Appendix C Sheet -I

Assumption Parameters for SHP Category- III (5 MW to 25 MW)

Sr. No	Assumption Head	Sub Head	Sub Head(2)	Unit	Value
1	Power Generation	Capacity	Installed Generation Capacity	MW	1
			Capacity Utilisation Factor	%	55
			Auxiliary Consumption	%	0.5
			Transformation Losses	%	0.5
			Transmission losses	%	0.7
			Useful Life	%	40
		Free Energy Structure	For entire tariff period	%	13
2	Project Cost	Capital Cost /MW	Project Cost	Rs. Lacs/MW	700
3	Project Financing	Debt Equity	Tariff Period	Year	40
			Debt	%	70
			Equity	%	30
		Debt Component	Loan Amount	Rs. Lacs/MW	490
			Moratorium Period	Year	0
			Repyment Period	Year	12
			Interst Rate	%	12.875
		Equity Component	Equity Amount	Rs. Lacs/MW	210
			Return of equity for first 10 Years	%	19
			Return of equity from 11th Years onwards	%	22
4	Subsidy	Subsidy	MNRE Capital Subsidy for 5 MW	Rs. Lacs/MW	64
			90% Capital Subsidy adjusted	Rs. Lacs/MW (at 5 MW Capacity)	57.6
5	Depreciation	Depreciation	Recovery of Depreciation	%	90
			Annual Rate of Depreciation till completion of Loan Repayment (balance spread in remaining years)	%	5.83
6	Operation & Maintenance		Total O&M Expenses	Rs. Lacs/MW	18
			Annual Escalation	%	5.72
7	Working Capital		O&M Charges	Months	1
			Maintenance Spares	% of O&M expenses of a Year	15
			Recievables	Months	2
			Interest on Working capital	%	13.375
8	Accelerated Depreciation	Accelerated Depriciation	Book Depreciation	%	5.28
			Tax Depreciation	%	80
			Additional Depreciation	%	20
			Corporate Tax including Surcharge & Cess	%	32.445
9	Discount Factor		Discount Rate	%	10.58

GENERIC LEVELLISED TARIFF OF CATEGORY -III (Above 5 MW to 25 MW)

DETERMINATION OF TARIFF COMPONENT	UNIT	YEAR→		Y 01	Y 02	Y 03	Y 04	Y 05	Y 06	Y 07	Y 08	Y 09	Y 10	Y 11	Y 12	Y 13	Y 14	Y 15	Y 16	Y 17	Y 18
Gross Generation (MU)	(MU)			4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82
Auxiliary Consumption @ 1 % (.5% +.5%)	(MU)			0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Net Generation (MU)	(MU)			4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77
Project Line Losses @ 0.7% (MU)	(MU)			0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Saleable Energy (MU)	(MU)			4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74
Free Power	%			13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Net Saleable Energy (Levellised/ Annual)	(MU)		4.123	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12
Fixed Cost																					
RoE	Rs Lacs.			39.90	39.90	39.90	39.90	39.90	39.90	39.90	39.90	39.90	39.90	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20
Depreciation	Rs Lacs.			40.81	40.81	40.81	40.81	40.81	40.81	40.81	40.81	40.81	40.81	24.07	6.82	6.82	6.82	6.82	6.82	6.82	6.82
O&M	Rs Lacs.			18.00	19.03	20.12	21.27	22.49	23.77	25.13	26.57	28.09	29.70	31.39	33.19	35.09	37.10	39.22	41.46	43.83	46.34
WC Interest	Rs Lacs.			4.04	3.90	3.84	3.78	3.73	3.68	3.64	3.60	3.57	3.54	3.30	2.98	3.08	3.19	3.31	3.43	3.56	3.69
Interest on long Term loans	Rs Lacs.			56.75	47.79	42.53	37.27	32.01	26.76	21.50	16.24	10.98	5.73	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	Rs Lacs.			159.50	151.42	147.19	143.03	138.94	134.92	130.98	127.12	123.35	119.67	106.51	89.19	91.19	93.31	95.55	97.91	100.41	103.05
Generic Rate	**Rs / kWh**			**3.87**	**3.67**	**3.57**	**3.46**	**3.37**	**3.27**	**3.18**	**3.08**	**2.99**	**2.90**	**2.58**	**2.16**	**2.21**	**2.26**	**2.32**	**2.37**	**2.44**	**2.50**
Levellised Tariff Corresponding to Tariff Period																					
Per Unit Cost of Generation																					
RoE	Rs./ kWh		**1.022**	0.97	0.88	0.79	0.71	0.65	0.59	0.53	0.48	0.43	0.39	0.41	0.37	0.34	0.30	0.27	0.25	0.22	0.20
Depreciation	Rs./ kWh		**0.713**	0.99	0.90	0.81	0.73	0.66	0.60	0.54	0.49	0.44	0.40	0.21	0.05	0.05	0.04	0.04	0.04	0.03	0.03
O&M	Rs./ kWh		**0.807**	0.44	0.42	0.40	0.38	0.36	0.35	0.33	0.32	0.30	0.29	0.28	0.27	0.25	0.24	0.23	0.22	0.21	0.20
WC Interest	Rs./ kWh		**9.441**	9.80	8.55	7.62	6.77	6.06	5.41	4.83	4.31	3.87	3.47	2.93	2.39	2.24	2.10	1.96	1.84	1.73	1.62
Interest on long Term loans	Rs./ kWh		**0.538**	1.38	1.05	0.84	0.67	0.52	0.39	0.29	0.19	0.12	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Cost of Generation	Rs./ kWh		**3.174**	3.87	3.32	2.92	2.56	2.26	1.98	1.74	1.52	1.34	1.17	0.95	0.71	0.66	0.61	0.57	0.52	0.49	0.45
Disc factor		**10.58%**		1.00	0.90	0.82	0.74	0.67	0.60	0.55	0.49	0.45	0.40	0.37	0.33	0.30	0.27	0.24	0.22	0.20	0.18
Discounted Rate	Rs./ kWh			3.87	3.32	2.92	2.56	2.26	1.98	1.74	1.52	1.34	1.17	0.95	0.71	0.66	0.61	0.57	0.52	0.49	0.45

Generic Levellised Tariff without Accelerated Depreciation	Rs./ kWh	**3.174**
Accelerated Depreciation benefit (Levellised)as per sheet IV of Appendix C	Rs./ kWh	**0.284**
Generic Levellised Tariff considering Accelerated benefit	Rs./ kWh	**2.890**

1. **Generic Levellised Tariff without Accelerated Depreciation = Rs. 3.17 /kWh**
2. **Generic Levellised Tariff with Accelerated Depreciation = Rs. 2.89 /kWh**

NOTES:

1. The associated terms and conditions have been given in sheet -VI of Appendix -C
2. For Illustrations please refer Sheet -VII of Appendix -C
3. These calculations have been carried out on the basis of per MW of installed capacity

GENERIC LEVELLISED TARIFF OF CATEGORY -III (Above 5 MW to 25 MW)

DETERMINATION OF TARIFF COMPONENT	UNIT	Y 19	Y 20	Y 21	Y 22	Y 23	Y 24	Y 25	Y 26	Y 27	Y 28	Y 29	Y 30	Y 31	Y 32	Y 33	Y 34	Y 35	Y36	Y37	Y38	Y39	Y40
Gross Generation (MU)	(MU)	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83	4.82	4.82	4.82	4.83
Auxiliary Consumption @ 1 % (.5% +.5%)	(MU)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Net Generation (MU)	(MU)	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78	4.77	4.77	4.77	4.78
Project Line Losses @ 0.7% (MU)	(MU)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Saleable Energy (MU)	(MU)	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75	4.74	4.74	4.74	4.75
Free Power	%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Net Saleable Energy (Levellised/ Annual)	(MU)	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13
Fixed Cost																							
RoE	Rs Lacs.	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20
Depreciation	Rs Lacs.	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82
O&M	Rs Lacs.	48.99	51.79	54.75	57.89	61.20	64.70	68.40	72.31	76.45	80.82	85.44	90.33	95.50	100.96	106.73	112.84	119.29	126.12	133.33	140.96	149.02	157.54
WC Interest	Rs Lacs.	3.84	3.99	4.15	4.32	4.50	4.69	4.89	5.10	5.33	5.56	5.81	6.08	6.36	6.65	6.97	7.30	7.65	8.02	8.41	8.82	9.26	9.72
Interest on long Term loans	Rs Lacs.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	Rs Lacs.	105.85	108.80	111.93	115.23	118.72	122.41	126.31	130.43	134.79	139.40	144.28	149.43	154.88	160.63	166.72	173.16	179.96	187.16	194.76	202.80	211.30	220.29
Generic Rate	**Rs / kWh**	**2.57**	**2.63**	**2.72**	**2.80**	**2.88**	**2.96**	**3.07**	**3.17**	**3.27**	**3.37**	**3.50**	**3.63**	**3.76**	**3.89**	**4.05**	**4.20**	**4.37**	**4.53**	**4.73**	**4.92**	**5.13**	**5.33**
Levellised Tariff Corresponding to Tariff Period																							
Per Unit Cost of Generation																							
RoE	Rs./ kWh	0.18	0.17	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Depreciation	Rs./ kWh	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
O&M	Rs./ kWh	0.19	0.19	0.18	0.17	0.16	0.15	0.15	0.14	0.14	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.08
WC Interest	Rs./ kWh	1.52	1.43	1.35	1.27	1.19	1.12	1.06	1.00	0.95	0.89	0.84	0.80	0.76	0.71	0.68	0.64	0.61	0.57	0.55	0.52	0.49	0.47
Interest on long Term loans	Rs./ kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Cost of Generation	Rs./ kWh	0.42	0.39	0.36	0.34	0.32	0.29	0.27	0.26	0.24	0.22	0.21	0.20	0.18	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11	0.11
Disc factor		0.16	0.15	0.13	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Discounted Rate	Rs./ kWh	0.42	0.39	0.36	0.34	0.32	0.29	0.27	0.26	0.24	0.22	0.21	0.20	0.18	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11	0.11
Generic Levellised Tariff without Accelerated Depreciation	Rs./ kWh																						
Accelerated Depreciation benefit (Levellised)as per sheet IV of Appendix C	Rs./ kWh																						
Generic Levellised Tariff considering Accelerated benefit	Rs./ kWh																						

Computation of Per Unit Benefit of Accelerated Depreciation

Depreciation amount	90.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	80.00%
Additional Depreciation	20.00%
Income Tax (Normal Rates)	32.45%
Capital Cost in Lacs	700.000

Years ---------->	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Book Depreciation	%age	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%
Book Depreciation	Rs. Lacs	18.48	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	36.96	20.16
Accelerated Depreciation																			
Opening	%	100.00%	50.00%	5.00%	1.00%	0.20%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%							
Allowed during the year	%	50.00%	45.00%	4.00%	0.80%	0.16%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%							
Closing	%	50.00%	5.00%	1.00%	0.20%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%							
Accelerated Depreciation	Rs. Lacs	350.00	315.00	28.00	5.60	1.12	0.22	0.04	0.01	0.00	0.00	0.00							
Net Depreciation Benefit	Rs. Lacs	331.52	278.04	-8.96	-31.36	-35.84	-36.74	-36.92	-36.95	-36.96	-36.96	-36.96	-36.96	-36.96	-36.96	-36.96	-36.96	-36.96	-20.16
Tax Benefit	Rs. Lacs	107.56	90.21	-2.91	-10.17	-11.63	-11.92	-11.98	-11.99	-11.99	-11.99	-11.99	-11.99	-11.99	-11.99	-11.99	-11.99	-11.99	-6.54
Net Saleable Energy	MU	1.24	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12
Discounting Factor For Full year		1.00	0.95	0.86	0.78	0.70	0.64	0.58	0.52	0.47	0.43	0.39	0.35	0.31	0.28	0.26	0.23	0.21	0.19
Discounted Tax Benefit		107.56	85.89	-2.50	-7.92	-8.19	-7.59	-6.90	-6.24	-5.65	-5.11	-4.62	-4.18	-3.78	-3.42	-3.09	-2.79	-2.53	-1.25
Net Saleable Energy (Levellised) in MU		1.24	3.92	3.55	3.21	2.91	2.62	2.37	2.15	1.94	1.75	1.59	1.44	1.30	1.17	1.06	0.96	0.87	0.78
Dicounted Benefit		8.70	2.08	-0.06	-0.19	-0.20	-0.18	-0.17	-0.15	-0.14	-0.12	-0.11	-0.10	-0.09	-0.08	-0.07	-0.07	-0.06	-0.03

Tax Benefit Levellised (Rs. Lacs)	10.9252
Net Saleable Energy (Levellised) in MU	3.8530
Levellised Benefit Rs./kWh	0.284

Computation of Per Unit Benefit of Accelerated Depriciation

Depreciation amount	90.00%
Book Depreciation rate	5.28%
Tax Depreciation rate	80.00%
Additional Depreciation	20.00%
Income Tax (Normal Rates)	32.45%
Capital Cost in Lacs	700.000

Years ---------->	Unit	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Book Depreciation	%age																							
Book Depreciation	Rs. Lacs																							
Accelerated Depreciation																								
Opening	%																							
Allowed during the year	%																							
Closing	%																							
Accelerated Depreciation	Rs. Lacs																							
Net Depreciation Benefit	Rs. Lacs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tax Benefit	Rs. Lacs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Saleable Energy	MU	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	4.13	4.12	4.12	4.12	2.89
Discounting Factor For Full year		0.17	0.16	0.14	0.13	0.12	0.10	0.09	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Discounted Tax Benefit		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Saleable Energy (Levellised) in MU		0.71	0.64	0.58	0.52	0.47	0.43	0.39	0.35	0.32	0.29	0.26	0.23	0.21	0.19	0.17	0.16	0.14	0.13	0.12	0.11	0.09	0.09	0.06
Dicounted Benefit		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Tax Benefit Levellised (Rs. Lacs)	10.9252
Net Saleable Energy (Levellised) in MU	3.8530
Levellised Benefit Rs./kWh	0.284