59.25
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		168.02	165.81	165.92	166.04	166.28	166.66	167.16	167.81	168.59	169.54	170.64	171.90	173.33	174.95	176.75	163.62	168.62	173.82	179.25	184.91	199.39	205.43	211.86	218.53	225.51

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	7.94	5.09	5.35	5.62	5.90	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59	11.12	11.68	12.26	12.87	13.52	14.19	14.90	15.65	16.43
O&M expn	Rs/kWh	1.00	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.47	0.32	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.71	0.74	0.78	0.81	0.85	0.89	0.94
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.66	7.72	7.98	8.25	8.53	8.83	9.14	9.48	9.83	10.20	10.59	11.00	11.44	11.89	12.36	12.88	13.18	13.75	14.43	15.10	15.83	16.67	17.45	18.25	19.11	20.00

Variable Cost for FY 2020-21	5.09	Rs/kWh
Levellised Tariff (Fixed)	2.72	Rs/kWh
Levellised Tariff FY 2020-21	**7.82**	**Rs/kWh**

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%	2.88%	0.00%	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	17.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
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	-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	-7.39	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-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
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	-0.10	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	0.47	0.43	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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14

Tax Benefit Levellised	7.65	Rs Lakh
Electricity Generation (Levellised)	5.04	MU
Levellised benefit	**0.15**	**Rs/kWh**

					Annexure 2.3I
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		337.36	354.45	372.16	391.73	410.72	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1038.05	1089.95

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	62.73	65.14	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.36	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
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		20.86	21.77	22.73	23.75	24.74	25.90	27.05	28.23	29.58	30.91	32.35	33.86	35.43	37.09	38.81	40.42	42.38	44.17	46.57	48.83	51.31	53.79	56.40	59.13	62.00
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		166.88	166.81	166.66	167.03	167.32	167.75	168.31	169.01	169.86	170.85	172.03	173.38	174.67	176.56	178.44	165.39	170.48	175.79	181.34	187.07	204.05	207.61	214.35	221.15	228.25

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	9.34	5.35	5.62	5.90	6.20	6.51	6.83	7.18	7.53	7.91	8.31	8.72	9.16	9.62	10.10	10.60	11.13	11.69	12.27	12.89	13.53	14.21	14.92	15.66	16.45	17.27
O&M expn	Rs/kWh	1.00	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	0.52	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.43	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89	0.94	0.98
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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	11.22	8.00	8.27	8.55	8.85	9.16	9.49	9.84	10.21	10.60	11.01	11.45	11.90	12.38	12.88	13.43	13.75	14.35	15.06	15.75	16.43	17.40	18.21	19.06	19.95	20.89

Variable Cost for FY 2020-21	5.35	Rs/kWh
Levelised Tariff (Fixed)	2.74	Rs/kWh
Levellised Tariff FY 2020-21	**8.10**	**Rs/kWh**

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%	2.88%	0.00%	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	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
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	53.27	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	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.41	63.45	18.62	6.66	-0.51	-4.81	-7.40	-8.95	-9.88	-10.44	-10.77	-10.97	-11.09	-11.16	-11.21	-11.23	-11.25	-6.14	0.01	0.00	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
Per unit benefit	Rs/kWh	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	-0.10	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	0.17	0.16	0.15	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.25	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	7.65	Rs Lakh
Electricity Generation (Levelised)	6.04	MU
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.4A
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		319.01	334.81	348.40	365.32	384.13	403.37	423.48	444.58	466.89	490.24	514.75	540.48	567.51	595.88	625.68	656.96	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	48.27	50.05	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.63	70.24	72.93	75.71	78.61	81.56	84.75	88.04	91.42	94.93	98.57	102.35	106.28	110.35	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.68	39.72	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		19.81	20.56	21.55	22.45	23.49	24.52	25.62	26.78	27.97	29.24	30.57	31.97	33.44	34.98	36.61	38.32	39.93	41.85	43.87	45.93	48.34	50.57	53.11	55.65	58.37
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		172.52	172.21	172.01	171.82	171.86	172.13	172.43	172.87	173.45	174.38	175.07	176.12	177.36	178.75	180.33	165.97	170.94	156.12	161.51	167.14	202.04	208.15	214.53	221.17	228.10

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.38	5.17	5.38	5.59	5.83	6.22	6.54	6.88	7.21	7.57	7.94	8.34	8.76	9.20	9.65	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51
O&M expn	Rs/kWh	1.05	0.76	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	0.51	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.65	0.64	0.59	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.48	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90	0.95
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	10.84	7.60	8.12	8.43	8.71	9.05	9.52	9.86	10.01	10.36	10.77	11.16	11.61	12.07	12.55	13.06	13.33	13.95	14.54	15.25	15.87	15.88	17.64	18.48	19.31	20.21

Variable Cost for FY 2020-21	5.12	Rs/kWh
Levelised Tariff (Fixed)	2.86	Rs/kWh
Levellised Tariff FY 2020-21	**[illegible]**	**Rs/kWh**

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)	652.00

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%	2.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	16.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	39%	21%	11%	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%	18%	9%	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	195.60	228.20	91.28	51.77	32.86	19.72	11.80	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.30	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-14.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-5.15	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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	0.16	0.15	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	0.15	0.13

Tax Benefit Levelised	0.56	Rs/kWh
Electricity Generation (Levelised)	5.90	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

					Annexure 2.4B
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3786.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		359.72	377.70	396.59	416.42	437.24	459.10	482.06	506.16	531.46	558.04	585.94	615.24	646.00	678.30	712.21	747.82	785.21	824.48	865.70	908.98	954.43	1002.16	1052.26	1104.88	1160.12

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		46.47	48.22	50.05	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.63	81.65	84.78	88.04	91.42	94.93	98.57	102.36	106.28	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.56	39.74	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.35	4.41	1.47	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		22.04	23.04	24.06	25.12	26.24	27.42	28.65	29.95	31.33	32.78	34.27	35.86	37.52	39.27	41.11	42.81	44.89	47.05	49.33	51.72	54.35	56.93	59.75	62.88	65.89
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.15	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.08	42.09	42.09	42.03	42.09
Total Fixed Cost	Rs Lakh		174.79	174.59	174.51	174.56	174.72	175.03	175.47	176.05	176.80	177.70	178.77	180.04	181.42	183.03	184.80	170.83	175.89	181.37	186.98	192.87	209.06	214.48	221.17	228.14	235.42

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.06	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.20	8.61	9.04	9.49	9.97	10.47	10.99	11.54	12.12	12.72	13.36	14.03	14.73	15.47	16.24	17.05	17.90	18.80
O&M exp.	Rs/kWh	1.06	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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.53	0.36	0.37	0.39	0.41	0.43	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97	1.02	1.07
RoE	Rs/kWh	0.56	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.00	8.66	8.95	9.25	9.58	9.92	10.29	10.66	11.06	11.45	11.90	12.39	12.89	13.41	13.96	14.53	14.88	15.57	16.30	17.06	17.85	18.84	19.71	20.63	21.60	22.61

Variable Cost for FY 2020-21	5.50	Rs/kWh
Levelised Tariff (Fixed)	2.32	Rs/kWh
Levelised Tariff FY 2020-21	8.75	Rs/kWh

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)	592.00

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%	2.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	17.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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%	39%	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%	31%	18%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	%	70%	39%	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	195.50	225.25	91.28	51.77	32.69	19.72	11.83	7.10	4.26	2.56	1.53	0.92	1.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	178.37	190.77	56.85	17.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-14.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	57.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.50	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-3.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.01	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/Unit	2.02	1.16	0.37	0.12	-0.01	-0.09	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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
Equivalent 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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	0.18	Rs/Wh
Electricity Generation (Levelised)	5.02	Rs/Wh
Levelised benefit	0.14	Rs/kWh

					Annexure 2.4C
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		367.69	386.28	405.60	425.89	447.17	469.53	493.00	517.65	543.54	570.71	599.25	629.21	660.67	693.71	728.39	764.81	803.05	843.20	885.36	929.63	976.11	1024.72	1075.17	1129.97	1186.47

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	50.06	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	102.36	106.28	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.69	39.74	36.80	33.85	30.91	27.97	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		22.60	23.49	24.52	25.61	26.73	27.94	29.23	30.56	31.95	33.42	34.96	36.56	38.28	40.07	41.95	43.76	45.81	48.03	50.38	52.80	55.40	58.17	61.00	63.96	67.06
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		175.21	175.03	174.98	175.04	175.24	175.57	176.04	176.65	177.43	178.36	179.45	163.78	162.19	164.68	166.67	171.57	175.82	180.29	185.00	190.05	209.19	216.66	222.41	229.45	235.79

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	9.29	5.96	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.06	15.82	16.61	17.44	18.31	19.20
O&M expn	Rs/kWh	1.06	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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.54	0.36	0.38	0.40	0.42	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99	1.04	1.09
RoE	Rs/kWh	0.52	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	12.22	8.60	9.10	9.41	9.74	10.09	10.45	10.84	11.25	11.68	12.14	12.62	13.12	13.66	14.22	14.81	15.43	15.88	16.62	17.39	18.21	19.21	20.16	21.04	22.03	23.06

Variable Cost for FY 2020-21	5.95	Rs/kWh
Levellised Tariff (Fixed)	2.93	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	**Rs/kWh**

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)	652.00

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%	2.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	16.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	1%	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%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-16.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-5.85	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.09	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	0.13
Applicable Discounting Factor		1.00	0.95	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	0.15	Rs/kWh
Electricity Generation (Levelised)	5.93	Rs/kWh
Levellised benefit	0.14	**Rs/kWh**

					Annexure 2.4D
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		376.25	395.06	414.81	435.55	457.33	480.20	504.21	529.42	555.89	583.69	612.87	643.51	675.69	709.47	744.95	782.19	821.30	862.37	905.49	950.76	998.30	1048.21	1100.62	1155.65	1213.44

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		45.42	48.20	50.06	51.97	53.97	56.04	58.17	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	102.36	106.28	110.35	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	38.74	35.80	31.86	30.91	27.95	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.93	23.94	25.00	26.11	27.28	28.52	29.81	31.17	32.59	34.09	35.67	37.32	39.06	40.89	42.81	44.80	46.76	49.07	51.40	53.89	56.54	59.36	62.27	65.29	68.38
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.08	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		175.05	175.43	175.46	176.56	175.77	176.12	175.89	177.27	178.07	179.04	180.17	181.47	182.97	184.05	186.53	172.48	177.77	183.29	189.54	195.04	210.34	216.87	223.58	230.78	238.19

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	9.50	6.10	6.40	6.72	7.06	7.41	7.78	8.17	8.58	9.01	9.46	9.93	10.43	10.95	11.50	12.07	12.67	13.31	13.97	14.67	15.41	16.18	16.99	17.84	18.73	19.66
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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.56	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.92	0.96	1.01	1.06	1.11
RoE	Rs/kWh	0.56	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	12.44	8.86	9.25	9.58	9.90	10.26	10.54	11.03	11.45	11.80	12.36	12.85	13.37	13.91	14.49	15.08	15.47	16.19	16.84	17.74	18.57	19.58	20.60	21.45	22.47	23.52

Variable Cost for FY 2020-21	6.10	Rs/kWh
Levellised Tariff (Fixed)	2.94	Rs/kWh
Levellised Tariff FY 2020-21	**9.04**	**Rs/kWh**

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)	652.53

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	195.30	228.70	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.33	193.77	56.86	20.34	-1.56	-14.71	-22.60	-27.33	-30.11	-31.87	-32.93	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.52	-11.14	-11.50	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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	0.41	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 Levelised	0.84	Rs/kWh
Electricity Generation (Levelised)	5.99	Rs/kWh
Levellised Benefit	**0.14**	**Rs/kWh**

					Annexure 2.4E
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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		314.02	329.72	346.20	363.51	381.69	400.77	420.81	441.85	463.94	487.14	511.50	537.07	563.93	592.12	621.73	652.81	685.45	719.73	755.71	793.50	833.15	874.80	918.55	964.47	1012.73

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	48.23	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	102.36	106.29	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	39.74	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		19.19	20.55	21.14	22.47	23.35	24.75	25.45	26.32	27.52	29.04	30.40	31.50	33.28	34.65	36.41	37.98	39.70	41.81	43.82	45.73	48.05	50.38	52.81	55.35	58.04
Return on Equity	Rs Lakh		33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		172.41	172.10	171.83	171.80	171.64	172.02	172.29	172.72	173.36	174.02	174.93	175.96	177.16	178.55	180.13	165.24	170.71	175.68	181.25	186.89	201.79	207.65	214.22	220.85	227.76

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.38	5.09	5.34	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.25	12.86	13.50	14.18	14.88	15.63	16.41
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	0.49	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.71	0.74	0.78	0.82	0.86	0.90	0.94
RoE	Rs/kWh	0.56	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	10.36	7.86	8.13	8.43	8.67	8.97	9.26	9.61	9.96	10.33	10.71	11.12	11.55	12.01	12.49	12.99	13.26	13.67	14.51	15.18	15.89	16.77	17.54	18.36	19.21	20.10

Variable Cost for FY 2020-21	5.06	Rs/kWh
Levellised Tariff (Fixed)	2.66	Rs/kWh
Levellised Tariff FY 2020-21	**7.72**	**Rs/kWh**

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)	652.69

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	195.80	228.29	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	178.30	193.77	56.85	21.34	-1.55	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.30	67.71	19.87	7.46	-0.54	-5.14	-7.90	-9.55	-10.54	-11.14	-11.50	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	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/kWh	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	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	0.13
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	0.15	0.14

Tax Benefit Levellised	8.32	Rs Lakh
Electricity Generation (Levellised)	5.97	MU
Levellised benefit	**0.14**	**Rs/kWh**

					Annexure 2.4F
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	%	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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		317.66	325.42	342.71	360.86	377.84	396.77	416.61	437.44	459.31	482.28	506.39	531.71	558.30	586.21	615.52	646.30	678.61	712.54	748.17	785.58	824.86	866.10	909.40	954.87	1002.62

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		45.32	48.29	50.65	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	102.36	106.29	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		47.58	42.74	36.40	33.65	30.91	27.36	25.72	22.38	19.13	16.19	13.25	10.30	7.35	4.42	1.47	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		19.54	20.34	21.25	22.18	23.16	24.18	25.25	26.37	27.55	28.83	30.14	31.52	32.97	34.47	36.09	37.54	36.35	41.25	43.21	45.31	47.43	49.72	52.13	54.68	57.51
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		172.25	171.93	171.71	171.67	171.64	171.79	172.07	172.49	173.06	173.77	174.64	175.67	176.87	178.24	179.81	165.43	170.36	175.61	180.87	186.45	201.38	207.41	213.75	220.35	227.24

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.85	5.15	5.27	5.55	5.83	6.12	6.43	6.75	7.09	7.44	7.81	8.21	8.62	9.05	9.50	9.97	10.47	11.00	11.55	12.12	12.73	13.37	14.03	14.74	15.47	16.25
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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.68	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.47	0.32	0.33	0.34	0.36	0.38	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
RoE	Rs/kWh	0.56	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	10.71	7.63	8.08	8.34	8.61	8.90	9.21	9.54	9.88	10.25	10.63	11.04	11.46	11.91	12.39	12.88	13.15	13.76	14.39	15.05	15.75	16.69	17.45	18.20	19.04	19.90

Variable Cost for FY 2020-21	5.22	Rs/kWh
Levelised Tariff (Fixed)	2.66	Rs/kWh
Levellised Tariff FY 2020-21	**7.88**	**Rs/kWh**

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)	650.00

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	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Book Depreciation	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Accelerated Depreciation		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	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Allowed during the year	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Closing	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Accelerated Depreciation	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

		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
Net Depreciation Benefit	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax Benefit	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Energy generation	MU	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Per unit benefit	Rs/Unit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levelised	[illegible]	Rs Lakh
Electricity Generation (Levelised)	[illegible]	MU
Levelised benefit	[illegible]	**Rs/kWh**

					Annexure 2.4G
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			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

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		315.24	334.81	348.40	365.82	384.11	403.32	423.48	444.66	466.89	490.24	514.75	540.49	567.51	595.89	625.68	656.97	689.81	724.30	760.52	798.54	838.47	880.39	924.41	970.63	1019.16

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	48.27	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		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	39.74	36.80	33.86	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		19.91	20.66	21.55	22.47	23.48	24.52	25.62	26.76	27.97	29.24	30.57	31.97	33.44	34.97	36.58	38.16	39.91	41.85	43.87	45.99	48.34	50.57	53.11	55.80	58.62
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.08	42.09	42.02	42.09	42.09
Total Fixed Cost	**Rs Lakh**		172.52	172.21	172.01	171.92	171.96	172.13	172.43	172.87	173.45	174.18	175.07	176.12	177.35	178.75	180.33	165.97	170.94	176.32	181.51	187.14	202.04	208.15	214.83	221.17	228.10

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.46	5.10	5.38	5.65	5.93	6.22	6.54	6.86	7.21	7.57	7.94	8.34	8.75	9.20	9.66	10.14	10.65	11.18	11.74	12.32	12.94	13.59	14.27	14.98	15.73	16.51
O&M expn	Rs/kWh	1.55	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	0.33	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.36	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.38	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.79	0.82	0.86	0.90	0.95
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	10.24	7.92	8.17	8.43	8.71	9.01	9.32	9.66	10.01	10.36	10.77	11.19	11.61	12.07	12.56	13.06	13.33	13.95	14.59	15.26	15.97	16.83	17.64	18.45	19.31	20.21

Variable Cost for FY 2020-21	5.12	Rs/kWh
Levelised Tariff (Fixed)	2.80	Rs/kWh
Levelised Tariff FY 2020-21	**7.92**	**Rs/kWh**

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)	652.00

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%	1.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%
Accelarated Depreciation	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-12.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-4.45	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	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	0.59	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	0.15	0.14

Tax Benefit Levelised	0.16	Rs Lakh
Electricity Generation (Levelised)	5.92	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

					Annexure 2.4H
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		321.52	337.60	354.48	372.20	390.81	410.35	430.87	452.41	475.03	498.78	523.72	549.91	577.41	606.28	636.59	668.42	701.84	736.93	773.78	812.47	853.09	895.75	940.53	987.56	1035.54

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	102.36	106.29	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term Loan	Rs Lakh		42.28	39.73	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		20.09	20.95	21.87	22.82	23.83	24.88	25.99	27.17	29.39	29.59	31.04	32.46	33.96	35.53	37.14	38.82	40.65	42.51	44.50	46.71	45.10	51.46	53.79	56.55	59.30
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.69	42.69	42.69	42.69	42.69
Total Fixed Cost	Rs Lakh		172.60	172.51	172.32	172.28	172.31	172.50	172.88	173.27	173.87	174.63	175.54	176.61	177.86	179.29	180.90	166.57	171.58	176.77	182.28	187.86	202.60	208.95	215.34	222.05	229.02

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levellised	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	8.12	5.21	5.47	5.74	6.03	6.31	6.65	6.98	7.30	7.70	8.08	8.49	8.91	9.35	9.82	10.32	10.83	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80
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	1.19	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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.36	0.68	0.64	0.59	0.55	0.50	0.45	0.40	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.45	0.33	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92	0.96
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	10.97	8.01	8.27	8.54	8.82	9.12	9.44	9.78	10.14	10.51	10.91	11.33	11.77	12.24	12.73	13.25	13.53	14.15	14.81	15.49	16.21	17.31	17.60	18.73	19.59	20.51

Variable Cost for FY 2020-21	5.21	Rs/kWh
Levellised Tariff (Fixed)	2.87	Rs/kWh
Levellised Tariff FY 2020-21	**8.08**	**Rs/kWh**

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)	652.00

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%	2.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	15.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	1%	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%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-15.70	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.50	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-5.49	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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
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	0.19	0.17	0.16	0.13

Tax Benefit Levelised	0.15	Rs/kWh
Electricity Generation (Levelised)	5.50	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

				State	Annexure 2.4I Other States
Assumption for Biomass Based Rankine Cycle Project Parameters					
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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	4200.00
			Fuel Price	Rs./T	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		337.95	354.85	372.60	391.23	410.79	431.33	452.90	475.54	499.32	524.28	550.50	578.02	606.92	637.27	669.13	702.59	737.72	774.61	813.34	854.00	896.70	941.54	988.62	1038.05	1089.95

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		45.92	48.23	50.65	51.99	53.97	56.04	58.19	60.42	62.71	65.14	67.63	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.35	106.29	110.35	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.69	39.74	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.35	4.42	1.47	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		20.56	21.65	22.81	23.61	24.87	25.98	27.13	28.37	29.68	31.01	32.43	33.92	35.48	37.14	38.87	40.47	42.42	44.47	46.61	48.87	51.30	53.84	56.46	59.18	62.06
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		173.88	173.09	173.29	173.24	173.35	173.59	173.96	174.47	175.13	176.96	176.93	178.07	179.39	180.50	182.50	164.34	170.43	176.79	184.24	190.02	205.96	211.30	217.86	224.67	231.77

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	8.53	5.48	5.75	6.04	6.34	6.66	6.99	7.34	7.71	8.09	8.50	8.92	9.37	9.83	10.33	10.84	11.38	11.95	12.55	13.18	13.84	14.53	15.26	16.02	16.82	17.66
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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	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	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87	0.91	0.96	1.01
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	11.43	8.26	8.56	8.85	9.15	9.47	9.80	10.15	10.53	10.93	11.36	11.79	12.25	12.74	13.26	13.80	14.11	14.78	15.45	16.17	16.92	17.83	18.65	19.56	20.46	21.42

Variable Cost for FY 2020-21	5.48	Rs/kWh
Levellised Tariff (Fixed)	2.89	Rs/kWh
Levellised Tariff - FY 2020-21	**8.37**	**Rs/kWh**

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)	652.62

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
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	195.50	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.55	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.33	193.77	56.85	20.34	-1.58	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.31	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.50	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.87	0.85	0.79	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	0.13
Applicable Discounting Factor		1.00	0.95	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	0.15	0.14

Tax Benefit Levellised	8.16	Rs Lakh
Electricity Generation (Levellised)	5.93	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

					Annexure 2.5A
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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	325.43	342.14	359.29	377.25	396.12	415.92	436.72	458.56	481.46	505.56	530.83	557.38	585.24	614.51	645.24	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	48.22	50.06	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		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.41	13.88	11.36	8.83	6.31	3.79	1.26	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		19.30	20.14	21.03	21.95	22.93	23.96	25.04	26.16	27.37	28.62	29.93	31.32	32.78	34.30	35.90	37.39	39.20	41.09	43.07	45.15	47.45	49.74	52.14	54.67	57.32
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		156.85	156.95	157.16	157.49	157.93	158.51	159.22	160.06	161.06	162.19	163.46	164.89	166.55	168.36	170.34	158.68	163.61	168.76	174.12	179.71	193.29	199.36	205.69	212.29	219.19

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levellised	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
Fuel / Variable Cost	Rs/kWh	7.65	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	1.09	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.45	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.72	0.75	0.78	0.83	0.87	0.91
RoE	Rs/kWh	0.48	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.27	7.40	7.56	7.91	8.19	8.48	8.79	9.11	9.46	9.82	10.20	10.59	11.02	11.47	11.94	12.44	12.74	13.33	13.94	14.59	15.27	16.11	16.86	17.64	18.47	19.35

Variable Cost for FY 2020-21	4.92	Rs/kWh
Levellised Tariff (Fixed)	2.60	Rs/kWh
Applicable Tariff (FY 2020-21)	7.52	Rs/kWh

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/MW)	559.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.35	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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 Levellised	7.00	Rs Lakh
Electricity Generation (Levellised)	6.04	MU
Levellised benefit	0.12	Rs/kWh

					Annexure 2.5B
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	**Financial Assumption**	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3786.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	**Generation and Sale of Power**	Number of Hours		Hours	8766.00

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		355.29	370.94	382.59	396.38	429.53	450.90	473.45	497.12	521.87	548.09	575.48	604.25	634.46	666.18	699.40	734.57	771.19	809.75	850.24	892.75	937.50	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	48.22	50.26	52.40	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.21	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		25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.99	34.07	31.15	28.22	25.50	23.09	21.25	15.93	16.10	13.69	11.35	5.83	6.31	3.79	1.29	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		21.53	22.56	23.42	24.54	25.55	26.81	28.03	29.32	30.67	32.08	33.57	35.14	36.79	38.50	40.32	42.20	44.20	46.26	48.44	50.75	53.36	55.66	58.47	61.27	62.51
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	35.59	35.79	35.99	36.29	35.05
Total Fixed Cost	**Rs Lakh**		154.05	156.73	159.62	150.07	160.06	161.38	162.20	163.29	164.34	165.84	167.11	153.74	170.58	172.56	174.75	183.31	158.42	173.81	179.49	185.24	199.23	205.67	212.22	219.14	225.37

Levellised tariff corresponding to Useful life																										
Per Unit Cost of Generation	**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
Per unit Variable Cost	Rs/kWh	8.72	5.60	5.88	6.17	6.48	6.80	7.14	7.50	7.86	8.27	8.68	9.17	9.57	12.06	10.65	11.09	11.64	12.22	12.83	13.47	14.14	11.96	15.59	15.07	[illegible]	14.72
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	1.15	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.25	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.55	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.80	0.85	0.89	0.93	0.97	1.02
RoE	Rs/kWh	0.49	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	11.38	8.12	8.40	8.70	9.02	9.36	9.75	10.07	10.46	10.87	11.24	11.27	12.26	12.76	13.29	13.86	14.22	14.69	15.56	16.32	17.08	18.64	18.66	19.74	20.47	21.54

Variable Cost for FY 2020-21	5.60	Rs/kWh
Levellised Tariff (Fixed)	2.66	Rs/kWh
Levellised Tariff FY 2020-21	**8.26**	**Rs/kWh**

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)	559.00

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%	2.88%	0.00%	0.40%	0.00%	0.00%	0.03%	0.00%	0.01%
Book Depreciation	Rs Lakh	14.74	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.95	28.17	16.90	10.14	6.09	3.65	2.19	1.31	4.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.96	166.13	48.74	17.43	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	51.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.05	-9.55	-9.85	-14.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.59	0.92	0.27	0.10	-0.05	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.16	Rs Lakh
Electricity Generation (Levelised)	6.11	MU
Levellised benefit	**0.12**	**Rs/kWh**

					Annexure 2.5C
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		361.32	379.38	398.35	418.27	439.18	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.69	1006.62	1056.95	1109.81	1165.30

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		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.35	8.83	6.31	3.79	1.26	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		21.54	22.32	23.34	25.02	25.15	27.34	28.59	29.90	31.28	32.73	34.25	35.85	37.53	39.29	41.14	42.80	44.97	47.15	49.44	51.74	54.47	57.11	59.89	62.80	65.85
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	35.09	35.09	35.09	35.09	35.09
Total Fixed Cost	**Rs Lakh**		159.49	159.73	160.08	160.55	161.15	161.89	162.79	163.79	164.96	166.29	167.79	169.46	171.31	173.34	175.58	166.18	169.39	174.82	180.49	185.40	200.31	206.73	213.44	220.42	227.71

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Fuel and Variable Cost	Rs/kWh	9.32	5.72	6.01	6.31	6.63	6.96	7.31	7.67	8.05	8.45	8.88	9.32	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.59	18.47
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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.52	0.34	0.35	0.37	0.38	0.40	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90	0.95	0.99	1.04
RoE	Rs/kWh	0.48	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	11.58	8.25	8.54	8.85	9.17	9.51	9.87	10.26	10.66	11.07	11.52	11.98	12.48	12.99	13.54	14.12	14.50	15.16	15.82	16.54	17.42	18.35	19.22	20.13	21.08	22.07

Variable Cost for FY 2020-21	5.72	Rs/kWh
Levellised Tariff (Fixed)	[illegible]	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	**Rs/kWh**

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)	559.00

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%	2.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	167.70	195.65	78.26	46.96	28.17	16.91	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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	0.38	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 Levellised	[illegible]	Rs Lakh
Electricity Generation Levellised	[illegible]	Rs Lakh
Levellised benefit	[illegible]	Rs/kWh

					Annexure 2.5D
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		369.53	384.01	407.41	427.74	449.17	471.62	495.20	519.59	545.96	573.25	601.92	632.02	663.62	696.20	731.64	768.22	806.64	846.97	889.32	933.78	980.47	1029.49	1080.97	1135.02	1191.77

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	70.23	72.93	75.73	78.63	81.65	84.78	88.04	91.42	94.93	98.57	102.35	106.23	110.26	114.59
Depreciation	Rs Lakh		28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	28.09	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19	11.19
Interest on term loan	Rs Lakh		36.53	34.07	31.56	29.02	25.55	23.99	21.45	18.93	16.40	13.88	11.35	8.80	6.31	3.79	1.25	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		22.37	23.37	24.44	25.51	26.67	27.89	29.15	30.50	31.91	33.39	34.96	36.58	38.29	40.10	41.99	43.76	45.90	48.14	50.47	52.92	55.46	58.41	61.13	64.11	67.23
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		159.92	160.17	161.55	161.04	161.67	162.43	163.30	164.38	165.59	166.96	168.48	170.19	172.07	174.15	176.42	155.07	170.02	175.90	181.52	187.48	201.44	207.92	214.68	221.73	229.08

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levellised	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	7.92	5.85	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88
O&M expn	Rs/kWh	1.00	0.74	0.76	0.79	0.80	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.15	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.20	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.25	0.22	0.16	0.14	0.10	0.06	0.02	0.00	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	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.61	0.64	0.67	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97	1.02	1.07
RoE	Rs/kWh	0.46	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	11.80	8.30	8.66	9.00	9.33	9.68	10.05	10.43	10.84	11.27	11.73	12.21	12.71	13.24	13.80	14.39	14.79	15.46	16.29	16.97	17.77	18.74	19.61	20.63	21.59	22.51

Variable Cost for FY 2020-21	5.85	Rs/kWh
Levellised Tariff (Fixed)	[illegible]	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	Rs/kWh

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)	33.38%
Capital Cost (Rs Lakh)	[illegible]

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.49	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.07	0.01	0.01	0.09	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.72	-29.04	-29.23	-29.34	-29.41	-29.45	-15.06	0.02	0.01	0.01	0.09	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	51.65	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.26	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy 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
Per unit benefit	Rs/Unit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		1.00	0.92	0.85	0.78	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.41	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 Levellised	[illegible]	Rs Lakh
Electricity Generation (Levellised)	[illegible]	Rs/kWh
Levellised Benefit	[illegible]	Rs/kWh

					Annexure 2.5E
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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		308.31	323.81	340.07	357.02	374.97	393.62	413.36	433.95	455.68	478.44	502.36	527.48	553.85	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65

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	58.11	60.42	62.74	65.13	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		25.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.46	18.93	16.40	13.82	11.26	8.83	6.31	3.79	1.26	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		19.25	20.03	20.91	21.83	22.81	23.83	24.91	26.04	27.22	28.47	29.77	31.15	32.59	34.11	35.70	37.16	38.97	40.45	42.63	44.50	47.18	49.46	51.86	54.36	56.99
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	Rs Lakh		156.75	156.84	157.06	157.37	157.84	158.39	159.08	159.92	160.90	162.03	163.31	164.76	166.37	168.16	170.14	158.46	160.39	168.52	173.08	179.45	193.02	199.08	205.40	211.99	218.95

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.31	4.89	5.13	5.39	5.66	5.94	6.24	6.55	6.88	7.22	7.58	7.96	8.36	8.78	9.21	9.67	10.16	10.67	11.20	11.76	12.35	12.97	13.61	14.29	15.01	15.76
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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.45	0.30	0.32	0.33	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90
RoE	Rs/kWh	0.65	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.22	7.37	7.62	7.88	8.15	8.44	8.75	9.07	9.41	9.77	10.15	10.55	10.97	11.41	11.87	12.37	12.67	13.26	13.87	14.51	15.19	16.02	16.77	17.55	18.37	19.23

Variable Cost for FY 2020-21	4.89	Rs/kWh
Levellised Tariff (Fixed)	2.60	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	Rs/kWh

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)	559.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.88	-27.33	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.08	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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 Levellised	1.30	Rs Lakh
Electricity Generation (Levellised)	6.01	MU
Levellised benefit	0.12	Rs/kWh

					Annexure 2.5F
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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		305.33	320.59	336.62	353.46	371.13	389.69	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.76	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71

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	62.71	65.14	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.36	106.28	110.36	114.59
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.36	8.84	6.31	3.79	1.26	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		18.04	19.67	20.74	21.85	22.62	23.63	24.63	25.45	26.56	28.22	29.41	30.56	32.31	33.51	35.34	36.95	38.52	40.45	42.44	44.45	46.75	48.91	51.38	53.96	56.37
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	35.09	35.09	35.09	35.09	35.09
Total Fixed Cost	**Rs Lakh**		156.59	156.57	156.87	157.18	157.62	158.15	158.87	159.39	160.08	161.79	161.95	164.48	166.08	167.86	169.82	158.13	159.04	168.16	173.49	179.06	192.58	198.63	204.93	211.49	218.33

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.54	4.84	5.08	5.33	5.60	5.88	6.17	6.48	6.81	7.15	7.50	7.88	8.27	8.69	9.12	9.58	10.05	10.56	11.08	11.64	12.22	12.83	13.48	14.15	14.86	15.60
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	1.15	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.43	0.30	0.31	0.33	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	0.74	0.78	0.81	0.85	0.90
RoE	Rs/kWh	0.46	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	10.14	7.32	7.56	7.82	8.09	8.38	8.68	9.00	9.34	9.69	10.07	10.46	10.86	11.30	11.76	12.27	12.56	13.14	13.75	14.39	15.06	15.83	16.62	17.43	18.31	19.06

Variable Cost for FY 2020-21	4.84	Rs/kWh
Levelised Tariff (Fixed)	2.60	Rs/kWh
Levelised Tariff FY 2020-21	[illegible]	**Rs/kWh**

Determination of AD for Biomass based Power Project	
Depreciation amount	20.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	40.00%
Additional Depreciation	20.00%
Income Tax (MAT)	17.47%
Income Tax (Normal Rates)	31.91%
Capital Cost (Rs Lakh)	559.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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 Levelised	1.00	Rs Lakh
Electricity Generation (Levelised)	[illegible]	MU
Levelised benefit	[illegible]	Rs/kWh

					Annexure 2.5G
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		310.27	325.83	342.15	359.27	377.25	396.12	415.92	436.72	458.55	481.48	505.55	530.83	557.36	585.24	614.51	645.20	677.42	711.31	746.84	784.24	823.54	864.57	907.81	953.19	1001.97
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	50.06	51.97	53.97	56.04	58.19	60.47	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	102.36	106.29	110.37	114.60
Depreciation	Rs Lakh		26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	26.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.53	34.07	31.55	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.35	8.83	6.31	3.79	1.25	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		19.30	20.14	21.00	21.96	22.93	23.96	25.04	26.16	27.37	28.62	29.94	31.32	32.79	34.31	35.90	37.39	39.20	41.09	43.07	45.15	47.45	49.74	52.14	54.67	57.32
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	35.09	35.09	35.09	35.09	35.09
Total Fixed Cost	**Rs Lakh**		156.80	156.95	157.18	157.49	157.93	158.51	159.22	160.09	161.05	162.18	163.48	164.93	166.55	168.35	170.34	158.68	163.61	168.76	174.12	179.71	193.24	199.35	205.69	212.29	219.18

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	7.56	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	14.39	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	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.29	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.48	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	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	0.45	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	0.57	0.57	0.57	0.57	0.57
Total COG	Rs/kWh	10.22	7.40	7.65	7.91	8.18	8.48	8.79	9.11	9.45	9.82	10.20	10.59	11.02	11.47	11.94	12.44	12.74	13.33	13.84	14.59	15.27	16.11	16.66	17.54	18.47	19.33

Variable Cost for FY 2020-21	4.92	Rs/kWh
Levellised Tariff (Fixed)	[illegible]	Rs/kWh
Applicable Tariff (FY2020-21)	**[illegible]**	**Rs/kWh**

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)	559.01

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%	2.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	167.70	195.65	78.26	46.96	26.17	15.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.44	-3.34	-13.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.17	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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	0.16

Tax Benefit Levelised	2.00	Rs Lakh
Electricity Generation (Levelised)	6.04	MU
Levellised benefit	**0.52**	**Rs/kWh**

					Annexure 2.5H
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption		Tariff Period	Years	25
		Debt Equity	Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		315.74	331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1018.42

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	102.36	106.29	110.36	114.60
Depreciation	Rs Lakh		29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	29.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.53	34.07	31.56	29.02	26.50	23.98	21.45	18.93	16.40	13.88	11.35	8.83	6.31	3.79	1.26	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		19.59	20.44	21.34	22.26	23.23	24.52	25.42	26.57	27.79	29.06	30.40	31.80	33.28	34.83	35.46	37.98	39.81	41.73	43.75	45.93	48.19	50.57	52.97	55.53	58.22
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	**Rs Lakh**		152.13	157.24	152.47	157.31	158.28	158.87	159.59	160.45	161.46	162.82	163.93	165.41	167.06	168.88	170.89	159.26	164.73	169.40	174.83	180.42	184.93	200.14	204.52	213.15	222.98

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.93	5.00	5.26	5.52	5.79	6.08	6.39	6.70	7.04	7.39	7.75	8.15	8.56	8.99	9.43	9.91	10.40	10.92	11.47	12.04	12.64	13.28	13.94	14.64	15.37	16.14
O&M expn	Rs/kWh	1.00	0.73	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.98	1.03	1.07	1.11	1.16	1.20	1.25	1.29	1.31	1.39	1.45	1.50	1.56	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.49	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92
RoE	Rs/kWh	0.49	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	10.41	7.49	7.74	8.01	8.28	8.59	8.95	9.23	9.58	9.95	10.34	10.75	11.16	11.62	12.11	12.61	12.92	13.62	14.16	14.81	15.50	16.26	17.13	17.91	18.74	19.62

Variable Cost for FY 2020-21	5.00	Rs/kWh
Levelised Tariff (Fixed)	2.61	Rs/kWh
Levelised Tariff FY 2020-21	7.61	Rs/kWh

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)	558.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	167.40	195.65	78.26	46.96	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.64	166.13	48.74	17.44	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.09	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	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
Per unit benefit	Rs/Unit	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
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

Per Unit benefit (Levelised)	0.06	Rs/kWh
Electricity Generation (Levelised)	6.04	MU
Levelised Benefit	0.13	Rs/kWh

					Annexure 2.5I
Assumption for Biomass Based Rankine Cycle Project Parameters				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	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amout	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		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		46.12	48.20	50.05	51.37	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.63	81.65	84.78	88.03	91.41	94.91	98.57	102.35	106.24	110.32	114.57
Depreciation	Rs Lakh		25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	25.09	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18
Interest on term loan	Rs Lakh		36.59	34.07	31.55	29.02	26.50	23.98	21.46	18.93	16.41	13.89	11.36	8.83	6.31	3.79	1.26	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		20.42	21.32	22.26	23.25	24.30	25.39	26.54	27.75	29.03	30.36	31.76	33.24	34.79	36.41	38.12	39.72	41.64	43.56	45.77	47.96	50.42	52.95	55.47	58.11	60.93
Return on Equity	Rs Lakh		28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	28.45	36.09	36.09	36.09	36.09	36.09
Total Fixed Cost	**Rs Lakh**		157.57	158.12	158.33	158.78	159.36	159.94	160.72	161.64	162.76	163.92	165.39	166.86	168.55	170.47	172.60	161.07	166.06	171.32	176.82	182.54	196.20	202.45	208.97	215.75	222.79

Levellised tariff corresponding to Useful Life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	6.21	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.16	8.57	8.99	9.44	9.92	10.41	10.93	11.48	12.05	12.66	13.29	13.95	14.65	15.38	16.15	16.96
O&M expn	Rs/kWh	1.03	0.74	0.78	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	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh	0.37	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Int. on term loan	Rs/kWh	0.23	0.58	0.54	0.50	0.46	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.54	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97
RoE	Rs/kWh	0.50	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	0.57	0.57	0.57	0.57	0.57
Total COG	**Rs/kWh**	10.63	7.76	8.03	8.31	8.60	8.92	9.25	9.59	9.95	10.35	10.75	11.19	11.54	12.12	12.62	13.15	13.49	14.11	14.77	15.45	16.18	17.05	17.86	18.69	19.57	20.49

Variable Cost for FY 2020-21	5.26	Rs/kWh
Levellised Tariff (Fixed)	2.63	Rs/kWh
Applicable Tariff (FY2020-21)	**7.89**	**Rs/kWh**

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)	552.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	14.76	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	29.52	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	167.70	195.65	78.26	46.95	28.17	16.90	10.14	6.09	3.65	2.19	1.31	0.79	0.47	0.28	0.17	0.10	0.06	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	152.94	166.13	48.74	17.43	-1.34	-12.61	-19.37	-23.43	-25.86	-27.32	-28.20	-28.73	-29.04	-29.23	-29.34	-29.41	-29.45	-16.06	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	53.44	58.05	17.03	6.09	-0.47	-4.41	-6.77	-8.19	-9.04	-9.55	-9.85	-10.04	-10.15	-10.21	-10.25	-10.28	-10.29	-5.61	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.66	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	1.69	0.92	0.27	0.10	-0.01	-0.07	-0.11	-0.13	-0.14	-0.15	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.09	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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 Levelised	[illegible]	[illegible]
Electricity Generation (Levelised)	[illegible]	[illegible]
Levellised benefit	0.13	Rs/kWh

					Annexure 2.6A
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		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		46.12	48.29	50.05	51.97	53.97	56.04	58.19	60.42	62.71	65.11	67.63	70.21	72.93	75.73	78.63	81.66	84.79	88.04	91.32	94.83	98.57	102.35	106.25	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		35.28	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		19.39	20.23	21.12	22.04	23.02	24.04	25.12	26.25	27.44	28.70	30.01	31.39	32.84	34.36	35.95	37.63	39.39	41.13	43.11	45.20	47.50	49.79	52.19	54.72	57.36
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		159.53	159.54	159.56	159.70	159.96	164.35	164.87	165.53	156.82	157.27	158.34	159.64	121.98	172.09	174.49	151.42	156.56	171.71	177.67	182.66	196.60	202.88	209.21	215.81	222.88

Levellised tariff corresponding to Useful Life																											
Per Unit Cost of Generation	**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
Per unit Variable Cost	Rs/kWh	7.44	5.03	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.13	8.60	9.03	9.48	9.96	10.46	10.98	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.37	0.62	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	0.00
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.46	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
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	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	10.58	7.64	7.92	8.20	8.47	8.77	9.06	9.41	9.76	10.13	10.51	10.92	11.35	11.80	12.29	12.78	13.27	13.68	14.21	14.57	15.07	15.53	17.30	18.10	18.94	19.83

Variable Cost FY 2020-21	5.03	Rs/kWh
Levellised Tariff (Fixed)	2.75	Rs/kWh
Levellised Tariff FY 2020-21	7.78	Rs/kWh

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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	-17.24	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	-6.02	0.01	0.00	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	-0.10	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
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 Levellised	[illegible]	Rs Lakh
Electricity Generation (Levellised)	[illegible]	Rs Lakh
Levellised benefit	0.12	Rs/kWh

					Annexure 2.6B
Assumption for Biomass Based Rankine Cycle Project Parameters				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	600.00
			Capital Cost	Rs. Lakh	600.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	600.00
3	Financial Assumption		Tariff Period	Years	25
		Debt Equity	Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	420.00
			Total Equity Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3786.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		353.29	370.95	389.50	408.98	429.43	450.90	473.45	497.12	521.97	548.07	575.47	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	65.15	67.65	70.25	72.95	75.74	78.65	81.66	84.75	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.78	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		21.82	22.67	23.57	24.82	25.73	26.82	28.11	29.39	30.74	32.15	33.63	35.21	36.84	38.57	40.36	42.47	44.10	46.24	48.44	50.80	53.41	56.00	58.79	61.57	64.56
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		165.86	166.89	166.02	166.79	166.67	167.29	167.86	168.55	169.02	170.12	171.31	173.05	175.08	176.92	178.80	166.26	171.43	176.82	182.41	188.29	202.72	209.09	215.73	222.64	229.88

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	8.92	5.72	6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.33	9.79	10.28	10.80	11.34	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.58	18.46
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.37	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	0.00
Int. on working capital	Rs/kWh	0.52	0.35	0.37	0.38	0.40	0.42	0.43	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.65	0.69	0.71	0.75	0.79	0.82	0.87	0.91	0.95	1.00	1.05
RoE	Rs/kWh	0.70	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	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	11.78	8.41	8.70	9.00	9.32	9.66	10.02	10.39	10.79	11.21	11.65	12.11	12.60	13.12	13.66	14.23	14.60	15.27	15.92	15.73	17.52	18.47	19.34	20.24	21.19	22.19

Variable Cost for FY 2020-21	5.72	Rs/kWh
Levelised Tariff (Fixed)	2.42	Rs/kWh
Levelised Tariff (FY 2020-21)	8.13	Rs/kWh

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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	-17.24	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	-6.02	0.01	0.00	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	-0.10	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.58	0.56	0.50	0.48	0.42	0.39	0.39	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	7.31	Rs Lakh
Electricity Generation (Levelised)	5.90	Rs/kWh
Levelised benefit	0.13	Rs/kWh

					Annexure 2.6C
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		361.32	379.38	398.35	418.27	439.19	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.59	1006.32	1056.55	1109.40	1165.29

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	65.11	67.64	70.21	72.83	75.73	78.64	81.35	84.79	88.04	91.42	94.93	98.57	102.35	106.29	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.25	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		22.04	23.01	24.03	25.11	26.24	27.42	28.67	29.98	31.35	32.80	34.32	35.92	37.59	39.35	41.20	42.94	45.01	47.15	49.49	51.88	54.52	57.15	59.94	62.85	65.92
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		165.27	166.37	166.46	166.77	167.58	167.73	168.42	169.25	170.20	171.38	172.69	174.17	175.83	177.66	179.73	167.13	172.34	177.77	183.44	189.35	203.82	210.25	216.95	223.94	231.23

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	9.12	5.85	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.53	0.36	0.37	0.39	0.41	0.43	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.70	0.73	0.76	0.80	0.84	0.88	0.93	0.97	1.02	1.07
RoE	Rs/kWh	0.59	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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	11.87	8.55	8.84	9.15	9.48	9.83	10.19	10.58	10.98	11.41	11.86	12.34	12.84	13.36	13.92	14.50	14.88	15.57	16.30	17.05	17.86	18.84	19.72	20.64	21.61	22.63

Variable Cost for FY 2020-21	5.85	Rs/kWh
Levellised Tariff (Fixed)	2.81	Rs/kWh
Levellised Tariff FY 2020-21	**8.67**	**Rs/kWh**

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)	600.06

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%	2.87%	0.00%	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	17.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	210.02	84.01	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	178.33	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	-17.19	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	-10.97	-11.01	-11.03	-11.05	-6.02	0.01	0.00	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	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.90	0.83	0.76	0.72	0.66	0.61	0.55	0.52	0.47	0.43	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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	7.51	Rs/kWh
Electricity Generation (Levelised)	5.90	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.6D
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		369.53	387.61	407.11	427.76	449.17	471.62	495.20	519.96	545.95	573.25	601.92	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.79	980.47	1029.49	1080.97	1135.02	1191.77

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	62.73	65.13	67.61	70.21	72.93	75.73	78.64	81.68	84.79	88.04	91.42	94.93	98.57	102.35	106.29	110.36	114.59
Depreciation	Rs Lakh		29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.28	36.57	33.86	31.15	28.44	25.73	23.02	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		22.46	23.46	24.50	25.59	26.75	27.97	29.24	30.58	31.97	33.45	35.01	36.61	38.36	40.15	42.05	43.82	45.91	48.17	50.51	52.99	55.65	58.36	61.18	64.15	67.28
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	36.74	36.74	36.74	36.74	36.74
Total Fixed Cost	**Rs Lakh**		166.70	166.79	166.95	167.26	167.70	168.27	168.90	169.65	170.56	172.04	173.38	174.90	176.60	178.45	180.57	166.01	173.27	176.73	184.46	190.42	206.96	211.44	218.20	225.25	232.67

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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
Per unit Variable Cost	Rs/kWh	9.33	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31
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	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.54	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.95	0.99	1.04	1.09
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	0.60	0.60	0.60	0.60	0.60
Total COG	**Rs/kWh**	12.16	8.69	8.89	9.34	9.64	10.00	10.37	10.76	11.18	11.62	12.08	12.55	13.06	13.60	14.16	14.74	15.12	15.68	16.32	17.00	17.72	19.21	20.11	21.06	22.04	23.06

Variable Cost for FY 2020-21	5.99	Rs/kWh
Levelised Tariff (Fixed)	2.82	Rs/kWh
Levelised Tariff FY 2020-21	**8.81**	**Rs/kWh**

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)	566.00

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%	2.32%	0.00%	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	17.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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%	1%	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%	1%	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%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	169.80	210.00	84.06	50.36	30.74	19.14	10.59	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

		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
Net Depreciation Benefit	Rs Lakh	154.16	178.32	52.32	18.72	-1.44	-12.54	-20.79	-25.15	-27.75	-29.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	57.78	62.31	18.28	6.54	-0.50	-4.73	-7.27	-8.79	-9.70	-10.25	-10.59	-10.77	-10.89	-10.96	-11.01	-11.03	-11.05	-6.02	0.01	0.00	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	-0.10	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	0.47	0.44	0.40	0.37	0.34	0.31	0.29	0.26	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.13
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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.92	MU
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.6E
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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		306.11	323.43	340.02	357.02	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.86	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65

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		46.32	48.22	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	81.65	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.28	36.57	33.46	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		19.27	20.13	21.00	21.93	22.90	23.91	24.39	26.11	27.28	28.51	29.84	31.21	32.56	34.17	35.75	37.22	39.01	40.85	42.67	44.64	47.23	49.50	51.70	54.40	57.04
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	36.71	36.74	36.70	36.71	36.74
Total Fixed Cost	**Rs Lakh**		163.52	163.43	163.45	163.59	163.84	164.22	164.73	165.38	166.17	167.12	169.21	169.47	170.80	172.50	174.29	161.41	156.34	171.47	176.82	182.40	195.53	202.09	208.91	215.50	222.30

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.79	5.00	5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	15.35	16.12
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.46	0.31	0.33	0.34	0.36	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.77	0.80	0.84	0.88	0.92
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	0.60	0.53	0.63	0.63	0.63
Total COG	**Rs/kWh**	10.53	7.65	7.90	8.16	8.45	8.73	9.04	9.37	9.71	10.06	10.45	10.87	11.29	11.74	12.22	12.72	13.00	13.60	14.21	14.83	15.58	16.44	17.21	18.00	18.84	19.72

Variable Cost for FY 2020-21	5.00	Rs/kWh
Levelised Tariff (Fixed)	2.74	Rs/kWh
Levelised Tariff FY 2020-21	**7.74**	**Rs/kWh**

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%	2.88%	0.00%	0.00%	0.00%	0.22%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	12.89	8.53	3.92	3.32	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	-18.79	-23.15	-27.76	-28.33	-30.27	-30.83	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	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	-6.02	0.01	0.00	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	-0.10	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
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	0.35	0.33	0.30	0.28	0.25	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.92	Rs/kWh
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.6F
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	%	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		305.38	320.59	336.62	353.45	371.13	389.69	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.75	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71

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	102.36	106.29	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.29	36.58	33.87	31.16	28.45	25.74	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		19.13	19.96	20.83	21.74	22.70	23.71	24.77	25.89	27.06	28.29	29.59	30.94	32.37	33.87	35.44	36.99	38.67	40.50	42.48	44.53	45.80	[illegible]	51.43	53.91	56.52
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		163.35	163.25	163.27	163.40	163.64	164.02	164.52	165.16	165.94	166.87	167.95	169.20	170.61	172.20	173.97	161.26	165.99	171.11	176.44	182.00	195.11	202.15	208.44	215.01	221.85

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.71	4.95	5.19	5.45	5.73	6.01	6.31	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	13.79	14.47	15.20	15.96
O&M expn	Rs/kWh	1.06	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.45	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.75	0.79	0.83	0.87	0.92
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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	10.45	7.59	7.84	8.10	8.38	8.66	8.97	9.30	9.64	10.02	10.36	10.79	11.20	11.65	12.12	12.61	12.90	13.43	14.16	14.77	15.45	16.31	17.06	17.85	18.66	19.55

Variable Cost for FY 2020-21	4.95	Rs/kWh
Levelised Tariff (Fixed)	2.74	Rs/kWh
Levelised Tariff FY 2020-21	**7.69**	**Rs/kWh**

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%	[illegible]	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	10.88	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	-17.24	-0.02	0.01	0.01	0.00	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	-6.02	-0.01	0.00	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	-0.10	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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 Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.93	Rs Lakh
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.6G
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		310.37	325.83	342.18	359.29	377.25	396.12	415.92	436.72	458.55	481.48	505.55	530.83	557.37	585.24	614.50	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	65.15	67.65	70.25	72.95	75.75	78.66	81.68	84.82	88.07	91.45	94.97	98.57	102.35	106.29	110.35	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
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		19.35	20.23	21.12	22.04	23.02	24.04	25.12	26.25	27.44	28.70	30.01	31.39	32.84	34.36	35.96	37.59	39.24	41.13	43.11	45.20	47.50	49.71	52.19	54.72	57.36
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		163.63	163.54	163.56	163.70	163.96	164.35	164.87	165.51	166.32	167.27	168.39	169.64	171.09	172.67	174.49	161.82	166.56	171.71	177.07	182.65	196.80	202.82	209.21	215.81	222.69

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.34	5.03	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.45	10.98	11.53	12.11	12.71	13.34	14.01	14.71	15.45	16.22
O&M expn	Rs/kWh	1.06	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.47	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.46	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
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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	10.58	7.68	7.93	8.20	8.47	8.77	9.06	9.41	9.78	10.14	10.51	10.92	11.35	11.80	12.28	12.74	13.07	13.66	14.19	14.97	15.87	16.53	17.33	18.16	19.04	19.93

Variable Cost for FY 2020-21	5.03	Rs/kWh
Levellised Tariff (Fixed)	2.75	Rs/kWh
Levellised Tariff -FY 2020-21	**7.78**	**Rs/kWh**

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%	2.88%	0.50%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	84.02	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	-30.80	-31.17	-31.38	-31.50	-31.57	-31.61	-17.24	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	-6.02	0.01	0.00	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	-0.98	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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	0.15	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.99	MU
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.6H
Assumption for Biomass Based Rankine Cycle Project Parameters				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	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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		315.79	331.57	348.15	365.56	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1018.42

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	70.23	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.36	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	12.66	12.66	12.66	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		35.79	34.57	33.86	31.15	28.44	25.71	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		15.97	20.53	21.43	22.37	23.35	24.40	25.50	26.65	27.46	29.13	30.47	31.87	33.34	34.89	36.52	38.02	39.85	41.77	40.79	45.91	48.24	50.57	53.07	55.58	58.27
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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	Rs Lakh		163.91	163.93	163.87	164.03	161.30	164.71	165.25	165.92	166.24	167.71	168.54	170.12	171.58	173.22	175.06	182.21	187.17	172.35	177.24	183.07	197.55	205.88	210.03	216.57	223.30

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.37	5.12	5.37	5.64	5.92	6.22	6.53	6.86	7.20	7.56	7.94	8.30	8.75	9.19	9.65	10.13	10.64	11.17	11.73	12.31	12.93	13.58	14.26	14.97	15.72	16.50
O&M expn	Rs/kWh	1.05	0.86	0.88	0.91	0.93	0.87	0.90	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.37	0.54	0.59	0.65	0.60	0.50	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	0.00
Int. on working capital	Rs/kWh	0.47	0.32	0.34	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.66	0.71	0.74	0.78	0.82	0.86	0.90	0.94
RoE	Rs/kWh	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.47	0.48	0.49	0.49	0.48	0.49	0.49	0.49	0.48	0.49	0.49	0.48	0.49	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	10.74	7.72	8.03	8.30	8.58	8.88	9.20	9.54	9.89	10.26	10.68	11.07	11.51	11.97	12.46	12.97	13.27	13.66	14.52	15.19	15.90	16.78	17.66	18.37	19.23	20.18

Variable Cost for FY 2020-21	5.12	Rs/kWh
Levelised Tariff (Fixed)	2.75	Rs/kWh
Levellised Tariff FY 2020-21	**7.87**	**Rs/kWh**

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%	2.88%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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%	1%	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%	1%	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

		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
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	-17.24	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	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.59	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/Unit	1.82	1.04	0.50	0.11	-0.01	-0.09	-0.12	-0.14	-0.19	-0.17	-0.17	-0.17	-0.18	-0.15	-0.18	-0.13	-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
Applicable Discounting Factor		1.00	0.95	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	0.15	0.14

Tax Benefit Levellised	7.51	Rs Lakh
Electricity Generation (Levellised)	5.95	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.6I
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	180.00
			Loan Amount	Rs. Lakh	420.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		311.92	334.52	355.95	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		45.12	48.22	50.06	51.97	53.97	56.04	58.18	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.47	94.91	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	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Interest on term loan	Rs Lakh		39.28	36.57	33.86	31.15	28.44	25.73	23.00	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	38.14	39.75	41.54	43.39	45.41	48.02	50.47	52.91	55.47	58.18	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	38.74	38.74	38.74	38.74	38.74
Total Fixed Cost	**Rs Lakh**		164.75	164.71	164.97	165.00	165.32	165.74	166.37	167.10	167.98	169.03	170.20	171.56	173.09	174.82	176.71	151.95	153.00	174.27	179.76	185.49	192.27	206.00	212.48	219.25	225.30

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	6.31	5.38	5.55	5.90	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.75	9.20	9.65	10.14	10.65	11.18	11.74	12.33	12.94	13.59	14.27	14.98	15.71	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	1.75	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.81	0.59	0.55	0.50	0.46	0.42	0.37	0.33	0.29	0.26	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	0.00
Int. on working capital	Rs/kWh	0.39	0.33	0.36	0.37	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.55	0.59	0.62	0.64	0.69	0.71	0.74	0.79	0.82	0.85	0.90	0.94	0.99
RoE	Rs/kWh	0.59	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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	11.16	8.05	8.32	8.59	8.90	9.22	9.55	9.90	10.28	10.67	11.08	11.52	11.98	12.46	12.97	12.61	13.94	14.44	15.15	15.66	16.60	17.55	18.52	19.18	20.07	21.01

Variable Cost for FY 2020-21	5.37	Rs/kWh
Levellised Tariff (Fixed)	2.78	Rs/kWh
Levellised Tariff FY 2020-21	**8.15**	**Rs/kWh**

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%	2.66%	0.00%	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	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	-17.24	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	-6.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	[illegible]	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/kWh	1.66	1.21	0.35	0.13	-0.01	-0.09	-0.14	-0.17	-0.19	-0.20	-0.20	-0.21	-0.21	-0.21	-0.21	-0.21	-0.21	-0.12	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
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	0.31	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.51	Rs Lakh
Electricity Generation (Levelised)	5.17	MU
Levelised benefit	**0.15**	**Rs/kWh**

					Annexure 2.7A
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		310.97	326.49	342.81	359.29	377.25	396.12	415.92	436.72	458.55	481.49	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		45.42	48.23	51.06	54.97	53.97	58.04	58.19	60.42	62.71	65.11	67.54	70.21	72.97	75.73	78.58	81.56	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.35	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.09	37.24	34.48	31.72	28.95	26.21	23.45	20.69	17.90	15.17	12.41	9.65	6.89	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	39.45	39.46	39.45	39.45	39.46
Total Fixed Cost	Rs Lakh		165.44	165.31	165.28	166.37	166.56	166.92	166.80	166.93	167.74	168.54	169.29	170.84	172.29	173.86	176.60	162.42	167.85	172.50	177.86	183.45	197.75	203.87	210.15	216.75	223.64

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
PU Var Variable Cost	Rs/kWh	7.56	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	1.00	0.74	0.76	0.79	0.82	0.86	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.15	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	0.41	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.56	0.31	0.32	0.33	0.35	0.37	0.38	0.40	0.42	0.44	0.46	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	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.32	7.54	7.78	8.04	8.31	8.60	8.90	9.23	9.57	9.92	10.30	10.70	11.12	11.56	12.03	12.57	12.50	13.39	14.00	14.65	15.33	16.18	16.93	17.71	18.54	19.40

Variable Cost for FY 2020-21	4.92	Rs/kWh
Levellised Fixed Cost	2.71	Rs/kWh
Levellised Tariff FY 2020-21	**7.63**	**Rs/kWh**

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)	611.03

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%	2.88%	0.00%	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	32.25	32.26	32.26	32.26	32.25	32.26	32.25	17.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	-27.55	0.02	0.01	0.01	0.01	0.00	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	-11.17	-11.21	-11.23	-11.25	-6.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.15	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	-0.10	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levellised	1.55	Rs Lakh
Electricity Generation (Levellised)	5.54	MU
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.7B
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3766.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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	429.43	450.90	473.45	497.12	521.97	548.07	575.47	604.25	634.46	666.18	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	60.43	62.75	65.16	67.66	70.26	72.96	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.36	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
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	6.89	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		21.86	22.80	23.80	24.85	25.75	26.91	28.13	29.41	30.75	32.17	33.56	35.22	36.92	38.59	40.39	42.08	44.11	46.20	48.41	50.64	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	36.45	36.45	36.45	36.45	36.45
Total Fixed Cost	**Rs Lakh**		167.62	167.66	167.74	167.95	168.20	168.76	169.31	170.13	171.03	172.30	173.32	174.72	176.10	178.02	180.02	167.05	172.22	177.61	183.23	189.08	203.66	210.03	216.58	223.07	230.83

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	1.15	1.20	1.25	1.29	1.34	1.40	1.45	1.50	1.56	1.62	1.68	1.75	1.82
Depreciation	Rs/kWh	0.43	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.51	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.59	0.61	0.64	0.67	0.70	0.73	0.77	0.80	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	0.58	0.58	0.58	0.58	0.58
Total COG	**Rs/kWh**	11.48	8.25	8.53	8.83	9.14	9.47	9.82	10.18	10.57	10.96	11.41	11.85	12.34	12.85	13.38	13.94	14.28	14.85	15.64	16.37	17.14	18.08	18.82	19.61	20.74	21.71

Variable Cost for FY 2020-21	5.60	Rs/kWh
Levellised Tariff (Fixed)	2.76	Rs/kWh
Levellised Tariff FY 2020-21	**8.36**	**Rs/kWh**

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%	2.64%	0.00%	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	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	1%	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%	1%	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%	1%	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	-17.56	0.02	0.01	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	-6.13	0.01	0.00	0.00	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
Per unit benefit	Rs/kWh	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	-0.10	0.00	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	0.47	0.43	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	0.35	0.33	0.30	0.28	0.25	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	7.85	Rs/Wh
Electricity Generation (Levelised)	5.94	Rs/Wh
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.7C
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		361.52	379.58	398.56	418.49	439.41	461.38	484.45	508.67	534.11	560.82	588.86	618.30	649.22	681.68	715.76	751.55	789.13	828.58	870.01	913.51	959.19	1007.15	1057.50	1110.38	1165.90

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		45.32	47.21	50.05	51.97	53.97	55.04	58.13	60.42	62.74	65.14	67.54	70.24	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.35	106.29	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
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		22.05	23.04	24.06	25.13	26.26	27.44	28.59	30.00	31.37	32.82	34.34	35.93	37.61	39.37	41.22	42.96	45.02	47.20	49.40	51.89	54.53	57.17	59.95	62.85	65.91
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		155.06	168.08	168.29	168.43	168.80	169.29	169.83	170.71	171.69	172.74	174.00	175.43	177.05	178.65	180.64	167.92	173.13	178.56	184.23	190.14	204.77	211.16	217.89	224.56	232.17

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	8.92	5.72	6.01	6.31	6.63	6.96	7.31	7.67	8.06	8.46	8.88	9.32	9.79	10.22	10.79	11.33	11.90	12.50	13.12	13.78	14.47	15.19	15.95	16.75	17.59	18.47
O&M expn	Rs/kWh	1.03	0.74	0.76	0.79	0.82	0.85	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.57	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.52	0.54	0.57	0.60	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.91	0.95	1.00	1.04
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	11.70	8.39	8.67	8.96	9.23	9.53	9.86	10.35	10.76	11.16	11.62	12.09	12.57	13.07	13.63	14.20	14.56	15.24	15.95	16.70	17.48	18.43	19.30	20.20	21.15	22.14

Variable Cost for FY 2020-21	5.72	Rs/kWh
Levelised Tariff (Fixed)	2.77	Rs/kWh
Levelised Tariff FY 2020-21	**8.50**	**Rs/kWh**

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)	610.00

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	%	2.66%	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%	2.86%	0.00%	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	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
Opening	%	100%	70%	35%	21%	13%	8%	5%	3%	2%	1%	1%	1%	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%	1%	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%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	183.30	213.66	85.64	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	181.40	53.38	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	-17.50	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	-6.13	0.01	0.00	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
Per unit benefit	Rs/Unit	1.85	1.01	0.29	0.11	-0.01	-0.03	-0.12	-0.14	-0.15	-0.17	-0.17	-0.17	-0.16	-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	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.41	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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levelised	7.65	Rs Lakh
Electricity Generation (Levelised)	6.04	MU
Levelised benefit	**0.13**	**Rs/kWh**

				State	Annexure 2.7D Punjab
Assumption for Biomass Based Rankine Cycle Project Parameters					
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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		369.53	388.01	407.41	427.78	449.17	471.62	495.20	519.96	545.96	573.26	601.92	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.79	980.47	1029.49	1080.97	1135.02	1191.77

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	106.29	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.00	37.24	34.48	31.72	28.97	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		22.49	23.48	24.53	25.62	26.74	27.99	29.26	30.58	32.07	33.49	35.03	36.66	38.37	40.17	42.05	43.83	45.95	48.19	50.57	52.97	55.66	58.35	61.20	64.17	67.29
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		168.52	168.53	166.87	168.93	169.22	169.64	170.50	171.32	172.28	173.41	174.70	176.16	177.81	179.65	181.60	168.80	174.06	179.54	185.25	191.21	205.50	212.32	219.14	226.16	233.35

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**Unit**	**Levellised**	**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	9.12	5.86	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.98	18.88
O&M expn	Rs/kWh	1.00	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	0.41	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.51	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.56	0.58	0.61	0.64	0.67	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97	1.02	1.07
RoE	Rs/kWh	0.51	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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	11.87	8.52	8.82	9.13	9.46	9.80	10.16	10.55	10.95	11.38	11.83	12.32	12.80	13.33	13.89	14.47	14.86	15.54	16.23	17.03	17.82	18.80	19.68	20.59	21.57	22.56

Variable Cost for FY 2020-21	5.85	Rs/kWh
Levellised Tariff (Fixed)	2.78	Rs/kWh
Levellised Tariff FY 2020-21	**8.64**	**Rs/kWh**

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)	[illegible]

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%	[illegible]	0.00%	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	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	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	-17.56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax Benefit	Rs Lakh	58.41	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	-6.13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Energy generation	MU	3.15	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	-0.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levellised	7.85	Rs Lakh
Electricity Generation (Levellised)	6.00	MU
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.7E
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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		309.41	323.43	340.02	357.02	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.85	581.55	610.63	641.16	673.21	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65

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	48.79	50.06	51.97	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.23	72.93	75.73	78.64	81.65	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
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	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		19.37	20.15	21.03	21.95	22.92	23.94	25.01	26.13	27.31	28.56	29.86	31.23	32.67	34.19	35.77	37.43	39.18	41.01	42.95	44.97	47.24	49.52	51.93	54.47	57.05
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		165.34	166.20	165.17	165.25	165.40	165.79	166.25	166.85	167.66	168.48	169.53	170.73	172.11	173.68	175.43	162.26	157.13	172.28	177.51	180.19	197.49	203.54	209.86	216.44	223.31

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	4.51	4.89	5.13	5.39	5.66	5.94	6.24	6.55	6.88	7.22	7.58	7.96	8.36	8.78	9.21	9.67	10.16	10.67	11.20	11.76	12.35	12.97	13.61	14.29	15.01	15.76
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	1.15	1.20	1.24	1.29	1.31	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.42	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	0.00
Int. on working capital	Rs/kWh	0.45	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.82	7.51	7.75	8.00	8.27	8.56	8.86	9.18	9.52	9.87	10.25	10.65	11.06	11.50	11.97	12.46	12.73	13.34	13.91	14.57	15.25	16.00	16.84	17.52	18.44	19.30

Variable Cost for FY 2020-21	4.89	Rs/kWh
Levellised Tariff (Fixed)	2.71	Rs/kWh
Levellised Tariff FY 2020-21	**7.59**	**Rs/kWh**

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)	[illegible]

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%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Allowed during the year	%	30%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Closing	%	70%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	0.00	0.00	0.00	0.00

		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**
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	-17.56	0.02	0.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	-6.13	0.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Energy generation	MU	[illegible]	[illegible]	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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Per unit benefit	Rs/Unit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levellised	1.65	Rs Lakh
Electricity Generation (Levellised)	5.94	MU
Levellised benefit	**0.28**	**Rs/kWh**

					Annexure 2.7F
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		Tariff Period	Years	25
		Debt Equity	Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	427.70
			Total Equity Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		305.33	320.59	336.62	353.46	371.13	389.68	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.75	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71

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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term Loan	Rs Lakh		40.00	37.24	34.48	31.72	28.95	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		19.15	19.98	20.85	21.76	22.72	23.71	24.75	25.91	27.08	28.31	29.59	30.95	32.36	33.84	35.40	36.90	38.63	40.54	42.41	44.54	46.91	49.07	51.44	53.93	56.53
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	Rs Lakh		165.18	165.03	164.90	165.07	165.26	165.56	166.03	166.62	167.38	168.23	169.27	170.48	171.82	173.30	175.08	161.87	166.78	171.80	177.23	182.79	197.25	203.05	209.39	215.96	222.79

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Levellised	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
Fuel and Variable Cost	Rs/kWh	7.54	4.84	5.08	5.33	5.60	5.88	6.17	6.48	6.81	7.15	7.50	7.88	8.27	8.69	9.12	9.58	10.06	10.56	11.09	11.64	12.22	12.84	13.48	14.15	14.86	15.60
O&M expn	Rs/kWh	1.09	0.74	0.76	0.79	0.82	0.85	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.45	0.30	0.32	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.58	0.61	0.64	0.67	0.71	0.74	0.78	0.82	0.85	0.90
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	0.62	0.62	0.62	0.62	0.62
Total COG	Rs/kWh	10.24	7.45	7.69	7.95	8.22	8.50	8.80	9.11	9.45	9.80	10.17	10.56	10.97	11.41	11.87	12.36	12.52	13.20	13.81	14.45	15.12	15.96	16.70	17.47	18.28	19.15

Variable Cost for FY 2020-21	4.84	Rs/kWh
Levellised Tariff (Fixed)	2.71	Rs/kWh
Levellised Tariff FY 2020-21	**7.54**	**Rs/kWh**

Determination of AD for Biomass based Power Project	
Depreciation amount	90.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	15.00%
Additional Depreciation	20.00%
Income Tax (MAT)	17.47%
Income Tax (Normal Rates)	34.94%
Capital Cost (Rs Lakh)	544.05

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%	2.58%	0.00%	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	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	163.30	213.65	85.51	51.30	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	147.17	181.39	53.24	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	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	39.32	58.55	18.57	6.58	-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	-6.13	0.01	0.00	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
Per unit benefit	Rs/Unit	1.86	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	-0.10	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levellised	7.56	Rs Lakh
Electricity Generation (Levellised)	6.31	MU
Levellised benefit	**0.15**	**Rs/kWh**

					Annexure 2.7G
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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	329.89	342.16	359.28	377.25	396.12	415.92	436.72	458.55	481.48	505.56	530.83	557.38	585.25	614.51	645.23	677.49	711.37	746.94	784.29	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		46.47	48.23	50.06	51.97	53.87	55.94	58.13	60.42	62.72	65.14	67.52	70.21	72.93	75.73	78.51	81.32	84.74	88.04	91.42	94.93	98.57	102.36	106.28	110.35	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		40.99	37.24	34.48	31.72	28.95	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		19.47	20.26	21.14	22.07	23.04	24.07	25.14	26.28	27.46	28.71	30.03	31.41	32.86	34.36	35.94	37.41	39.25	41.14	43.12	45.21	47.51	49.90	52.21	54.70	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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		167.44	166.31	165.26	165.37	165.58	165.52	166.28	166.93	167.74	168.64	169.59	170.91	172.29	173.26	175.60	162.42	167.35	172.50	177.88	183.46	197.75	203.42	210.15	216.75	223.64

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	4.90	5.16	5.42	5.69	5.96	6.26	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	15.85
O&M expn	Rs/kWh	1.03	0.74	0.76	0.78	0.82	0.85	0.89	0.92	0.96	0.99	1.03	1.07	1.11	1.15	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.37	7.54	7.78	8.04	8.31	8.60	8.90	9.23	9.57	9.92	10.30	10.70	11.12	11.56	12.03	12.52	12.80	13.39	14.00	14.65	15.33	16.18	16.90	17.71	18.54	19.40

Variable Cost for FY 2020-21	4.92	Rs/kWh
Levellised Tariff (Fixed)	2.71	Rs/kWh
Levellised Tariff FY 2020-21	**7.63**	**Rs/kWh**

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)	611.66

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	16.15	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	183.39	213.89	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	-31.77	-31.96	-32.07	-32.15	-32.18	-17.76	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	-11.10	-11.16	-11.21	-11.23	-11.26	-6.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.14	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	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.84	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	0.95	0.88	0.81	0.75	0.69	0.64	0.59	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	0.15

Tax Benefit Levellised	7.65	Rs Lakh
Electricity Generation (Levellised)	5.74	MU
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.7H
Assumption for Biomass Based Rankine Cycle Project Parameters				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		Tariff Period	Years	25
		Debt Equity	Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	427.70
			Total Equity Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31

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		315.79	331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.95	837.85	879.75	923.74	969.92	1018.42

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		45.42	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	102.36	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
Interest on term loan	Rs Lakh		46.00	37.24	34.48	31.72	28.95	26.21	23.45	20.69	17.93	15.17	12.41	9.65	6.89	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		19.70	20.55	21.45	22.39	23.38	24.43	25.52	26.67	27.88	29.15	30.49	31.93	33.35	34.91	36.53	38.03	39.85	41.78	43.90	45.92	48.26	49.59	53.01	55.50	58.24
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	32.45	32.45	32.45	32.45	33.45
Total Fixed Cost	**Rs Lakh**		165.73	165.60	165.59	166.09	165.92	166.26	166.76	167.33	168.10	169.07	170.15	171.30	172.60	174.05	176.16	163.60	167.96	173.14	178.54	184.18	196.49	204.06	210.96	217.82	224.54

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.80	5.00	5.25	5.51	5.79	6.08	6.38	6.70	7.03	7.39	7.76	8.15	8.55	8.98	9.43	9.91	10.40	10.92	11.47	12.04	12.64	13.28	13.94	14.64	15.37	16.14
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	1.15	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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.73	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	0.00
Int. on working capital	Rs/kWh	0.45	0.31	0.33	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92
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	0.52	0.52	0.52	0.52	0.52
Total COG	**Rs/kWh**	10.51	7.65	7.82	8.14	8.42	8.75	9.02	9.36	9.69	10.05	10.44	10.85	11.27	11.72	12.20	12.75	12.98	13.56	14.21	14.87	15.56	16.42	17.16	17.98	18.82	19.69

Variable Cost for FY 2020-21	5.00	Rs/kWh
Levellised Tariff (Fixed)	2.72	Rs/kWh
Levellised Tariff FY 2020-21	**7.72**	**Rs/kWh**

Determination of All the 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%	2.72%	0.00%	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	17.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	-17.93	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.41	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	-6.26	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.36	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	-0.10	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levellised	7.65	Rs Lakh
Electricity Generation (Levellised)	6.04	MU
Levellised benefit	**0.13**	**Rs/kWh**

					Annexure 2.7I
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	183.30
			Loan Amount	Rs. Lakh	427.70
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		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	102.36	106.29	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	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22	12.22
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	6.89	4.13	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		20.54	21.43	22.37	23.36	24.40	25.50	26.64	27.85	29.12	30.45	31.85	33.32	34.87	36.49	38.19	39.77	41.62	43.71	45.82	48.04	50.48	52.92	55.48	58.17	60.99
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	39.45	39.45	39.45	39.45	39.45
Total Fixed Cost	**Rs Lakh**		166.56	166.48	166.51	166.67	166.94	167.35	167.88	168.57	169.38	170.36	171.52	172.82	174.30	175.97	177.82	164.74	169.72	175.06	180.55	186.28	200.72	206.94	213.43	220.19	227.25

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	8.20	5.25	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.15	8.57	8.99	9.45	9.92	10.41	10.93	11.48	12.05	12.66	13.29	13.95	14.65	15.38	16.15	16.96
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
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	0.00
Int. on working capital	Rs/kWh	0.48	0.33	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.61	0.63	0.66	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.97
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	0.62	0.62	0.62	0.62	0.62
Total COG	**Rs/kWh**	10.93	7.90	8.16	8.44	8.73	9.04	9.36	9.71	10.07	10.45	10.86	11.29	11.73	12.21	12.70	13.23	13.54	14.17	14.84	15.52	16.24	17.53	17.93	18.77	19.64	20.56

Variable Cost for FY 2020-21	5.25	Rs/kWh
Levelised Tariff (Fixed)	2.74	Rs/kWh
Levelised Tariff FY 2020-21	**8.00**	**Rs/kWh**

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)	611.02

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%	2.64%	0.00%	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	16.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation																										
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	-17.56	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	58.42	63.46	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	-6.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.15	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	-0.10	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	0.41	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	0.63	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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	7.65	Rs Lakh
Electricity Generation (Levelised)	6.04	MU
Levelised benefit	**0.13**	**Rs/kWh**

					Annexure 2.8A
Assumption for Biomass Based Rankine Cycle Project Parameters				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		Tariff Period	Years	25
		Debt Equity	Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	456.40
			Total Equity Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		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	784.29	823.50	864.67	907.91	953.31	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		45.32	48.22	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		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	39.74	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		19.51	20.35	21.25	22.15	23.13	24.15	25.22	26.35	27.54	28.75	30.10	31.47	32.92	34.44	36.03	37.49	39.29	41.14	43.13	45.21	47.50	[illegible]	52.25	54.79	57.40
Return on Equity	Rs Lakh		33.33	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.08	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		172.22	171.90	171.69	171.59	171.61	171.78	172.04	172.46	173.02	173.79	174.59	175.62	176.82	178.15	179.75	165.39	170.30	175.44	180.61	186.49	201.26	207.34	213.67	220.27	227.15

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Fuel and Variable Cost	Rs/kWh	7.84	5.03	5.28	5.54	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.46	10.93	11.53	12.10	12.71	13.34	14.01	14.71	15.45	16.22
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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.47	0.32	0.33	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
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	10.69	7.82	8.07	8.33	8.60	8.89	9.20	9.53	9.87	10.23	10.62	11.02	11.45	11.90	12.37	12.87	13.13	13.74	14.37	15.03	15.73	16.61	17.37	18.17	19.02	19.90

Variable Cost for FY 2020-21	5.03	Rs/kWh
Levellised Tariff (Fixed)	2.86	Rs/kWh
Levellised Tariff FY 2020-21	**7.89**	**Rs/kWh**

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)	652.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	195.60	228.20	91.29	54.77	32.86	19.72	11.83	7.10	4.25	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.86	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	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	0.82	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levellised	0.18	Rs/kWh
Electricity Generation (Levellised)	5.99	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

					Annexure 2.8B
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3786.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	**Generation and Sale of Power**	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		[illegible]	[illegible]	385.50	404.56	429.43	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		45.32	48.27	51.05	51.97	53.97	55.04	58.19	59.42	62.74	65.14	67.54	70.74	72.93	75.71	78.54	81.55	84.73	88.04	91.42	94.93	98.57	102.35	106.28	110.36	114.59
Depreciation	Rs Lakh		30.42	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.99	39.74	36.80	33.39	30.91	27.95	25.02	22.06	19.10	16.19	13.25	10.30	7.36	4.42	1.47	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		21.73	22.57	23.59	24.73	25.84	26.96	28.21	29.49	30.90	32.24	33.73	35.24	36.92	38.54	40.45	42.12	44.14	46.27	48.50	50.88	53.47	55.56	58.78	61.83	64.67
Return on Equity	Rs Lakh		33.14	33.19	33.18	33.19	33.19	33.18	33.18	33.15	33.14	33.19	33.18	33.18	33.19	33.18	33.15	33.15	33.14	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		171.45	174.21	174.34	174.17	174.32	174.67	175.00	175.59	176.31	177.19	178.23	179.64	180.42	182.40	184.17	180.20	175.67	180.66	186.17	192.03	207.18	213.65	226.19	227.13	234.34

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	8.92	5.72	6.01	6.31	6.63	6.96	7.31	7.67	8.05	8.45	8.86	9.33	9.79	10.28	10.79	11.33	11.90	12.50	13.12	13.75	14.47	15.19	15.95	16.75	17.58	18.46
O&M expn	Rs/kWh	1.25	0.75	0.79	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.16	1.23	1.27	1.32	1.37	1.43	1.48	1.54	1.61	1.66	1.72	1.79	1.88
Depreciation	Rs/kWh	0.52	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.33	0.55	0.59	0.52	0.55	0.50	0.45	0.41	0.36	0.35	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.52	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.74	0.72	0.75	0.79	0.82	0.87	0.91	0.95	1.00	1.05
RoE	Rs/kWh	0.59	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.69
Total COG	**Rs/kWh**	11.82	8.56	8.81	9.10	9.45	9.78	10.14	10.53	10.90	11.32	11.76	12.21	12.70	13.21	13.75	14.32	14.86	15.33	16.05	16.79	17.58	18.55	19.41	20.31	21.26	22.26

Variable Cost for FY 2020-21	5.77	Rs/kWh
Levelised Tariff (Fixed)	2.92	Rs/kWh
Levelised Tariff -FY 2020-21	**8.66**	**Rs/kWh**

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)	652.03

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	195.61	228.21	79.78	51.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.01	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	177.12	193.77	45.45	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	32.31	27.71	15.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/Unit	2.02	1.10	0.37	0.12	-0.01	-0.05	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.13	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
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	0.15	0.14

Tax Benefit Levelised	0.16	Rs/kWh
Electricity Generation (Levelised)	5.93	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

					Annexure 2.8C
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3872.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		361.32	379.38	398.35	418.27	439.18	461.14	484.20	508.41	533.83	560.52	588.55	617.98	648.87	681.32	715.38	751.15	788.71	828.15	869.55	913.03	958.68	1006.62	1056.95	1109.80	1165.27

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		46.47	48.23	51.05	51.37	53.97	56.04	58.19	60.42	62.74	65.14	67.64	70.24	72.93	75.73	78.63	81.65	84.78	88.03	91.40	94.93	98.57	102.35	106.25	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	[illegible]	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	39.74	36.60	33.65	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.18	23.15	24.45	25.22	26.34	27.50	28.72	30.59	31.45	32.93	34.41	36.00	37.57	39.41	40.77	42.70	45.07	47.25	49.53	51.93	54.58	57.22	59.60	62.91	65.96
Return on Equity	Rs Lakh		33.19	33.13	33.18	33.19	33.18	33.18	33.18	33.19	33.18	33.18	33.18	33.19	33.13	33.14	33.13	33.14	33.18	33.19	33.19	33.18	42.08	42.08	42.08	42.92	42.09
Total Fixed Cost	Rs Lakh		174.62	174.98	174.80	174.65	174.82	175.13	175.58	176.36	176.93	177.83	178.90	180.15	181.57	183.18	184.90	171.86	175.65	181.51	187.18	193.03	208.28	214.75	221.31	228.40	235.68

Levelised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levelised	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	8.12	5.85	6.15	6.45	6.78	7.12	7.47	7.85	8.24	8.65	9.08	9.54	10.01	10.51	11.04	11.59	12.17	12.78	13.42	14.09	14.79	15.53	16.31	17.13	17.96	18.88
O&M expn	Rs/kWh	1.05	0.75	0.79	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.19	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	0.44	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	[illegible]	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.59	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.54	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	0.71	0.73	0.77	0.80	0.84	0.88	0.93	0.97	1.02	1.07
RoE	Rs/kWh	0.56	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	12.06	8.65	8.98	9.28	9.61	9.95	10.31	10.68	11.07	11.52	11.95	12.40	12.88	13.46	14.01	14.59	14.94	15.63	16.36	17.12	17.89	18.91	19.75	20.21	21.58	22.70

Variable Cost for FY 2020-21	5.86	Rs/kWh
Levelised Tariff (Fixed)	2.92	Rs/kWh
Levelised Tariff FY 2020-21	8.78	Rs/kWh

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)	34.944%
Capital Cost (Rs Lakh)	652.03

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%	2.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	17.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-15.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.33	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-5.50	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.17	-0.01	-0.08	-0.13	-0.15	-0.17	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.75	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.41	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	0.95	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14

Tax Benefit Levelised	0.15	Rs/kWh
Electricity Generation (Levelised)	5.??	Rs/kWh
Levelised benefit	0.14	Rs/kWh

					Annexure 2.8D
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3960.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		309.58	324.61	407.31	427.79	449.17	471.52	495.20	519.95	545.95	573.25	601.91	632.02	663.62	696.80	731.64	768.22	806.64	846.97	889.32	933.78	980.47	1029.49	1080.97	1135.02	1191.77

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		48.12	48.26	50.05	51.97	53.97	56.03	58.17	60.47	62.74	65.14	67.64	70.23	72.93	75.73	78.64	81.66	84.79	88.04	91.42	94.93	98.57	102.36	106.28	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.08	38.74	35.80	33.55	30.01	27.93	25.22	22.08	19.13	16.19	13.25	10.30	7.35	4.17	1.47	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	Rs Lakh		22.56	23.58	24.52	25.71	26.86	28.07	29.34	30.64	32.09	33.55	35.10	36.73	38.44	40.21	42.12	43.87	46.02	48.22	50.56	53.01	55.71	58.41	61.25	64.22	67.34
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.69	42.69	42.69	42.69	42.08
Total Fixed Cost	Rs Lakh		176.36	175.12	175.07	175.14	175.34	175.66	176.16	176.76	177.56	178.49	179.70	159.98	162.34	163.55	165.84	171.75	177.61	182.49	188.20	194.16	209.42	215.85	222.48	229.71	237.06

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable cost	Rs/kWh	9.33	5.99	6.29	6.60	6.93	7.28	7.64	8.02	8.43	8.85	9.29	9.75	10.24	10.75	11.29	11.86	12.45	13.07	13.72	14.41	15.13	15.89	16.68	17.52	18.39	19.31
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	1.40	1.48	1.54	1.60	1.66	1.72	1.79	1.86
Depreciation	Rs/kWh	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.59	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.55	0.37	0.38	0.40	0.42	0.44	0.45	0.46	0.50	0.52	0.54	0.57	0.60	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86	0.90	0.95	0.99	1.04	1.09
RoE	Rs/kWh	0.56	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.83	0.83	0.83	0.83	0.83
Total COG	Rs/kWh	12.26	8.83	9.13	9.44	9.77	10.12	10.49	10.88	11.29	11.72	12.19	12.55	13.17	13.71	14.27	14.87	15.23	15.94	16.68	17.40	18.28	19.98	20.18	21.12	22.11	23.15

Variable Cost for FY 2020-21	5.99	Rs/kWh
Levellised Tariff (Fixed)	2.93	Rs/kWh
Levellised Tariff FY 2020-21	**8.92**	**Rs/kWh**

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)	552.00

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%	2.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	17.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	195.60	278.39	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.00	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.86	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-14.74	0.00	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	52.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.50	-11.71	-11.84	-11.92	-11.96	-11.99	-12.00	-4.95	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.09	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Per unit benefit	Rs/Unit	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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
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 Levellised	0.76	Rs/kWh
Electricity Generation (Levellised)	5.50	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

					Annexure 2.8E
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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3305.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17

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		304.41	323.83	340.02	357.03	374.87	393.62	413.30	433.96	455.66	478.44	502.36	527.48	553.86	581.55	610.63	641.16	673.22	706.88	742.22	779.33	818.30	859.21	902.17	947.28	994.65

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		45.42	48.20	53.05	51.97	55.07	55.84	58.13	60.42	62.74	65.11	67.54	70.21	72.91	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		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.68	39.74	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.35	4.42	1.47	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		19.61	20.23	21.22	22.04	23.00	24.02	25.09	26.21	27.31	28.52	29.83	31.30	32.71	34.25	35.83	37.27	39.07	40.95	42.92	44.99	47.29	49.57	51.95	54.47	57.12
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		172.12	171.78	170.57	171.42	171.48	171.63	171.90	172.31	172.87	173.57	174.43	175.45	176.64	178.00	179.56	165.15	170.08	175.21	180.55	186.14	200.99	207.05	213.37	219.96	225.92

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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
Per unit Variable Cost	Rs/kWh	7.79	5.00	5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	15.35	16.12
O&M expn	Rs/kWh	1.05	0.76	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.02	1.06	1.10	1.14	1.19	1.23	1.27	1.32	1.37	1.42	1.48	1.54	1.60	1.66	1.72	1.79	1.86
Depreciation	Rs/kWh	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.47	0.31	0.32	0.34	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.70	0.73	0.77	0.80	0.84	0.88	0.93
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	10.64	7.79	8.03	8.35	8.58	8.80	9.15	9.45	9.82	10.15	10.57	10.97	11.39	11.84	12.31	12.80	13.07	13.62	14.29	14.95	15.64	16.62	17.29	18.04	18.91	19.79

Variable Cost for FY 2020-21	5.00	Rs/kWh
Levellised Tariff (Fixed)	2.65	Rs/kWh
Levellised Tariff FY 2020-21	**7.65**	**Rs/kWh**

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)	652.00

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%	2.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	16.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-16.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.50	-11.71	-11.83	-11.91	-11.96	-11.99	-12.00	-5.85	0.01	0.00	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.09	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	0.32	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	0.19	0.17	0.16	0.14

Tax Benefit Levellised	8.16	[illegible]
Electricity Generation (Levellised)	5.90	[illegible]
Levellised benefit	**0.14**	**[illegible]**

					Annexure 2.8F
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	%	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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		305.53	320.59	336.62	353.45	371.13	389.68	409.17	429.63	451.11	473.66	497.35	522.21	548.33	575.74	604.53	634.75	666.49	699.82	734.81	771.55	810.13	850.63	893.16	937.82	984.71

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		46.47	48.70	50.06	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		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	39.74	36.80	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		19.35	20.57	20.94	21.86	22.91	23.81	24.87	25.98	27.15	28.36	29.67	31.02	32.45	33.94	35.52	36.94	38.72	40.59	42.54	44.59	46.80	49.12	51.49	53.94	56.54
Return on Equity	Rs Lakh		33.19	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.59	42.59	42.59	42.59	42.59
Total Fixed Cost	Rs Lakh		171.96	171.62	171.39	171.28	171.29	171.42	171.69	172.09	172.63	173.32	174.17	175.17	176.35	177.70	179.23	164.82	169.73	174.64	180.18	186.74	200.57	206.64	212.90	219.47	225.11

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	7.71	4.95	5.19	5.45	5.73	6.01	6.31	6.63	6.96	7.31	7.68	8.06	8.46	8.89	9.33	9.80	10.29	10.80	11.34	11.91	12.50	13.13	13.79	14.47	15.20	15.96
O&M expn	Rs/kWh	1.06	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	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	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	0.33	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.45	0.48	0.50	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92
RoE	Rs/kWh	0.56	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.69	0.69	0.69	0.69	0.69
Total COG	Rs/kWh	10.56	7.73	7.98	8.23	8.50	8.79	9.09	9.41	9.75	10.11	10.49	10.89	11.30	11.74	12.21	12.70	12.96	13.55	14.17	14.83	15.51	16.30	17.13	17.82	18.75	19.62

Variable Cost for FY 2020-21	4.95	Rs/kWh
Levellised Tariff (Fixed)	2.85	Rs/kWh
Levellised Tariff FY 2020-21	**7.80**	**Rs/kWh**

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)	652.00

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%	2.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	195.60	228.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	178.39	193.77	56.85	20.34	-1.56	-14.71	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.55	0.01	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	0.54	0.50	0.46	0.42	0.38	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.15	0.14

Tax Benefit Levellised	0.16	Rs/kWh
Electricity Generation (Levelised)	5.90	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

					Annexure 2.8G
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

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		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		45.32	48.21	[illegible]	[illegible]	[illegible]	55.91	58.18	60.42	62.74	65.14	67.64	70.23	72.93	75.73	78.63	81.65	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.58	39.73	36.79	33.85	30.91	27.96	25.02	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		[illegible]	20.36	21.73	22.15	23.13	24.15	25.22	26.35	27.54	28.79	30.10	31.47	32.92	34.44	36.03	37.69	39.21	41.12	43.15	45.25	47.56	49.88	52.25	54.74	57.33
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Fixed Cost	**Rs Lakh**		172.22	171.80	171.66	171.58	171.61	171.78	172.04	172.46	173.02	173.73	174.59	175.62	176.82	178.19	179.75	165.38	170.35	175.44	180.81	186.43	201.29	207.34	213.67	220.27	227.16

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.34	5.03	5.28	5.55	5.82	6.11	6.42	6.74	7.08	7.43	7.80	8.19	8.60	9.03	9.48	9.96	10.45	10.98	11.53	12.10	12.71	13.35	14.01	14.71	15.45	16.22
O&M expn	Rs/kWh	1.05	0.73	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	1.49	1.54	1.60	1.66	1.72	1.79	1.86
Depreciation	Rs/kWh	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.59	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.47	[illegible]	0.33	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
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.56	0.56	0.56	0.58	0.59
Total COG	**Rs/kWh**	10.69	7.82	8.07	8.33	8.60	8.88	9.25	9.53	9.87	10.23	10.62	11.02	11.45	11.90	12.37	12.87	13.13	13.74	14.27	15.03	15.73	15.61	17.37	18.17	19.07	19.92

Variable Cost for FY 2020-21	5.03	Rs/kWh
Levellised Tariff (Fixed)	2.86	Rs/kWh
Levellised Tariff FY 2020-21	**7.88**	**Rs/kWh**

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)	[illegible]

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	1%	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	195.30	226.22	91.26	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	[illegible]	[illegible]	0.00	0.00	0.00

		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**
Net Depreciation Benefit	Rs Lakh	178.09	191.79	56.83	20.34	-1.57	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.88	-34.10	-34.23	-34.31	-34.36	-18.72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax Benefit	Rs Lakh	62.24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Energy generation	MU	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Per unit benefit	Rs/Unit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levellised	9.15	Rs Lakh
Electricity Generation (Levellised)	6.17	MU
Levellised benefit	**0.15**	**Rs/kWh**

					Annexure 2.8H
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3384.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		315.75	331.57	348.15	365.55	383.83	403.02	423.17	444.33	466.55	489.88	514.37	540.09	567.09	595.45	625.22	656.48	689.31	723.77	759.96	797.96	837.86	879.75	923.74	969.92	1018.42

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		46.32	48.10	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	81.65	84.79	88.04	91.42	94.93	98.57	102.35	106.28	110.35	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.59	38.74	35.30	33.55	30.21	27.91	25.32	22.06	19.53	16.10	13.25	10.30	7.33	4.42	1.47	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		19.73	20.64	21.54	22.56	23.47	24.51	25.60	26.75	27.96	29.22	30.55	31.95	33.42	34.97	36.59	38.27	39.92	41.52	43.44	45.50	46.90	50.50	53.09	55.84	58.36
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.14	33.16	33.18	33.15	33.18	33.19	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	**Rs Lakh**		172.60	172.19	171.93	171.91	171.95	172.12	172.41	172.85	173.43	174.16	175.05	176.10	177.32	178.72	180.31	164.95	170.51	175.09	181.48	187.11	200.01	206.12	214.49	221.13	228.06

Levelised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.97	5.12	5.37	5.64	5.92	6.22	6.53	6.86	7.20	7.56	7.94	8.33	8.75	9.19	9.65	10.13	10.64	11.17	11.73	12.32	12.93	13.58	14.26	14.97	15.72	16.50
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	1.41	1.48	1.54	1.60	1.66	1.72	1.79	1.86
Depreciation	Rs/kWh	0.44	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.35	0.69	0.64	0.59	0.55	0.51	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.49	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.95
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	**Rs/kWh**	10.84	7.91	8.16	8.43	8.71	9.01	9.32	9.65	10.00	10.37	10.75	11.17	11.61	12.06	12.54	13.06	13.32	13.84	14.58	15.25	15.96	16.85	17.63	18.44	19.30	20.20

Variable Cost for FY 2020-21	5.12	Rs/kWh
Levelised Tariff (Fixed)	2.36	Rs/kWh
Levelised Tariff FY 2020-21	**7.48**	**Rs/kWh**

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)	[illegible]
Capital Cost (Rs Lakh)	[illegible]

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%	2.88%	0.00%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	18.75	0.00	[illegible]	[illegible]	[illegible]	[illegible]	0.00	0.00

Accelerated Depreciation		**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	135.70	268.72	91.29	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	[illegible]	[illegible]	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	118.49	193.77	56.85	20.34	-1.56	-14.72	-22.60	-27.33	-30.17	-31.87	-32.89	-33.51	-33.87	-34.09	-34.23	-34.31	-34.35	-18.73	0.03	[illegible]	[illegible]	[illegible]	0.00	0.00	0.00
Tax Benefit	Rs Lakh	37.34	67.71	19.87	7.11	-0.55	-5.14	-7.90	-9.56	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-6.60	0.01	0.01	[illegible]	[illegible]	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	2.02	1.10	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.11	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	0.32	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	0.19	0.17	0.16	0.14

Tax Benefit Levelised	3.15	Rs Lakh
Electricity Generation (Levelised)	5.?? [illegible]	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

					Annexure 2.8I
Assumption for Biomass Based Rankine Cycle Project Parameters				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 Amout	Rs. Lakh	195.60
			Loan Amount	Rs. Lakh	456.40
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	3557.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

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		331.97	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	56.01	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	102.36	106.28	110.36	114.59
Depreciation	Rs Lakh		30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	30.43	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04	13.04
Interest on term loan	Rs Lakh		42.98	39.74	36.80	33.86	30.91	27.96	25.03	22.08	19.13	16.19	13.25	10.30	7.36	4.42	1.47	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		20.53	21.52	22.48	23.45	24.49	25.54	26.72	27.91	29.19	30.52	31.92	33.39	34.93	36.55	38.25	39.81	41.73	43.75	45.56	48.09	50.53	52.97	55.53	58.22	61.04
Return on Equity	Rs Lakh		33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	33.18	42.09	42.09	42.09	42.09	42.09
Total Fixed Cost	Rs Lakh		173.34	173.07	172.92	172.88	172.97	173.19	173.54	174.03	174.67	175.44	176.42	177.54	178.83	180.31	181.97	167.69	172.74	178.01	183.20	189.23	204.25	210.46	216.94	223.71	230.78

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Variable Cost	Rs/kWh	4.38	5.38	5.66	5.93	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.75	9.20	9.65	10.14	10.65	11.18	11.74	12.33	12.94	13.59	13.77	14.39	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	0.99	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	0.11	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	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Int. on term loan	Rs/kWh	0.36	0.69	0.64	0.60	0.55	0.50	0.45	0.41	0.36	0.31	0.26	0.21	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.30	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.82	0.86	0.90	0.94	0.99
RoE	Rs/kWh	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.68	0.68	0.68	0.68	0.68
Total COG	Rs/kWh	11.27	8.19	8.46	8.73	9.03	9.34	9.67	10.02	10.39	10.76	11.19	11.62	12.06	12.55	13.06	13.60	13.90	14.54	15.21	15.92	16.65	17.58	18.39	19.25	20.15	21.09

Variable Cost for FY 2020-21	5.35	Rs/kWh
Levellised Tariff (Fixed)	2.90	Rs/kWh
Levellised Tariff FY 2020-21	8.25	Rs/kWh

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)	[illegible]

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%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.21	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	13.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	195.80	225.20	91.28	54.77	32.86	19.72	11.83	7.10	4.26	2.56	1.53	0.92	0.55	0.33	0.20	0.12	0.07	0.04	0.03	0.02	0.01	0.01	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	178.37	190.77	56.85	20.34	-1.57	-14.71	-22.60	-27.33	-30.17	-31.87	-32.90	-33.51	-33.87	-34.09	-34.23	-34.31	-34.36	-13.66	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	62.34	66.67	19.87	7.11	-0.55	-5.14	-7.90	-9.55	-10.54	-11.14	-11.49	-11.71	-11.84	-11.91	-11.96	-11.99	-12.00	-4.77	0.01	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	2.02	1.08	0.32	0.12	-0.01	-0.08	-0.13	-0.15	-0.17	-0.18	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.08	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
Applicable Discounting Factor		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	0.19	0.17	0.16	0.14	0.13

Tax Benefit Levellised	8.16	Rs Lakh
Electricity Generation (Levelised)	5.92	MU
Levellised Benefit	0.14	Rs/kWh

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					Annexure 3A
Assumption for Bagasse based Cogeneration Project Parameters				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	%	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		Tariff Period	Years	25
		Debt Equity	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	1878.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration Power Project														
Units Generation	**Unit**	**Year-->**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Installed Capacity	MW		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61

Units Generation	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Installed Capacity	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61

Variable Cost	**Unit**	**Year-->**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Bagasse Cost	Rs. Lakh		118.53	124.46	130.68	137.21	144.07	151.28	158.84	166.78	175.12	183.88	193.07	202.73	212.86

Variable Cost	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Bagasse Cost	223.51	234.68	246.42	258.74	271.67	285.26	299.52	314.50	330.22	346.73	364.07	382.27

Fixed Cost	**Unit**	**Year-->**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
O&M Expenses	Rs Lakh		24.52	25.46	26.44	27.45	28.51	29.60	30.74	31.91	33.14	34.41	35.73	37.10	38.53
Depreciation	Rs Lakh		21.45	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79
Interest on term loan	Rs Lakh		30.57	28.46	26.36	24.25	22.14	20.03	17.92	15.81	13.70	11.60	9.49	7.38	5.27
Interest on working Capital	Rs Lakh		8.23	8.55	8.88	9.21	9.56	9.93	10.30	10.70	11.25	11.65	12.06	12.73	13.34
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77
Total Fixed Cost	**Rs Lakh**		108.88	108.03	107.23	106.49	105.80	105.18	104.61	104.12	100.68	103.32	100.94	102.83	102.76

Fixed Cost	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
O&M Expenses	40.01	41.54	43.13	44.79	46.51	48.29	50.14	52.07	54.07	56.14	58.29	60.53
Depreciation	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	3.16	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on working Capital	13.82	14.54	15.02	15.73	16.47	17.25	18.06	18.91	19.77	20.65	21.64	22.67
Return on Equity	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	102.55	102.69	91.26	93.62	90.98	99.64	104.31	110.57	113.40	116.48	119.62	122.89

Levelised tariff corresponding to Useful life															
Per Unit Cost of Generation	**Unit**		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Per unit Variable Cost	Rs/kWh	5.12	3.28	3.45	3.62	3.80	3.99	4.19	4.40	4.62	4.85	5.09	5.35	5.62	5.90
O&M expn	Rs/kWh	0.85	0.68	0.71	0.74	0.76	0.79	0.82	0.85	0.88	0.92	0.95	0.99	1.03	1.07
Depreciation	Rs/kWh	0.54	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Int. on term loan	Rs/kWh	0.43	0.85	0.79	0.73	0.67	0.61	0.56	0.50	0.44	0.38	0.32	0.26	0.20	0.15
Int. on working capital	Rs/kWh	0.31	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.33	0.34	0.35	0.37
RoE	Rs/kWh	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Total COG	Rs/kWh	9.03	6.30	6.44	6.59	6.75	6.92	7.11	7.30	7.51	7.72	7.96	8.20	8.47	8.74

Per Unit Cost of Generation	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Per unit Variable Cost	6.19	6.50	6.83	7.17	7.53	7.90	8.30	8.71	9.15	9.61	10.09	10.59
O&M expn	1.11	1.15	1.19	1.24	1.29	1.34	1.39	1.44	1.50	1.56	1.62	1.68
Depreciation	0.60	0.60	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Int. on term loan	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	0.38	0.40	0.42	0.44	0.45	0.48	0.50	0.53	0.55	0.58	0.61	0.63
RoE	0.66	0.66	0.66	0.66	0.66	0.66	0.67	0.84	0.84	0.84	0.84	0.84
Total COG	9.04	9.35	9.38	9.76	10.19	10.64	11.11	11.76	12.29	12.85	13.45	14.00

Variable Cost for FY 2020-21	3.28	Rs/kWh
Levelised Tariff (Fixed)	2.51	Rs/kWh
Levelised Tariff FY 2020-21	[illegible]	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	[illegible]

Years	**Unit**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
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%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66

Years	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Book Depreciation (%)	5.28%	5.28%	5.28%	5.28%	2.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation (Rs Lakh)	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Opening	%	100%	70%	35%	21%	15%	9%	5%	3%	2%	1%	1%	0%	0%
Allowed during the year	%	30%	35%	14%	6%	5%	3%	2%	1%	1%	0%	0%	0%	0%
Closing	%	70%	35%	21%	15%	9%	5%	3%	2%	1%	1%	0%	0%	0%
Accelerated Depreciation	Rs Lakh	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40

Accelerated Depreciation	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Opening	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Allowed during the year	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accelerated Depreciation	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	-1.12	-10.54	-16.18	-19.57	-21.61	-22.83	-23.56	-24.00	-24.26
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	-0.39	-3.68	-5.66	-6.84	-7.55	-7.98	-8.23	-8.39	-8.48
Energy generation	MU	1.80	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Per unit benefit	Rs/Unit	2.47	1.34	0.39	0.14	-0.01	-0.10	-0.16	-0.19	-0.21	-0.22	-0.23	-0.23	-0.23
Discounting Factor		1.00	0.92	0.85	0.78	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.41	0.37
Applicable Discounting Factor		1.00	0.96	0.89	0.81	0.75	0.69	0.63	0.58	0.54	0.50	0.46	0.42	0.39

	14	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Net Depreciation Benefit	-24.42	-24.52	-24.57	-24.61	-13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	-8.53	-8.57	-8.59	-8.60	-4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Per unit benefit	-0.24	-0.24	-0.24	-0.24	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor	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	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 Levelised	5.84	Rs Lakh
Electricity Generation (Levelised)	3.45	MU
Levelised benefit	0.17	Rs/kWh

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					Annexure 3B
Assumption for Bagasse based Cogeneration Project Parameters				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	%	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	2671.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		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	4.25	4.25	4.25	4.25	4.25

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**
Bagasse Cost	Rs Lakh		198.55	208.48	218.92	229.85	241.34	253.41	266.08	279.38	293.35	308.02	323.42	339.59	356.57	374.40	393.12	412.77	433.41	455.08	477.84	501.73	526.81	553.15	580.81	609.85	640.35

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		24.52	25.46	26.44	27.45	28.51	29.60	30.74	31.91	33.14	34.41	35.73	37.10	38.53	40.00	41.54	43.13	44.79	46.51	48.29	50.14	52.07	54.06	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.46	26.35	24.25	22.14	20.03	17.92	15.81	13.70	11.60	9.49	7.38	5.27	3.16	1.05	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		12.39	12.91	13.46	14.04	14.65	15.29	15.97	16.68	17.42	18.21	19.03	19.90	20.81	21.75	22.77	23.86	24.93	26.09	27.35	28.57	30.04	31.43	33.01	34.58	36.36
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	**Rs Lakh**		113.04	112.40	111.82	111.30	110.84	110.48	110.16	109.96	109.83	109.77	109.81	109.94	110.16	110.43	110.92	96.90	102.66	105.66	108.65	111.82	121.59	125.04	128.54	132.39	136.30

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.29	4.67	4.90	5.15	5.41	5.68	5.96	6.26	6.57	6.90	7.25	7.61	7.99	8.39	8.81	9.25	9.71	10.20	10.71	11.24	11.80	12.39	13.01	13.66	14.35	15.07
O&M expn	Rs/kWh	0.90	0.58	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.14	1.18	1.22	1.27	1.32	1.37	1.42
Depreciation	Rs/kWh	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term Loan	Rs/kWh	0.36	0.72	0.67	0.62	0.57	0.52	0.47	0.42	0.37	0.32	0.27	0.22	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.40	0.29	0.30	0.32	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56	0.59	0.61	0.64	0.67	0.71	0.74	0.78	0.81	0.85
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	**Rs/kWh**	9.50	7.33	7.56	7.80	8.02	8.29	8.55	8.80	9.16	9.46	9.83	10.19	10.57	10.98	11.41	11.86	12.08	12.61	13.19	13.80	14.43	15.25	15.96	16.69	17.46	18.27

Variable Cost for FY 2020-21	4.67	Rs/kWh
Levellised Tariff (Fixed)	2.63	Rs/kWh
Levellised Tariff FY 2020-21	**7.30**	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	467.66

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%	2.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	30%	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%	39%	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%	30%	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	140.10	183.45	65.86	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	-1.12	-10.54	-16.18	-19.57	-21.61	-22.83	-23.56	-24.00	-24.26	-24.42	-24.52	-24.57	-24.61	-13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.58	14.25	5.09	-0.39	-3.69	-5.66	-6.85	-7.56	-7.99	-8.25	-8.40	-8.49	-8.55	-8.58	-8.60	-8.61	-4.70	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	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	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.19	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.11	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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	0.15	0.14

Tax Benefit Levelised	5.84	Rs/kWh
Electricity Generation (Levelised)	4.07	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

Assumption for Bagasse based Cogeneration Project Parameters				State	Annexure 3C Maharashtra
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	2632.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81

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
Bagasse Cost	Rs. Lakh		221.40	232.47	244.21	256.42	269.23	282.69	296.82	311.66	327.24	343.61	360.79	378.83	397.77	417.66	438.54	460.47	483.49	507.66	533.05	559.70	587.68	617.07	647.92	680.32	714.33

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		24.57	25.46	26.44	27.45	28.51	29.60	30.74	31.91	33.14	34.41	35.73	37.10	38.50	40.00	41.54	43.13	44.79	46.51	48.29	50.14	52.07	54.08	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.46	26.35	24.25	22.14	20.03	17.92	15.81	13.70	11.60	9.49	7.39	5.27	3.16	1.06	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		13.56	14.16	14.78	15.42	16.10	16.81	17.55	18.33	19.16	20.05	20.97	21.93	22.95	24.01	25.11	26.14	27.47	28.73	30.12	31.58	33.26	34.81	36.48	38.25	40.12
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	Rs Lakh		114.23	113.66	113.13	112.68	112.30	112.00	111.78	111.64	111.56	111.62	111.75	111.97	112.30	112.73	113.28	102.36	106.32	108.34	111.53	114.93	124.26	129.26	132.92	136.66	140.74

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	Unit	Lev	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	4.17	4.60	4.83	5.07	5.33	5.59	5.87	6.17	6.45	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08	11.63	12.21	12.82	13.46	14.14	14.84
O&M expn	Rs/kWh	0.76	0.51	0.53	0.55	0.57	0.59	0.62	0.64	0.66	0.69	0.72	0.74	0.77	0.80	0.83	0.87	0.90	0.93	0.97	1.00	1.04	1.08	1.12	1.17	1.21	1.26
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.32	0.64	0.59	0.55	0.50	0.46	0.42	0.37	0.33	0.28	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	0.00
Int. on working capital	Rs/kWh	0.42	0.28	0.29	0.31	0.32	0.33	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83
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	0.63	0.63	0.63	0.63	0.63
Total COG	Rs/kWh	6.53	6.96	7.19	7.47	7.67	7.95	8.20	8.43	8.66	9.12	9.46	9.82	10.20	10.60	11.02	11.47	11.70	12.23	12.67	13.33	14.02	14.80	15.40	16.21	16.96	17.78

Variable Cost for FY 2020-21	4.60	Rs/kWh
Levellised Tariff (Fixed)	2.34	Rs/kWh
Levellised Tariff (FY 2020-21)	**6.94**	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	467.92

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%	2.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	-1.12	-10.54	-16.19	-19.57	-21.57	-22.83	-23.56	-24.00	-24.26	-24.42	-24.50	-24.57	-24.61	-13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	-0.39	-3.68	-5.66	-6.84	-7.55	-7.98	-8.23	-8.39	-8.48	-8.53	-8.57	-8.59	-8.60	-4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.41	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
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	-0.10	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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	0.15	0.14

Tax Benefit Levelised	5.84	Rs/kWh
Electricity Generation (Levelised)	4.57	Rs/kWh
Levellised benefit	**0.13**	**Rs/kWh**

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					Annexure 3D
Assumption for Bagasse based Cogeneration Project Parameters				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	%	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	2351.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		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	4.25	4.25	4.25	4.25	4.25

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**
Bagasse Cost	Rs Lakh		174.75	183.50	192.67	202.31	212.43	223.05	234.20	245.91	258.20	271.12	284.67	298.90	313.85	329.54	346.02	363.32	381.49	400.56	420.59	441.62	463.70	486.88	511.23	536.79	563.63

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		24.52	25.46	26.44	27.45	28.51	29.61	30.74	31.91	33.14	34.41	35.73	37.10	38.53	40.00	41.54	43.13	44.77	46.51	48.29	50.14	52.07	54.06	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.46	26.36	24.25	22.14	20.03	17.92	15.81	13.70	11.60	9.49	7.38	5.27	3.16	1.05	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		11.15	11.51	12.10	12.61	13.15	13.72	14.31	14.94	15.59	16.29	17.00	17.78	18.59	19.43	20.32	21.52	22.50	23.36	24.26	25.11	26.78	28.04	29.35	30.61	32.29
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	35.15	35.15	35.15	35.15	35.15
Total Fixed Cost	**Rs Lakh**		111.80	111.10	110.45	109.87	109.35	108.91	108.53	108.23	108.00	107.86	107.80	107.82	107.94	108.16	108.47	97.93	100.06	102.73	106.57	109.89	118.32	121.60	125.02	128.59	132.31

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	5.11	4.11	4.32	4.53	4.76	5.00	5.25	5.51	5.79	6.07	6.38	6.70	7.03	7.38	7.75	8.14	8.55	8.98	9.42	9.90	10.39	10.91	11.46	12.03	12.63	13.26
O&M expn	Rs/kWh	0.65	0.58	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.14	1.18	1.22	1.27	1.32	1.37	1.42
Depreciation	Rs/kWh	0.36	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.35	0.72	0.67	0.62	0.57	0.52	0.47	0.42	0.37	0.32	0.27	0.22	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.39	0.26	0.27	0.28	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.57	0.59	0.63	0.66	0.69	0.72	0.76
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	**Rs/kWh**	8.30	6.74	6.90	7.10	7.31	7.57	7.81	8.06	8.30	8.61	8.91	9.23	9.57	9.92	10.30	10.69	10.84	11.33	11.84	12.38	12.95	13.86	14.51	14.92	15.65	16.37

Variable Cost for FY 2020-21	4.11	Rs/kWh
Levellised Tariff (Fixed)	2.54	Rs/kWh
Levellised Tariff FY 2020-21	**6.64**	**Rs/kWh**

Determination of AD for Bagasse Based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	457.00

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%	2.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.31	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	123.61	153.45	55.36	33.22	22.34	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	127.27	135.78	40.77	14.57	-1.12	-10.54	-15.18	-18.57	-21.61	-22.83	-23.56	-24.09	-24.26	-24.42	-24.52	-24.57	-24.61	-13.42	0.02	0.01	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.55	47.52	14.23	5.09	-0.39	-3.69	-5.31	-6.50	-7.56	-7.99	-8.23	-8.43	-8.48	-8.53	-8.57	-8.59	-8.60	-4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	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	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.12	0.33	0.12	-0.01	-0.09	-0.12	-0.15	-0.18	-0.19	-0.19	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.11	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	0.13
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.63	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	0.19	0.17	0.16	0.14

Tax Benefit Levellised	3.84	Rs Lakh
Electricity Generation (Levellised)	4.07	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

Assumption for Bagasse based Cogeneration Project Parameters				State	Annexure 3E 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	%	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	2023.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81

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
Bagasse Cost	Rs Lakh		170.24	178.75	187.69	197.07	206.93	217.28	228.14	239.55	251.53	264.10	277.31	291.17	305.73	321.02	337.07	353.92	371.62	390.20	409.71	430.19	451.70	474.29	498.00	522.90	549.05

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		24.57	25.51	26.44	27.45	28.51	29.60	30.74	31.91	33.13	34.41	35.73	37.10	38.53	40.00	41.54	43.13	44.79	46.51	48.29	50.14	52.07	54.06	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.45	26.35	24.26	22.14	20.03	17.92	15.81	13.70	11.60	9.49	7.38	5.27	3.15	1.05	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		10.97	11.13	11.84	12.33	12.87	13.42	14.00	14.61	15.25	15.93	16.63	17.38	18.17	19.01	19.86	20.46	21.59	22.62	23.71	24.85	26.14	27.39	28.71	30.09	31.54
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	**Rs Lakh**		111.67	110.65	110.19	109.60	109.07	108.61	108.21	107.96	107.65	107.48	107.41	107.42	107.52	107.72	108.01	96.70	99.48	102.24	105.11	108.10	117.69	120.95	124.34	127.87	131.56

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	3.51	3.54	3.71	3.90	4.10	4.30	4.51	4.74	4.98	5.23	5.49	5.76	6.05	6.35	6.67	7.00	7.35	7.72	8.11	8.51	8.94	9.38	9.85	10.35	10.87	11.41
O&M expn	Rs/kWh	0.71	0.51	0.53	0.55	0.57	0.59	0.62	0.64	0.66	0.69	0.72	0.74	0.77	0.80	0.83	0.86	0.90	0.93	0.97	1.00	1.04	1.08	1.12	1.17	1.21	1.26
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	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Int. on term loan	Rs/kWh	0.37	0.64	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	0.00
Int. on working capital	Rs/kWh	0.33	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.57	0.60	0.63	0.66
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	0.63	0.63	0.63	0.63	0.63
Total COG	**Rs/kWh**	7.78	5.86	6.02	6.19	6.37	6.57	6.77	6.99	7.22	7.46	7.72	7.99	8.29	8.59	8.91	9.25	9.37	9.79	10.23	10.70	11.19	11.83	12.37	12.93	13.52	14.14

Variable Cost for FY 2020-21	3.54	Rs/kWh
Levellised Tariff (Fixed)	2.27	Rs/kWh
Levellised Tariff - FY 2020-21	**5.81**	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	467.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	-1.12	-10.54	-16.18	-19.57	-21.61	-22.83	-23.56	-24.00	-24.26	-24.42	-24.51	-24.57	-24.61	-13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	-0.39	-3.68	-5.65	-6.84	-7.55	-7.98	-8.23	-8.39	-8.48	-8.53	-8.57	-8.59	-8.60	-4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.41	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
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	-0.10	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
Applicable Discounting Factor		1.00	0.96	0.89	0.81	0.75	0.69	0.64	0.59	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 Levelised	3.21	Rs/kWh
Electricity Generation (Levelised)	4.80	Rs/kWh
Levelised benefit	**0.11**	**Rs/kWh**

					Annexure 3F
Assumption for Bagasse based Cogeneration Project Parameters				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	%	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		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	4.25	4.25	4.25	4.25	4.25

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**
Bagasse Cost	Rs Lakh		139.53	146.50	153.83	161.52	169.60	178.08	186.99	196.33	206.15	216.45	227.28	238.64	250.57	263.10	276.25	290.07	304.57	319.80	335.79	352.58	370.21	388.72	408.16	428.56	449.99

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		24.52	25.46	26.44	27.45	28.51	29.60	30.74	31.92	33.14	34.41	35.73	37.11	38.53	40.01	41.55	43.14	44.80	46.52	48.31	50.16	52.07	54.06	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.46	26.35	24.25	22.14	20.03	17.92	15.81	13.70	11.60	9.49	7.38	5.27	3.16	1.05	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		9.30	9.69	10.08	10.43	10.90	11.38	11.86	12.35	12.89	13.45	13.94	14.55	15.20	15.84	16.70	17.29	18.11	18.87	19.27	20.42	21.56	22.36	24.04	25.19	26.37
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	**Rs Lakh**		109.97	109.18	108.44	107.75	107.13	106.57	106.08	105.66	105.30	105.02	104.81	104.69	104.65	104.71	104.85	93.53	95.00	98.58	101.27	104.97	113.46	115.50	119.07	122.97	126.41

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**Unit**	**Levellised**	**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	5.11	3.28	3.45	3.62	3.80	3.99	4.19	4.41	4.62	4.85	5.09	5.35	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.71	9.14	9.60	10.08	10.59
O&M exp	Rs/kWh	0.60	0.58	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.14	1.18	1.22	1.27	1.32	1.37	1.42
Depreciation	Rs/kWh	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.36	0.72	0.67	0.62	0.57	0.52	0.47	0.42	0.37	0.32	0.27	0.22	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.27	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.32	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.44	0.47	0.48	0.52	0.54	0.57	0.59	0.62
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	**Rs/kWh**	7.53	5.87	6.01	6.17	6.33	6.51	6.70	6.89	7.10	7.33	7.56	7.81	8.08	8.36	8.65	8.96	9.02	9.42	9.84	10.29	10.74	11.33	11.88	12.42	12.97	13.56

Variable Cost for FY 2020-21	3.28	Rs/kWh
Levelised Tariff (Fixed)	2.51	Rs/kWh
Levellised Tariff FY 2020-21	**5.80**	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	467.00

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%	2.64%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.45	0.10	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	140.10	153.45	65.38	33.23	20.54	14.17	8.47	5.09	3.56	1.93	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	127.77	128.79	40.72	8.57	-4.12	-10.54	-16.18	-19.57	-21.81	-22.83	-23.55	-24.00	-24.26	-24.42	-24.52	-24.57	-24.61	-13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.52	14.73	5.09	-0.39	-3.68	-5.66	-6.84	-7.55	-7.99	-8.23	-8.40	-8.49	-8.53	-8.57	-8.59	-8.60	-4.70	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	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	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12	-0.01	-0.09	-0.13	-0.16	-0.18	-0.19	-0.19	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.11	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
Applicable Discounting Factor		1.00	0.96	0.89	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	0.19	0.17	0.16	0.14

Tax Benefit Levellised	5.84	Rs/kWh
Electricity Generation (Levelised)	4.07	Rs/kWh
Levellised benefit	**0.14**	**Rs/kWh**

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					Annexure 3G
Assumption for Bagasse based Cogeneration Project Parameters				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	%	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	2095.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51

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
Bagasse Cost	Rs Lakh		132.21	138.34	145.79	153.07	160.72	168.75	177.20	186.06	195.36	205.13	215.38	226.15	237.46	249.33	261.80	274.89	288.63	303.07	318.22	334.13	350.84	368.38	386.80	406.14	426.44

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		24.52	25.46	26.44	27.45	28.51	29.60	30.74	31.21	33.14	34.45	35.73	37.10	38.53	40.00	41.54	43.13	44.79	46.51	48.29	50.14	52.07	54.06	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.46	26.36	24.25	22.14	20.03	17.92	15.81	13.70	11.59	9.48	7.38	5.27	3.16	1.05	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		8.94	9.29	9.66	10.06	10.45	10.87	11.35	11.80	12.33	12.56	13.42	14.06	13.62	15.27	15.95	16.50	17.26	18.10	18.95	19.66	20.90	21.89	22.30	24.07	25.17
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	**Rs Lakh**		109.59	108.76	108.03	107.31	106.87	106.09	105.57	105.12	104.74	104.43	104.20	104.04	103.97	103.98	104.10	92.24	95.17	97.71	100.38	103.11	112.45	115.44	118.53	121.81	125.19

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh	5.71	3.66	3.49	4.02	4.24	4.45	4.68	4.91	5.16	5.41	5.69	5.97	6.27	6.58	6.91	7.25	7.82	8.00	8.40	8.87	9.25	9.72	10.21	10.72	11.26	11.81
O&M expn	Rs/kWh	0.95	0.68	0.71	0.73	0.76	0.79	0.82	0.85	0.88	0.92	0.95	0.99	1.03	1.07	1.11	1.15	1.10	1.24	1.29	1.34	1.39	1.44	1.50	1.56	1.62	1.68
Depreciation	Rs/kWh	0.54	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Int. on term loan	Rs/kWh	0.43	0.85	0.79	0.73	0.67	0.61	0.55	0.50	0.44	0.38	0.32	0.26	0.20	0.15	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.36	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.33	0.34	0.35	0.37	0.38	0.41	0.42	0.44	0.45	0.48	0.50	0.53	0.55	0.58	0.61	0.64	0.67	0.70
RoE	Rs/kWh	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.84	0.84	0.84	0.84	0.84
Total COG	**Rs/kWh**	8.65	5.70	6.86	7.03	7.21	7.41	7.61	7.83	8.07	8.31	9.58	9.85	9.15	9.46	9.79	10.14	10.18	10.60	11.19	11.60	12.11	12.84	13.40	14.09	14.63	15.28

Variable Cost for FY 2020-21	3.55	Rs/kWh
Levellised Tariff (Fixed)	2.94	Rs/kWh
Levellised Tariff FY 2020-21	[illegible]	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	457.00

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%	2.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	24.66	13.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	140.10	163.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	127.77	138.79	40.72	14.57	-1.12	-10.56	-16.19	-19.57	-21.61	-22.83	-23.56	-24.00	-24.26	-24.42	-21.52	-20.57	-24.61	-13.42	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.65	48.50	14.23	5.09	-0.39	-3.69	-5.66	-6.84	-7.55	-7.98	-8.23	-8.39	-8.48	-8.53	-8.57	-8.59	-8.60	-4.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	1.80	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51
Per unit benefit	Rs/Unit	2.47	1.34	0.41	0.14	-0.01	-0.10	-0.16	-0.19	-0.21	-0.22	-0.23	-0.23	-0.23	-0.24	-0.24	-0.24	-0.24	-0.13	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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	0.15	0.14

Tax Benefit Levelised	5.84	Rs Lakh
Electricity Generation (Levelised)	3.45	MU
Levelised benefit	0.17	**Rs/kWh**

					Annexure 3C
Assumption for Bagasse based Cogeneration Project Parameters				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	%	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
			Interest Rate	%	9.67%
		Equity Component	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%
			Discount Rate	%	8.6[illegible]%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	2274.00
			GCV Bagasse	kcal/kg	2250.00
			Bagasse price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Bagasse Based Cogeneration 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		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	4.25	4.25	4.25	4.25	4.25

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**
Bagasse Cost	Rs Lakh		158.64	177.49	186.37	195.69	205.47	215.74	226.53	237.86	249.75	262.24	275.35	289.11	303.57	318.75	334.69	351.42	368.99	387.44	406.81	427.15	448.51	470.94	494.48	519.21	545.17

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		24.52	25.46	26.44	27.45	28.51	29.60	30.73	31.91	33.14	34.41	35.73	37.10	38.53	40.00	41.54	43.13	44.79	46.51	48.29	50.14	52.07	54.06	56.14	58.29	60.53
Depreciation	Rs Lakh		21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	21.79	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34
Interest on term loan	Rs Lakh		30.57	28.46	26.35	24.25	22.14	20.03	17.92	15.81	13.70	11.59	9.48	7.37	5.27	3.16	1.05	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		10.96	11.36	11.77	12.27	12.71	13.24	13.91	14.52	15.04	15.43	16.53	17.37	17.96	18.87	19.73	20.47	21.45	22.48	23.54	24.62	25.97	27.22	28.53	29.90	31.35
Return on Equity	Rs Lakh		23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	23.77	30.15	30.15	30.15	30.15	30.15
Total Fixed Cost	**Rs Lakh**		111.51	110.79	110.13	109.53	108.99	108.53	108.13	107.81	107.56	107.29	107.31	107.21	107.44	107.09	107.88	96.71	99.35	102.09	104.96	107.94	117.51	120.77	124.15	127.68	131.35

Levellised tariff corresponding to Useful life																											
Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	4.20	3.73	4.18	4.39	4.60	4.83	5.07	5.33	5.60	5.87	6.17	6.48	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08	11.63	12.21	12.82
O&M expn	Rs/kWh	0.80	0.58	0.60	0.62	0.65	0.67	0.70	0.72	0.75	0.78	0.81	0.84	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.14	1.18	1.22	1.27	1.32	1.37	1.42
Depreciation	Rs/kWh	0.45	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Int. on term loan	Rs/kWh	0.35	0.72	0.67	0.62	0.57	0.52	0.47	0.42	0.37	0.32	0.27	0.22	0.17	0.12	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.37	0.26	0.27	0.28	0.29	0.30	0.31	0.33	0.34	0.35	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58	0.61	0.64	0.67	0.70	0.74
RoE	Rs/kWh	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.71	0.71	0.71	0.71	0.71
Total COG	**Rs/kWh**	6.77	6.36	6.74	6.97	7.18	7.40	7.65	7.87	8.13	8.44	8.69	9.00	9.33	9.67	10.03	10.41	10.54	11.02	11.52	12.04	12.58	13.32	13.92	14.55	15.22	15.91

Variable Cost for FY 2020-21	3.98	Rs/kWh
Levellised Tariff (Fixed)	2.57	Rs/kWh
Levellised Tariff FY 2020-21	**6.55**	**Rs/kWh**

Determination of AD for Bagasse based Cogeneration Project	
Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs A/MW)	487.69

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	%	2.25%	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%	2.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	12.33	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	24.06	13.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	144.16	153.45	65.38	39.23	23.54	14.12	8.47	5.08	3.05	1.83	1.10	0.66	0.40	0.24	0.14	0.09	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	127.77	128.79	40.72	14.57	-1.17	-10.54	-16.18	-19.57	-21.51	-22.91	-23.55	-24.09	-24.25	-24.42	-24.52	-24.57	-24.61	-13.12	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	44.66	49.50	14.20	5.09	-0.30	-3.68	-5.66	-6.84	-7.35	-7.93	-8.23	-8.39	-8.45	-8.53	-8.57	-8.59	-8.60	-4.59	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.13	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	4.25	4.25	4.25	4.25
Per unit benefit	Rs/Unit	2.10	1.14	0.33	0.12	-0.03	-0.09	-0.13	-0.16	-0.17	-0.19	-0.19	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.11	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
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 Levelised	5.84	Rs Lakh
Electricity Generation (Levelised)	4.07	Rs/kWh
Levelised benefit	**0.14**	**Rs/kWh**

					Annexure 4A
Assumption for Biomass Gasifier based Project Parameters				**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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	**Project Cost**	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	**Financial Assumption**	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	**Fuel Related Assumptions**	Biomass	Fuel Price	Rs./T	3326.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	**Generation and Sale of Power**	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
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		309.78	325.27	341.53	358.61	376.54	395.37	415.13	435.89	457.69	480.57	504.60	529.83	556.32	584.14	613.34	644.01	676.21	710.02	745.52	782.80	821.94	863.03	906.19	951.50	999.07
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		61.31	63.68	66.15	68.64	71.29	74.01	76.85	79.80	82.55	86.04	89.34	92.77	96.33	100.03	103.86	107.85	111.99	116.28	120.75	125.38	130.19	135.18	140.37	145.75	151.35
Depreciation	Rs Lakh		20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85
Interest on term Loan	Rs Lakh		29.02	27.04	25.00	23.00	20.99	18.99	16.99	14.99	12.98	10.99	8.99	6.98	4.98	2.98	0.98	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		19.59	20.48	21.36	22.45	23.03	24.47	25.54	26.71	27.90	29.22	30.56	31.99	33.49	35.05	36.72	38.28	40.12	42.05	44.07	46.20	48.51	50.95	53.52	55.47	58.57
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	29.30	29.30	29.30	29.30	29.30
Total Fixed Cost	**Rs Lakh**		**153.15**	**154.37**	**155.78**	**157.22**	**158.87**	**160.65**	**162.61**	**164.71**	**167.02**	**169.44**	**172.14**	**174.99**	**178.04**	**181.30**	**184.78**	**177.53**	**183.51**	**189.74**	**196.22**	**202.98**	**216.16**	**223.49**	**231.13**	**239.09**	**247.38**

Levellised tariff corresponding to Useful Life

Per Unit Cost of Generation	**Unit**	**Levellised**	**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	**7.20**	4.62	4.85	5.09	5.34	5.61	5.90	6.19	6.50	6.83	7.17	7.52	7.90	8.30	8.71	9.15	9.60	10.08	10.59	11.12	11.67	12.25	12.87	13.51	14.19	14.90
O&M expn	Rs/kWh	**1.27**	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26
Depreciation	Rs/kWh	**0.28**	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	**0.22**	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	**0.64**	0.29	0.31	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	0.79	0.83	0.87
RoE	Rs/kWh	**0.34**	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.44	0.44	0.44	0.44	0.44
Total COG	**Rs/kWh**	**9.75**	**6.89**	**7.15**	**7.42**	**7.66**	**7.98**	**8.29**	**8.62**	**8.96**	**9.32**	**9.69**	**10.09**	**10.51**	**10.96**	**11.41**	**11.90**	**12.25**	**12.82**	**13.42**	**14.05**	**14.70**	**15.48**	**16.20**	**16.94**	**17.75**	**18.59**

Variable Cost for FY 2020-21	4.62	Rs/kWh
Levellised Tariff (Fixed)	2.55	Rs/kWh
Levellised Tariff FY 2020-21	**7.17**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	[illegible]

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%	[illegible]	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Depreciation																										
Opening	%	100%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Allowed during the year	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Closing	%	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Accelerated Depreciation	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.74	1.04	0.63	0.38	0.23	0.14	0.08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Net Depreciation Benefit	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax Benefit	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Energy generation	MU	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Per unit benefit	Rs/Unit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Applicable Discounting Factor		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levelised	5.54	Rs Lakh
Electricity Generation (Levelised)	5.41	MU
Levelised benefit	**0.09**	**Rs/kWh**

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					Annexure 4B
Assumption for Biomass Gasifier based Project Parameters				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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capita		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3786.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71

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		367.82	370.25	388.77	408.21	428.62	450.05	472.55	496.18	520.99	547.03	574.39	603.11	633.27	664.92	698.17	733.08	769.73	808.22	848.63	891.06	935.61	982.40	1031.52	1083.09	1137.25

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		51.31	53.59	56.11	58.51	71.28	74.09	76.85	79.80	80.84	88.04	89.34	92.77	96.33	100.03	103.86	107.85	111.92	116.28	120.75	125.38	130.19	135.19	140.37	145.75	151.35
Depreciation	Rs Lakh		20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	9.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	5.86
Interest on term loan	Rs Lakh		29.90	27.02	25.00	23.97	21.98	18.79	15.99	14.98	12.99	10.99	8.99	6.98	4.99	2.98	0.98	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		21.43	22.31	23.74	24.33	25.97	27.25	29.52	29.84	31.22	32.68	34.20	35.81	37.49	39.24	41.11	42.90	44.91	47.05	49.33	51.69	54.12	57.05	59.81	62.71	65.75
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	23.65	28.60	28.60	28.60	28.60
Total Fixed Cost	**Rs Lakh**		**155.37**	**156.71**	**158.18**	**159.80**	**161.57**	**163.50**	**165.59**	**167.85**	**170.30**	**172.94**	**175.78**	**178.79**	**182.03**	**185.49**	**189.18**	**193.16**	**188.37**	**194.84**	**201.58**	**208.40**	**222.06**	**229.09**	**237.54**	**245.93**	**254.56**

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	**8.10**	6.25	6.52	6.82	7.10	7.39	7.71	7.65	7.40	7.77	8.12	8.57	8.99	9.44	9.92	10.41	11.30	11.48	12.05	12.66	13.29	13.96	14.65	15.38	16.16	16.98
O&M expn	Rs/kWh	**1.27**	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26
Depreciation	Rs/kWh	**0.28**	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	**0.22**	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	**0.48**	0.33	0.34	0.36	0.37	0.39	0.31	0.43	0.44	0.47	0.49	0.51	0.53	0.55	0.58	0.61	0.64	0.67	0.70	0.74	0.77	0.81	0.85	0.89	0.94	0.98
RoE	Rs/kWh	**0.34**	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.41	0.43	0.43	0.43
Total COG	**Rs/kWh**	**10.89**	**7.58**	**7.85**	**8.16**	**8.47**	**8.80**	**9.15**	**9.52**	**9.90**	**10.31**	**10.74**	**11.19**	**11.66**	**12.16**	**12.66**	**13.23**	**13.65**	**14.22**	**14.86**	**15.66**	**16.40**	**17.26**	**18.07**	**18.93**	**19.82**	**20.75**

Variable Cost for FY 2020-21	5.25	Rs/kWh
Levellised Tariff (Fixed)	[illegible]	Rs/kWh
Levellised Tariff FY 2020-21	**7.88**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	440.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.72	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	132.00	153.65	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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**
Net Depreciation Benefit	Rs Lakh	[illegible]	[illegible]	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.25	-23.31	-23.34	-12.73	[illegible]	[illegible]	[illegible]	[illegible]	0.00	0.00	0.00
Tax Benefit	Rs Lakh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-7.18	-7.57	-7.81	-7.95	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	[illegible]	[illegible]	[illegible]	[illegible]	0.00	0.00	0.00
Energy generation	MU	[illegible]	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Per unit benefit	Rs/Unit	1.75	[illegible]	[illegible]	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	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	0.41	0.37	0.34	0.31	0.29	0.27	0.25	0.23	0.21	[illegible]	[illegible]	0.15	0.14	0.14
Applicable Discounting Factor		1.00	0.95	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	[illegible]	[illegible]	0.17	0.15	0.14

Tax Benefit Levellised	5.54	Rs Lakh
Electricity Generation (Levellised)	5.71	Rs/kWh
Levellised benefit	**0.09**	**Rs/kWh**

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					Annexure 4C
Assumption for Biomass Gasifier based Project Parameters				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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3872.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier Based Power Project																										
Unit 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		5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71

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		300.63	378.66	397.60	417.48	438.35	460.27	483.28	507.45	532.82	559.46	587.43	616.81	647.65	680.03	714.03	749.73	787.22	826.58	867.91	911.30	956.87	1004.71	1054.95	1107.69	1163.06

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		51.31	53.65	56.11	58.61	71.28	74.01	75.95	79.80	82.96	86.04	89.34	92.77	96.33	100.03	103.86	107.85	111.99	116.29	120.75	125.39	130.19	135.19	140.37	145.75	151.35
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.71	8.85	8.86	8.86	8.85	8.86	8.86	8.86	8.85	8.86	8.85
Interest on term loan	Rs Lakh		29.09	27.09	25.00	23.01	20.99	18.99	16.99	14.99	12.99	10.99	8.99	6.98	4.99	2.96	0.98	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		22.25	23.25	24.30	25.41	26.57	27.79	29.08	30.42	31.84	33.32	34.86	36.57	38.23	40.03	41.90	43.77	45.85	48.10	50.43	52.87	55.57	58.21	61.03	63.99	67.05
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	**Rs Lakh**		**155.79**	**157.14**	**158.64**	**160.28**	**162.06**	**164.03**	**166.15**	**168.45**	**170.92**	**173.58**	**176.44**	**179.60**	**182.78**	**186.26**	**190.01**	**193.82**	**189.27**	**195.79**	**202.54**	**209.85**	**223.17**	**230.85**	**238.96**	**247.20**	**255.90**

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levellised	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	5.33	5.60	5.90	6.23	6.54	6.86	7.21	7.57	7.95	8.34	8.75	9.20	9.66	10.13	10.65	11.19	11.71	12.31	12.94	13.59	14.27	14.98	15.73	16.52	17.34
O&M expn	Rs/kWh	1.27	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.18	1.24	1.28	1.33	1.39	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.89	1.94	2.02	2.09	2.17	2.26
Depreciation	Rs/kWh	0.28	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.22	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.18	0.15	0.13	0.10	0.07	0.04	0.01	0.00	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	0.50	0.52	0.54	0.57	0.60	0.63	0.66	0.69	0.72	0.75	0.79	0.83	0.87	0.91	0.95	1.00
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	**Rs/kWh**	**10.99**	**7.70**	**7.99**	**8.29**	**8.62**	**8.95**	**9.31**	**9.68**	**10.06**	**10.49**	**10.90**	**11.30**	**11.87**	**12.38**	**12.92**	**13.49**	**13.91**	**14.58**	**15.25**	**15.96**	**16.72**	**17.66**	**18.42**	**19.18**	**20.20**	**21.08**

Variable Cost for FY 2020-21	5.38	Rs/kWh
Levellised Tariff (Fixed)	2.61	Rs/kWh
Levellised Tariff FY 2020-21	**7.99**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	30%
Capital Cost (Rs Lakh)	443.00

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	%	2.02%	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%	2.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	17.72	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.75	0.01	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	132.90	155.06	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

	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
Net Depreciation Benefit	Rs Lakh	121.70	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.26	45.91	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	2.85	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Per unit benefit	Rs/Unit	1.79	0.80	0.20	0.07	-0.01	-0.06	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	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
Applicable Discounting Factor		1.00	0.95	0.88	0.81	0.75	0.69	0.64	0.58	0.54	0.50	0.46	0.42	0.39	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.15	0.14

Tax Benefit Levelised	5.54	Rs Lakh
Electricity Generation (Levelised)	5.31	MU
Levellised benefit	**0.09**	**Rs/kWh**

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					Annexure 4D
Assumption for Biomass Gasifier based Project Parameters				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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3960.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71

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		368.43	387.27	406.63	426.97	448.31	470.73	494.27	518.98	544.93	572.18	600.79	630.82	662.36	695.48	730.25	766.77	805.11	845.36	887.63	932.01	978.61	1027.55	1078.92	1132.87	1189.51

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		61.31	63.59	66.11	68.61	71.28	74.01	76.85	79.80	82.86	86.04	89.34	92.77	96.34	100.03	103.86	107.85	111.97	116.26	120.75	125.39	130.19	135.18	140.37	145.76	151.35
Depreciation	Rs Lakh		20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		29.00	27.00	25.00	23.00	20.99	18.99	16.99	14.99	12.99	10.99	8.99	6.98	4.98	2.98	0.99	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		22.67	23.79	24.77	25.90	27.08	28.34	29.65	31.02	32.47	33.98	35.57	37.25	39.00	40.84	42.73	44.76	46.91	49.09	51.45	53.95	56.56	59.31	62.27	65.29	68.49
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	**Rs Lakh**		**158.21**	**157.59**	**159.11**	**160.77**	**162.59**	**164.57**	**166.72**	**169.04**	**171.55**	**174.24**	**177.13**	**180.23**	**183.54**	**187.08**	**190.85**	**183.91**	**190.20**	**196.77**	**203.64**	**210.73**	**224.30**	**232.04**	**240.19**	**248.51**	**257.27**

Levelised tariff corresponding to Useful Life

Per Unit Cost of Generation	Unit	Levellised	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
Fuel and Variable Cost	Rs/kWh	**8.57**	5.50	5.78	6.05	6.37	6.69	7.02	7.37	7.74	8.13	8.53	8.96	9.41	9.88	10.37	10.89	11.43	12.01	12.61	13.24	13.90	14.59	15.32	16.09	16.89	17.74
O&M expn	Rs/kWh	**1.27**	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.25
Depreciation	Rs/kWh	**0.26**	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	**0.22**	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	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	0.40	0.42	0.44	0.45	0.48	0.51	0.50	0.55	0.58	0.61	0.64	0.67	0.70	0.73	0.77	0.80	0.84	0.89	0.93	0.97	1.02
RoE	Rs/kWh	**0.34**	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	**Rs/kWh**	**11.19**	**7.83**	**8.12**	**8.44**	**8.76**	**9.11**	**9.47**	**9.89**	**10.25**	**10.68**	**11.13**	**11.60**	**12.09**	**12.61**	**13.16**	**13.74**	**14.18**	**14.84**	**15.54**	**16.27**	**17.04**	**17.84**	**18.70**	**19.67**	**20.60**	**21.67**

Variable Cost for FY 2020-21	5.50	Rs/kWh
Levelised Tariff (Fixed)	2.62	Rs/kWh
Levelised Tariff FY 2020-21	**8.12**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	443.60

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		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	132.90	155.65	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

		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
Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.97	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.25	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.37	-6.50	-7.18	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.46	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	[illegible]	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Per unit benefit	Rs/Unit	1.24	0.80	0.24	0.07	-0.01	-0.06	-0.09	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	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	0.41	0.37	0.34	0.32	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	0.25	0.24	0.22	0.20	0.19	0.17	0.16	0.14

Tax Benefit Levelised	5.54	Rs/kWh
Electricity Generation (Levelised)	5.71	Rs/kWh
Levelised benefit	**0.08**	**Rs/kWh**

					Annexure 4E
Assumption for Biomass Gasifier based 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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3305.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		6.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71

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		307.82	323.21	339.38	356.34	374.16	392.87	412.51	433.14	454.80	477.54	501.41	526.48	552.81	580.45	609.47	639.94	671.94	705.54	740.81	777.85	816.75	857.58	900.46	945.48	992.76

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		59.31	63.55	55.11	68.54	71.28	74.61	73.36	73.32	22.55	45.04	89.14	92.77	96.33	100.53	103.94	107.35	111.89	115.79	120.75	125.38	130.19	135.18	140.37	145.75	151.33
Depreciation	Rs Lakh		23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	27.40	20.25	20.69	20.69	20.99	20.69	20.69	9.35	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		27.92	27.02	25.66	23.01	20.99	18.98	16.36	13.99	11.78	10.98	8.93	6.08	4.91	2.98	0.98	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		19.50	20.37	21.28	22.24	23.24	21.29	25.40	26.55	27.74	29.02	30.41	31.43	33.31	34.47	36.53	38.30	39.89	41.81	43.83	45.94	48.24	50.57	53.00	55.56	58.24
Return on Equity	Rs Lakh		22.56	22.56	22.56	22.56	22.56	22.55	22.56	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.56	22.56	22.55	22.56	22.56	22.56	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	**Rs Lakh**		**143.05**	**154.38**	**155.61**	**157.11**	**158.74**	**160.51**	**162.48**	**164.59**	**166.87**	**169.33**	**171.97**	**174.81**	**177.85**	**181.11**	**184.60**	**177.32**	**183.29**	**189.60**	**195.95**	**202.72**	**215.89**	**223.21**	**230.63**	**234.76**	**247.08**

Levelised tariff corresponding to Useful life

Per Unit Cost of Generation	**Unit**	**Levellised**	**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	7.15	4.59	4.82	5.06	5.31	5.58	5.86	6.15	6.46	6.78	7.12	7.48	7.85	8.24	8.66	9.09	9.54	10.02	10.52	11.05	11.60	12.18	12.79	13.43	14.10	14.80
O&M expn	Rs/kWh	1.27	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.30	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26
Depreciation	Rs/kWh	0.28	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.23	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.44	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.43	0.45	0.47	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.69	0.72	0.75	0.79	0.83	0.87
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.39	0.43	0.43	0.43	0.43
Total COG	**Rs/kWh**	**9.70**	**6.87**	**7.12**	**7.39**	**7.66**	**7.95**	**8.25**	**8.57**	**8.91**	**9.27**	**9.65**	**10.04**	**10.46**	**10.90**	**11.36**	**11.84**	**12.10**	**12.75**	**13.35**	**13.97**	**14.67**	**15.40**	**16.13**	**16.87**	**17.66**	**18.49**

Variable Cost for FY 2020-21	4.59	Rs/kWh
Levelised Tariff (fixed)	2.55	Rs/kWh
Levellised Tariff FY 2020-21	**7.14**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	30%
Capital Cost (Rs Lakh)	445.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.73	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	132.50	155.05	62.07	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.13	0.08	0.05	0.03	0.02	0.01	0.01	[illegible]	[illegible]	[illegible]	[illegible]

Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.26	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.36	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.36	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Per unit benefit	Rs/Unit	1.26	0.89	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14

Tax Benefit Levelised	5.54	Rs Lakh
Electricity Generation (Levelised)	6.41	Rs/kWh
Levelised benefit	**0.08**	**Rs/kWh**

					Annexure 4F
Assumption for Biomass Gasifier based 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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3272.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71

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		304.75	319.99	335.99	352.79	370.43	388.95	408.39	428.81	450.25	472.77	496.41	521.23	547.29	574.65	603.38	633.55	665.23	698.49	733.42	770.09	808.59	849.02	891.47	936.05	982.85

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		61.31	63.66	66.11	68.64	71.28	74.01	76.85	79.80	82.86	86.04	89.34	92.77	96.33	100.03	103.86	107.85	111.99	116.29	120.75	125.39	130.19	135.18	140.37	145.75	151.35
Depreciation	Rs Lakh		20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term Loan	Rs Lakh		29.02	27.02	25.00	23.02	20.99	18.99	16.99	14.99	12.99	10.99	8.99	6.98	4.96	2.95	0.98	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		19.34	20.20	21.10	22.05	23.05	24.09	25.19	26.34	27.55	28.82	30.15	31.55	33.02	34.57	36.19	37.73	39.55	41.45	43.44	45.54	47.82	50.12	52.54	55.07	57.75
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.58	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	**Rs Lakh**		**152.09**	**154.10**	**155.44**	**156.92**	**158.55**	**160.33**	**162.28**	**164.36**	**166.63**	**169.08**	**171.71**	**174.54**	**177.57**	**180.82**	**184.28**	**178.99**	**182.84**	**189.14**	**195.59**	**202.32**	**215.47**	**222.76**	**230.37**	**238.29**	**246.54**

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**Unit**	**Levellised**	**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**
Fuel and Variable Cost	Rs/kWh	7.08	4.54	4.77	5.01	5.26	5.52	5.80	6.09	6.39	6.71	7.05	7.40	7.77	8.15	8.57	9.00	9.45	9.92	10.42	10.94	11.48	12.05	12.66	13.29	13.95	14.65
O&M expn	Rs/kWh	1.27	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26
Depreciation	Rs/kWh	0.28	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.22	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.43	0.29	0.30	0.31	0.33	0.34	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49	0.52	0.54	0.56	0.59	0.62	0.65	0.68	0.71	0.75	0.78	0.82	0.86
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43	0.43
Total COG	**Rs/kWh**	**9.63**	**6.82**	**7.07**	**7.33**	**7.60**	**7.88**	**8.19**	**8.51**	**8.85**	**9.20**	**9.57**	**9.96**	**10.36**	**10.81**	**11.27**	**11.75**	**12.09**	**12.65**	**13.24**	**13.85**	**14.50**	**15.27**	**15.94**	**16.73**	**17.51**	**18.33**

Variable Cost for FY 2020-21	4.54	Rs/kWh
Levelised Tariff (Fixed)	2.54	Rs/kWh
Levellised Tariff FY 2020-21	**7.08**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	[illegible]

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%	2.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.72	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	36%	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%	34%	15%	8%	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Closing	%	70%	36%	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	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.66	-22.36	-22.77	-23.02	-23.17	-23.26	-23.31	-12.73	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.36	46.01	13.50	4.83	-0.37	-3.49	-5.37	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.10	-8.13	-8.15	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	[illegible]	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	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
Applicable Discounting Factor		1.00	0.96	0.88	0.81	0.75	0.69	0.64	0.59	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	0.15	0.14

Tax Benefit Levelized	5.54	Rs Lakh
Electricity Generation (Levelized)	6.41	MU
Levelized benefit	**0.09**	**Rs/kWh**

					Annexure 4G
Assumption for Biomass Gasifier based Project Parameters				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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3326.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71

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		309.74	325.27	341.53	358.61	376.54	395.37	415.13	435.89	457.69	480.57	504.60	529.83	556.32	584.14	613.34	644.01	676.21	710.02	745.52	782.80	821.94	863.02	906.19	951.50	999.07

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		61.71	[illegible]	[illegible]	68.64	71.23	74.61	78.85	79.80	82.66	86.04	89.34	92.77	96.33	100.03	103.86	107.85	111.99	116.29	120.75	125.38	130.19	135.18	140.37	145.75	151.35
Depreciation	Rs Lakh		20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86	8.86
Interest on term loan	Rs Lakh		29.00	27.00	25.00	23.00	20.99	18.99	16.99	14.99	12.99	10.99	8.99	6.98	4.95	2.96	0.98	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		16.70	21.43	21.32	22.35	23.15	24.42	25.54	26.71	27.93	29.22	30.58	32.00	33.49	35.05	36.70	38.28	40.12	42.06	44.07	46.20	44.51	50.85	53.30	55.87	58.57
Return on Equity	Rs Lakh		22.59	22.55	22.56	22.55	22.55	22.56	22.56	22.56	22.55	22.56	22.56	22.56	22.55	22.55	22.55	22.55	22.55	22.55	22.56	22.55	28.60	28.51	28.60	28.56	28.60
Total Fixed Cost	**Rs Lakh**		**153.15**	**154.37**	**155.73**	**157.22**	**158.87**	**160.65**	**162.61**	**164.73**	**167.02**	**169.48**	**172.14**	**174.99**	**178.04**	**181.30**	**184.78**	**177.53**	**181.51**	**189.74**	**196.22**	**202.98**	**216.16**	**223.48**	**231.11**	**239.09**	**247.33**

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	**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**
Per unit Variable Cost	Rs/kWh	7.20	4.62	4.86	[illegible]	5.35	5.61	5.90	6.19	6.50	6.83	7.17	7.57	7.96	8.30	8.71	9.15	9.60	10.08	10.58	11.12	11.67	12.25	12.87	13.51	14.19	14.90
O&M exps	Rs/kWh	1.27	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.26
Depreciation	Rs/kWh	0.28	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.22	0.43	[illegible]	[illegible]	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.44	0.29	[illegible]	[illegible]	0.39	0.35	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.70	0.75	0.79	0.83	0.87
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	**Rs/kWh**	**9.75**	**6.90**	**7.15**	**7.42**	**7.69**	**7.98**	**8.29**	**8.62**	**8.96**	**9.32**	**9.69**	**10.09**	**10.51**	**10.95**	**11.41**	**11.90**	**12.25**	**12.82**	**13.42**	**14.04**	**14.70**	**15.48**	**16.20**	**16.96**	**17.75**	**18.59**

Variable Cost for FY 2020-21	4.62	Rs/kWh
Levellised Tariff (Fixed)	2.55	Rs/kWh
Levellised Tariff FY 2020-21	**7.12**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	443.00

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%	2.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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	132.90	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.25	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.35	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Per unit benefit	Rs/Unit	1.26	0.81	0.20	0.07	-0.01	-0.05	-0.09	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.97	[illegible]	0.79	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	0.33	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.15	0.14

Tax Benefit Levellised	5.54	Rs Lakh
Electricity Generation (Levellised)	6.41	Rs/kWh
Levellised benefit	**0.09**	**Rs/kWh**

					Annexure 4H
Assumption for Biomass Gasifier based Project Parameters				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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3384.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71

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		[illegible]	330.94	347.49	364.86	383.11	402.25	422.37	443.49	465.67	488.95	513.40	539.07	566.02	594.32	624.04	655.24	688.00	722.40	758.52	796.45	836.27	878.08	921.99	968.09	1016.49

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		61.31	63.55	66.11	68.54	71.28	74.01	76.86	79.80	82.86	86.04	89.34	92.77	96.33	100.03	103.86	107.85	111.99	116.28	120.75	125.38	130.19	135.19	140.37	145.75	151.35
Depreciation	Rs Lakh		20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	20.59	8.85	8.85	8.85	8.85	8.85	8.85	8.85	8.85	8.85	8.85
Interest on term loan	Rs Lakh		29.30	27.09	25.00	23.00	20.99	18.99	16.99	14.99	12.99	10.99	8.99	6.98	4.99	2.99	0.98	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		19.88	20.77	21.70	22.58	23.76	24.78	25.91	27.10	28.35	29.66	31.03	32.48	34.00	35.59	37.26	38.36	40.73	[illegible]	[illegible]	45.91	47.75	51.53	54.12	56.73	59.44
Return on Equity	Rs Lakh		22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	22.55	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	**Rs Lakh**		**153.43**	**154.66**	**156.04**	**157.55**	**159.21**	**161.02**	**162.99**	**165.12**	**167.43**	**169.92**	**172.59**	**175.47**	**178.54**	**181.83**	**185.33**	**178.31**	**184.12**	**190.13**	**196.50**	**203.69**	**214.90**	**224.27**	**231.95**	**239.95**	**248.28**

Levelised tariff corresponding to Useful life

Per Unit Cost of Generation	**Unit**	**Levelised**	**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	7.32	4.79	4.94	5.13	5.44	5.71	6.00	6.30	6.61	6.94	7.29	7.65	8.04	8.44	8.86	9.30	9.77	10.25	10.77	11.31	11.88	12.47	13.09	13.75	14.44	15.16
O&M expn	Rs/kWh	1.27	0.91	0.95	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.55	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.25
Depreciation	Rs/kWh	0.28	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.22	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. on working capital	Rs/kWh	0.44	0.30	0.31	0.32	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	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
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	**Rs/kWh**	**[illegible]**	**6.99**	**7.24**	**7.51**	**7.79**	**8.09**	**8.40**	**8.73**	**9.08**	**9.44**	**9.83**	**10.23**	**10.66**	**11.10**	**11.57**	**12.07**	**12.43**	**13.01**	**13.61**	**14.25**	**14.91**	**15.70**	**16.44**	**17.21**	**18.09**	**18.96**

Variable Cost for FY 2020-21	4.70	Rs/kWh
Levelised Tariff (Fixed)	2.56	Rs/kWh
Levelised Tariff FY 2020-21	**7.26**	**Rs/kWh**

Determination of AD for Biomass Gasifier based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs Lakh)	[illegible]

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%	2.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.70	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		**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%	1%	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	132.30	155.05	62.02	37.21	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.13	0.08	0.05	0.03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Net Depreciation Benefit	Rs Lakh	121.20	131.66	38.63	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.25	-23.31	-23.34	-12.71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tax Benefit	Rs Lakh	42.36	46.01	13.50	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.09	-8.13	-8.15	-8.16	-4.45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Energy generation	MU	3.35	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Per unit benefit	Rs/Unit	1.26	0.69	0.20	0.07	-0.01	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discounting Factor		1.00	0.92	[illegible]	0.75	0.72	[illegible]	[illegible]	0.56	0.52	[illegible]	0.44	0.40	0.37	0.34	0.31	0.29	0.27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tax Benefit Levelised	[illegible]	Rs Lakh
Electricity Generation (Levelised)	6.71	MU
Levelised benefit	**[illegible]**	**Rs/kWh**

					Annexure 4I
Assumption for Biomass Gasifier based Project Parameters				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%
			Plant Load Factor	%	85%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	443.00
			Capital Cost	Rs. Lakh	443
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	443.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	310.10
			Total Equity Amout	Rs. Lakh	132.90
			Loan Amount	Rs. Lakh	310.10
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15.00
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	132.90
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		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
		Biomass Stock		Months	4
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Fuel Price	Rs./T	3557.00
			Specific Fuel Consumption	kg/kWh	1.25
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of Hours		Hours	8766.00

Determination of Tariff Components	Biomass Gasifier 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		5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71

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		331.29	347.85	365.25	383.51	402.68	422.83	443.97	466.16	489.47	513.95	539.64	566.63	594.96	624.71	655.94	688.74	723.17	759.33	797.30	837.16	879.02	922.97	969.12	1017.58	1068.45

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		51.31	53.55	55.11	58.53	71.28	74.04	75.50	79.80	82.85	86.01	91.31	92.77	96.10	102.03	103.96	107.85	111.99	115.28	120.75	125.34	130.19	135.19	140.37	145.75	151.36
Depreciation	Rs Lakh		20.59	20.69	20.69	20.59	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.69	20.67	9.66	5.86	5.89	5.89	5.95	5.85	5.85	5.85	5.86	5.85
Interest on term loan	Rs Lakh		29.00	27.02	25.00	23.00	20.99	18.99	16.99	14.99	12.99	10.99	9.00	6.98	4.95	2.99	0.96	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		20.72	21.55	22.52	23.56	24.72	25.86	27.03	28.28	29.59	30.95	32.40	33.91	35.50	37.17	38.97	40.80	42.55	44.51	46.76	47.02	51.49	53.96	56.57	59.31	62.16
Return on Equity	Rs Lakh		22.56	22.55	22.56	22.55	22.55	22.55	22.55	22.55	22.56	22.55	22.55	22.55	22.55	22.56	22.55	22.56	22.55	22.56	22.56	22.55	26.60	26.60	26.60	26.60	26.60
Total Fixed Cost	Rs Lakh		154.26	155.54	156.96	158.52	160.22	162.09	164.11	166.30	168.67	171.22	173.96	176.90	180.04	183.40	186.99	179.85	183.95	190.34	196.85	205.88	219.33	226.81	234.46	242.52	250.99

Levellised tariff corresponding to Useful life

Per Unit Cost of Generation	Unit	Levellised	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
Fuel and Variable Cost	Rs/kWh	7.70	4.94	5.19	5.45	5.72	6.00	6.31	6.62	6.95	7.30	7.66	8.05	8.45	8.87	9.32	9.78	10.27	10.79	11.32	11.89	12.48	13.11	13.76	14.45	15.17	15.93
O&M expn	Rs/kWh	1.27	0.91	0.96	0.99	1.02	1.06	1.10	1.15	1.19	1.24	1.28	1.33	1.38	1.44	1.49	1.56	1.61	1.67	1.73	1.80	1.87	1.94	2.02	2.09	2.17	2.25
Depreciation	Rs/kWh	0.28	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Int. on term loan	Rs/kWh	0.22	0.41	0.46	0.37	0.34	0.31	0.28	0.25	0.22	0.19	0.16	0.13	0.10	0.07	0.04	0.01	0.00	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	0.34	0.35	0.37	0.39	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.54	0.61	0.63	0.67	0.70	0.73	0.77	0.80	0.84	0.88	0.93
RoE	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.43	0.43	0.43	0.43	0.43
Total COG	Rs/kWh	10.27	7.24	7.51	7.79	8.08	8.39	8.72	9.07	9.45	9.81	10.22	10.64	11.09	11.58	12.05	12.57	12.95	13.56	14.19	14.86	15.59	16.38	17.14	17.95	18.79	19.68

Variable Cost for FY 2020-21	4.94	Rs/kWh
Levellised Fixed Cost	2.58	Rs/kWh
Levellised Tariff (FY 2020-21)	7.52	Rs/kWh

Determination of AD for Biomass Gasifier Based Power Project

Depreciation amount	90%
Book Depreciation rate	5%
Tax Depreciation rate	40%
Additional Depreciation	20%
Income Tax (MAT)	17%
Income Tax (Normal Rates)	35%
Capital Cost (Rs. Lakh)	443.88

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	%	2.61%	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%	2.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	11.72	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.39	23.33	23.33	23.30	12.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accelerated Depreciation		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
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	137.90	155.06	[illegible]	[illegible]	22.33	13.40	8.04	4.82	2.89	1.74	1.04	0.63	0.38	0.23	0.14	0.08	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Net Depreciation Benefit	Rs Lakh	121.23	131.66	38.83	13.82	-1.06	-9.99	-15.35	-18.57	-20.50	-21.65	-22.35	-22.77	-23.02	-23.17	-23.25	-23.31	-23.34	-12.73	0.02	0.01	0.01	0.00	0.00	0.00	0.00
Tax Benefit	Rs Lakh	42.35	46.01	13.57	4.83	-0.37	-3.49	-5.36	-6.49	-7.16	-7.57	-7.81	-7.96	-8.04	-8.10	-8.12	-8.15	-8.16	-4.45	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.16	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Per unit benefit	Rs/Unit	1.34	0.59	0.20	0.07	-0.04	-0.05	-0.08	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discounting Factor		1.00	0.92	0.85	0.79	0.72	0.66	0.61	0.56	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15	0.14
Applicable Discounting Factor		0.96	0.88	0.81	0.75	0.69	0.64	0.59	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	0.19	0.17	0.16	0.15	0.14

Tax Benefit Levellised	5.54	Rs Lakh
Electricity Generation (Levellised)	5.41	Rs/kWh
Levellised benefit	0.10	Rs/kWh

					Annexure 5A
Assumption for Biogas based Project Parameters					
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	12%
			Plant Load Factor	%	90%
			Useful Life	Years	25.00
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	1,186.00
			Capital Cost	Rs. Lakh	1,186.00
			Capital Subsidy	Rs. Lakh	300.00
			Net Capital Cost	Rs. Lakh	886.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25.00
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	620.20
			Total Equity Amout	Rs. Lakh	265.80
			Loan Amount	Rs. Lakh	620.20
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	265.80
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	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	61.31
		O&M expenses p.a		Rs. Lakh	61.31
		Escalation factor		%	3.84%
5	Working Capital	O&M expenses p.a		Month	1
		Maintenance Spares	% of O&M exepenses	%	15%
		Receivables		Days	45
		Interest on Working Capital		% per annum	11.17%
6	Fuel Related Assumptions	Biogas	Fuel Price	Rs./T	1422.00
			Specific Fuel Consumption	kg/kWh	3.00
			Substrates price escalation factor	%	5%
7	Generation and Sale of Power	Number of Hours		Hours	8,766.00

Determination of Tariff Components — Biogas 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		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Generation	MU		6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94

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		338.56	353.39	371.06	389.61	409.09	429.55	451.03	473.58	497.26	522.12	548.22	575.63	604.42	634.64	666.37	699.69	734.67	771.41	809.98	850.47	893.00	937.65	984.53	1,033.76	1,085.45

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		61.31	63.66	66.11	68.64	71.28	74.01	76.85	79.80	82.86	86.04	89.34	92.77	96.33	100.03	103.86	107.85	111.99	116.28	120.75	125.38	130.19	135.18	140.37	145.76	151.35
Depreciation	Rs Lakh		41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72
Interest on term loan	Rs Lakh		58.00	54.00	50.00	46.00	42.00	38.00	34.00	30.00	26.00	22.00	18.00	14.00	10.00	6.00	2.00	-	-	-	-	-	-	-	-	-	-
Interest on working Capital	Rs Lakh		22.02	22.93	23.89	24.90	25.96	27.08	28.25	29.49	30.79	32.15	33.58	35.09	36.67	38.34	40.09	41.91	43.80	45.80	47.87	50.16	52.73	55.25	57.90	60.68	63.59
Return on Equity	Rs Lakh		45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	45.09	57.20	57.20	57.20	57.20	57.20
Total Fixed Cost	Rs Lakh		227.77	227.03	226.43	225.98	225.68	225.53	225.54	225.73	226.06	226.63	227.36	228.30	229.44	230.80	232.38	212.27	218.30	224.77	231.43	238.35	257.84	265.36	273.19	281.35	289.86

Levalised tariff corresponding to Useful life

Per Unit Cost of Generation	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
Per unit Variable Cost	Rs/kWh		4.85	5.09	5.34	5.61	5.89	6.19	6.50	6.82	7.16	7.52	7.90	8.29	8.71	9.14	9.60	10.08	10.58	11.11	11.67	12.25	12.86	13.51	14.18	14.89	15.63
O&M expn	Rs/kWh	1.23	0.88	0.92	0.95	0.99	1.03	1.07	1.11	1.15	1.19	1.24	1.29	1.34	1.39	1.44	1.50	1.55	1.61	1.67	1.74	1.81	1.88	1.95	2.02	2.10	2.18
Depreciation	Rs/kWh	0.53	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Int. on term loan	Rs/kWh	0.42	0.84	0.78	0.72	0.66	0.60	0.55	0.49	0.43	0.37	0.32	0.26	0.20	0.14	0.09	0.03	-	-	-	-	-	-	-	-	-	-
Int. on working capital	Rs/kWh	0.47	0.32	0.33	0.34	0.36	0.37	0.39	0.41	0.42	0.44	0.46	0.48	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.76	0.80	0.83	0.87	0.92
RoE	Rs/kWh	0.86	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.82	0.82	0.82	0.82	0.82
Total COG	Rs/kWh	3.31	8.13	8.36	8.61	8.87	9.14	9.44	9.75	10.07	10.42	10.78	11.17	11.58	12.01	12.47	12.95	13.14	13.73	14.35	15.00	15.68	16.58	17.33	18.12	18.94	19.81

Variable Cost for FY 2020-21	4.85	Rs/kWh
Levelised Tariff (Fixed)	3.31	Rs/kWh
Levelised Tariff FY 2020-21	**8.16**	**Rs/kWh**

Determination of AD for Biogas 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)	686.00

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%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Book Depreciation	Rs Lakh	23.30	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	46.78	25.52	-	-	-	-	-	-	-

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	%	100.00%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Allowed during the year	%	30.00%	35.00%	14.00%	8.40%	5.04%	3.02%	1.81%	1.09%	0.65%	0.39%	0.24%	0.14%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Closing	%	70.00%	35.00%	21.00%	12.60%	7.56%	4.54%	2.72%	1.63%	0.98%	0.59%	0.35%	0.21%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerated Depreciation	Rs Lakh	265.80	310.10	124.04	74.42	44.65	26.79	16.08	9.65	5.78	3.47	2.08	1.25	0.75	0.45	0.27	0.16	0.10	0.06	0.03	0.02	0.01	0.01	0.00	0.00	0.00

	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
Net Depreciation Benefit	Rs Lakh	242.41	263.32	77.26	27.64	-2.13	-19.99	-30.71	-37.14	-40.98	-43.31	-44.70	-45.53	-46.03	-46.33	-46.51	-46.67	-46.68	-25.46	0.03	0.02	0.01	0.01	0.00	0.00	0.00
Tax Benefit	Rs Lakh	84.71	92.01	27.00	9.66	-0.74	-6.98	-10.73	-12.98	-14.32	-15.13	-15.62	-15.91	-16.08	-16.19	-16.25	-16.29	-16.31	-8.90	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Energy generation	MU	3.47	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Per unit benefit	Rs/Unit	2.44	1.33	0.39	0.14	-0.01	-0.10	-0.15	-0.19	-0.21	-0.22	-0.22	-0.23	-0.23	-0.23	-0.23	-0.23	-0.23	-0.13	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
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	0.35	0.33	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.17	0.16	0.14

Tax Benefit Levelised	11.06	Rs Lakh
Electricity Generation (Levelised)	6.64	MU
Levelised benefit	0.17	Rs/kWh

Annexure - G

Fax: 03592 202927

Phones: 202706
PBX: 222908
222916

GOVERNMENT OF SIKKIM
POWER DEPARTMENT

No. 09/CE/IPP/2021/16

Dated 15/09/2021

To,
The Director (Tariff & Technical)
Sikkim State Electricity Regulatory Commission
Deorali
Gangtok.

Sub: Approval of tariff for the projects handed over to HGHPL.

Sir,
Reference to your office letter dated 08. 09. 2021 regarding file a fresh petition for the approval of tariff of projects handed over to M/s Hanuman Ganga Hydroprojects Pvt. Ltd., the department hereby authorise M/s Hanuman Ganga Hydroprojects Pvt. Ltd., to appear, represent, file petition and submit the supporting documents related to the matters pertaining to the PPA with HGHPL, duly following the procedure.

Thanking You,

Yours Sincerely

(O. K. Sharma)
Chief Engineer (HQ)
Power Department
Govt. of Sikkim
Gangtok

Received

Copy to HGHPL – for information and follow up with SSERC.

DIRECTOR (T&T)
SIKKIM STATE ELECTRICITY
REGULATORY COMMISSION
Gangtok, Sikkim

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BEFORE THE HON'BLE SIKKIM STATE ELECTRICITY REGULATORY COMMISSION, GANGTOK, SIKKIM

File No: ________________
Case No: ________________

IN THE MATTER OF: Petition for Approval of Power Purchase Agreement under Section 86 (1) (b) read with Sections 61, 62 and 64 of the Electricity Act, 2003

AND

IN THE MATTER OF:

Hanuman Ganga Hydroprojects Private Limited ... **Petitioner**

V/s

The Power Department, Government of Sikkim ... **Respondent**

VAKALATNAMA

I, Shri Vishnu Kumar Bhargava, Project Head (Commercial), authorized representative of the **Petitioner, M/s Hanuman Ganga Hydroprojects Private Limited**, in the above petition do hereby appoint and retain advocates of **Shardul Amarchand Mangaldas & Co** including **SHASHWAT KUMAR, RAHUL CHOUHAN,** and **NAMAN MITTAL,** Advocate(s), to appear, plead and act for me/us in the above petition and to conduct and prosecute all proceedings that may be taken in respect thereof and applications for return of documents, enter into compromise and to draw any moneys payable to me/us in the said proceeding and also appear in the said petition.

Rahul Chouhan
(RAHUL CHOUHAN)
R/1120/2013

PETITIONER THROUGH AUTHORISED REPRESENTATIVE

SHASHWAT KUMAR
(D-1690-2006)

Naman Mittal
NAMAN MITTAL
D/7429/2018

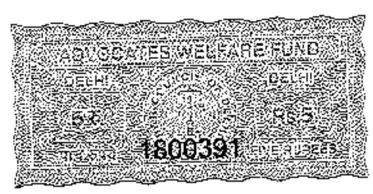
ACCEPTED

Place: Gangtok, Sikkim
Dated: ________________

Executed in my presence.

(Address for service on the Counsel of Petitioner)

Shardul Amarchand Mangaldas & Co.
Amarchand Towers, 216
Okhla Industrial Estate Phase III
New Delhi – 110020
Kind Attn: Mr. Shashwat Kumar
Email: shashwat.kumar@AMSShardul.com
Phone No.: +91 7428238330



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HANUMAN GANGA HYDROPROJECTS PRIVATE LIMITED

CERTIFIED TRUE COPY OF RESOLUTION PASSED IN THE MEETING OF BOARD OF DIRECTORS OF M/S. HANUMAN GANGA HYDROPROJECTS PRIVATE LIMITED HELD ON 25.09.2021 AT FLAT NO.1103, 11TH FLOOR, SURYA KIRAN BUILDING, 19 KG MARG, NEW DELHI-110001, AT 11.00 AM

"**RESOLVED THAT** the authority of the Board be and is hereby accorded to Mr. Vishnu Kumar Bhargava, Authorised Representative of the company to initiate/file petition/defend/pursue any legal action or proceeding(s) against any person(s)/party (ies) in connection with the approvals of tariffs for hydro projects taken from the Power Department of Sikkim on a ROMT basis, including but not limited to filing of Appeal."

"**FURTHER RESOLVED THAT** Vishnu Kumar Bhargava, authorized representative of the company be and is hereby authorized to file, prosecute such appropriate appeal, petition against the any order for and on behalf of the Company, to appoint Advocate(s)/ Counsel(s) Solicitor(s)/ to appoint further attorneys, to make statement on oath, to give evidence, to tender, file or withdraw documents, sign complaint, applications reply, or any documents, or to settle, withdraw, /compromise any legal proceedings, to prosecute or conduct the matter(s) and generally to do all acts and deeds which are incidental to and ancillary to the institution, conduct and prosecution of the proceedings and that his actions shall be binding upon the company."

Signature of Mr. Vishnu Kumar Bhargava..................................

For and on behalf of
M/s. Hanuman Ganga Hydroprojects Private Limited

Pardeep Garg
Director
DIN: 00546541

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Bank Statement

HDFC BANK
We understand your world

M/S. HANUMAN GANGA HYDROPROJECTS PRIVATE LTD
MASKEY FUELS MP GOLAI EAST
.
.
GANGTOK 737102
SIKKIM INDIA
JOINT HOLDERS :

Nomination : Not Registered

Account Branch : JANPATH
Address : HDFC BANK LTD
72,
VED MANSION
City : NEW DELHI 110001
State : DELHI
Phone no. : 011-61606161
OD Limit : 0.00
Currency : INR
Email : COMMERCIAL@HANUMANGANGA.COM
Cust ID : 140576862
Account No : 50200050042320 CAGEN
A/C Open Date : 09/07/2020
Account Status : Regular
RTGS/NEFT IFSC: HDFC0001660 MICR : 110240213
Branch Code : 1660 Product Code : 1313

From : 22/09/2021 To : 22/09/2021

Statement of account

Date	Narration	Chq./Ref.No.	Value Dt	Withdrawal Amt.	Deposit Amt.	Closing Balance
22/09/21	CHEQUE PAID SHANKER SEN - CHQ PAID - JAN PATH	0000000000000425	22/09/21	20,000.00		1,580,026.72
22/09/21	FT - DR - 50200034147274 - PIONEER SYSTE MS CORPORATION	0000000000000433	22/09/21	3,711.00		1,576,315.72
22/09/21	RTGS CR-PUNB0302800-GOGIA LEASING LTD-HA NUMAN GANGA HYDROPROJCETS PVT LTD-PUNBR5 20210922148559O9	PUNBR52021092214 855909	22/09/21		2,000,000.00	3,576,315.72
22/09/21	NEFT DR-CBIN0282266-DEVIKA CHETTRI -JANP ATH-N265211645493547	0000000000000436	22/09/21	3,800.00		3,572,515.72
22/09/21	NEFT DR-UCBA0000095-EXCEL MARKETING -JAN PATH-N265211645477285	0000000000000430	22/09/21	107,520.00		3,464,995.72
22/09/21	NEFT DR-UBIN0554804-SILIGURI TRADE LINK PVT LTD -JANPATH-N265211645433119	0000000000000435	22/09/21	480,000.00		2,984,995.72
22/09/21	BULK NEFT CR JANPATH 11 177002 DR - 0197 0920000l - NEFTOUTWARD NORTH TRANSITOR Y ACCOUNT	0000000000000424	22/09/21	177,002.00		2,807,993.72
22/09/21	NEFT DR-SBIN0032499-PLY GHAR-K G MARG-N2 652116455 4232	0000000000000432	22/09/21	44,640.00		2,763,353.72
22/09/21	NEFT DR-SBIN0007557-PHURBA SHERPA-K G MA RG-N265211645523659	0000000000000437	22/09/21	20,000.00		2,743,353.72
22/09/21	NEFT DR-UTIB0003552-HOMEFURNICA PVT LTD-JANPATH-N265211645448428	0000000000000429	22/09/21	102,100.00		2,641,253.72
22/09/21	NEFT DR-SBIN0012421-MAYARATH FUEL CENTRE -K G MARG-N265211645499691	0000000000000438	22/09/21	39,594.00		2,601,659.72
22/09/21	NEFT DR-PUNB0015300-GREENBOX DESIGNS -JA NPATH-N265211645783172	0000000000000445	22/09/21	108,000.00		2,493,659.72
22/09/21	NEFT DR-SBIN0001504-A.K. TRADING CO.-K G MARG-N265211645511780	0000000000000434	22/09/21	69,100.00		2,424,559.72
22/09/21	NEFT DR-UTIB0000112-SIKKIM STATE ELECTRI CITY REGULATORY COMMISSION-JANPATH-N2652	0000000000000444	22/09/21	420,000.00		2,004,559.72

HDFC BANK LIMITED
*Closing balance includes funds earmarked for hold and uncleared funds
Contents of this statement will be considered correct if no error is reported within 30 days of receipt of statement. The address on this statement is that on record with the Bank as at the day of requesting this statement.
State account branch GSTN:07AAACH2702H1Z2
HDFC Bank GSTIN number details are available at https://www.hdfcbank.com/personal/making-payments/online-tax-payment/goods-and-service-tax.
Registered Office Address: HDFC Bank House,Senapati Bapat Marg,Lower Parel,Mumbai 400013

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HDFC BANK
We understand your world

M/S. HANUMAN GANGA HYDROPROJECTS PRIVATE LTD
MASKEY FUELS MP GOLAI EAST
.
.
GANGTOK 737102
SIKKIM INDIA

JOINT HOLDERS :

Nomination : Not Registered

Account Branch : JANPATH
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72,
VED MANSION
City : NEW DELHI 110001
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Phone no. : 011-61606161
OD Limit : 0.00
Currency : INR
Email : COMMERCIAL@HANUMANGANGA.COM
Cust ID : 140576862
Account No : 50200050042320 CAGEN
A/C Open Date : 09/07/2020
Account Status : Regular
RTGS/NEFT IFSC: HDFC0001660 MICR : 110240213
Branch Code : 1660 Product Code : 1313

From : 22/09/2021 To : 22/09/2021

Statement of account

	11645773136					

STATEMENT SUMMARY :-

Opening Balance	Dr Count	Cr Count	Debits	Credits	Closing Bal
1,600,026.72	13	1	1,595,467.00	2,000,000.00	2,004,559.72

Generated On: 25-Sep-2021 13:57 **Generated By: 140576863** **Requesting Branch Code: NET**

This is a computer generated statement and does not require signature.

HDFC BANK LIMITED
*Closing balance includes funds earmarked for hold and uncleared funds
Contents of this statement will be considered correct if no error is reported within 30 days of receipt of statement.The address on this statement is that on record with the Bank as at the day of requesting this statement.
State account branch GSTN:07AAACH2702H1Z2
HDFC Bank GSTIN number details are available at https://www.hdfcbank.com/personal/making-payments/online-tax-payment/goods-and-service-tax.
Registered Office Address: HDFC Bank House,Senapati Bapat Marg,Lower Parel,Mumbai 400013