Parameters for determination of tariff for Hydel plant up to 5 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	8.900
		Power Plant Cost		Rs. Cr	8.9
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.23
			Total equity amount	Rs Cr.	2.67
		Debt component	Loan amount	Rs Cr	6.23
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	2.67
			ROE for first 20 years	%	18.18%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.51%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.42
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	30
			Interest on WC	%	12.24%

Determination of tariff for Hydel plant up to 5 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	41.74	43.93	46.24	48.67	51.22	53.91	56.74	59.72	62.85	66.15
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56
Interest on term loan	Rs Lakh	66.19	61.63	57.06	52.49	47.92	43.35	38.78	34.21	29.65	25.08
Interest on Working Capital	Rs Lakh	4.25	4.27	4.30	4.34	4.39	4.43	4.49	4.55	4.62	4.70
Return on Equity	Rs Lakh	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53
Total Fixed Cost	Rs Lakh	202.27	199.92	197.69	195.59	193.62	191.79	190.10	188.58	187.21	186.02
Tariff	Rs/kWh	7.77	7.68	7.60	7.52	7.44	7.37	7.31	7.25	7.20	7.15

O & M expenses	Rs/kWh	1.60	1.69	1.78	1.87	1.97	2.07	2.18	2.30	2.42	2.54
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Interest on term loan	Rs/kWh	2.54	2.37	2.19	2.02	1.84	1.67	1.49	1.32	1.14	0.96
Interest on Working Capital	Rs/kWh	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18
Return on Equity	Rs/kWh	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Total Tariff	**Rs/kWh**	**7.77**	**7.68**	**7.60**	**7.52**	**7.44**	**7.37**	**7.31**	**7.25**	**7.20**	**7.15**
Discount Factor		1	0.913	0.834	0.762	0.695	0.635	0.580	0.530	0.484	0.442
Levellised Tariff	Rs/kWh	**7.57**									

Determination of tariff for Hydel plan

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	69.63	73.28	77.13	81.18	85.44	89.93	94.65	99.62	104.85	110.35
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	20.51	15.94	11.37	6.80	2.24	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.78	4.87	4.97	5.08	5.20	4.84	5.05	5.27	5.50	5.74
Return on Equity	Rs Lakh	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53
Total Fixed Cost	Rs Lakh	185.01	184.19	183.57	183.16	182.97	150.40	155.33	160.51	165.98	171.72
Tariff	Rs/kWh	7.11	7.08	7.06	7.04	7.03	5.78	5.97	6.17	6.38	6.60

O & M expenses	Rs/kWh	2.68	2.82	2.96	3.12	3.28	3.46	3.64	3.83	4.03	4.24
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.79	0.61	0.44	0.26	0.09	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.18	0.19	0.19	0.20	0.20	0.19	0.19	0.20	0.21	0.22
Return on Equity	Rs/kWh	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Total Tariff	**Rs/kWh**	**7.11**	**7.08**	**7.06**	**7.04**	**7.03**	**5.78**	**5.97**	**6.17**	**6.38**	**6.60**
Discount Factor		0.403	0.368	0.336	0.307	0.280	0.256	0.234	0.214	0.195	0.178
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	116.14	122.24	128.66	135.41	142.52	150.00	157.88	166.17	174.89	184.07
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	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	6.20	6.47	6.76	7.05	7.37	7.70	8.05	8.42	8.80	9.21
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	191.01	197.38	204.08	211.13	218.56	226.37	234.59	243.25	252.36	261.95
Tariff	Rs/kWh	7.34	7.59	7.84	8.12	8.40	8.70	9.02	9.35	9.70	10.07

O & M expenses	Rs/kWh	4.46	4.70	4.95	5.20	5.48	5.77	6.07	6.39	6.72	7.08
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	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/kWh	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.34	0.35
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**7.34**	**7.59**	**7.84**	**8.12**	**8.40**	**8.70**	**9.02**	**9.35**	**9.70**	**10.07**
Discount Factor		0.163	0.149	0.136	0.124	0.113	0.103	0.094	0.086	0.079	0.072
Levellised Tariff	Rs/kWh										

Annexure: 1 A

Determination of tariff for Hydel plan

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	193.74	203.91	214.61	225.88	237.74	250.22	263.36	277.19	291.74	307.05
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	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	9.64	10.09	10.57	11.06	11.59	12.14	12.73	13.34	13.98	14.66
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	272.04	282.66	293.84	305.61	318.00	331.03	344.75	359.19	374.39	390.38
Tariff	Rs/kWh	10.46	10.86	11.29	11.75	12.22	12.72	13.25	13.81	14.39	15.00

O & M expenses	Rs/kWh	7.45	7.84	8.25	8.68	9.14	9.62	10.12	10.65	11.21	11.80
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	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/kWh	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**10.46**	**10.86**	**11.29**	**11.75**	**12.22**	**12.72**	**13.25**	**13.81**	**14.39**	**15.00**
Discount Factor		0.066	0.060	0.055	0.050	0.046	0.042	0.038	0.035	0.032	0.029
Levellised Tariff	Rs/kWh										

Parameters for determination of tariff for Hydel plant above 5 MW upto 10 MW					
S No	Assumption Head	Sub-head	Sub-head 2	Unit	Value
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	10.270
		Power Plant Cost		Rs. Cr	10.27
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	7.189
			Total equity amount	Rs Cr.	3.081
		Debt component	Loan amount	Rs Cr	7.189
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	3.081
			ROE for first 20 years	%	18.18%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.51%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.35
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	30
			Interest on WC	%	12.24%

Determination of tariff for Hydel plant 5 MW to 10 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	35.41	37.27	39.23	41.28	43.45	45.73	48.13	50.66	53.32	56.12
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96
Interest on term loan	Rs Lakh	76.38	71.11	65.84	60.57	55.30	50.02	44.75	39.48	34.21	28.94
Interest on Working Capital	Rs Lakh	4.33	4.33	4.34	4.35	4.37	4.39	4.41	4.44	4.48	4.52
Return on Equity	Rs Lakh	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00
Total Fixed Cost	Rs Lakh	220.09	216.68	213.37	210.16	207.08	204.11	201.26	198.55	195.97	193.54
Tariff	Rs/kWh	8.46	8.33	8.20	8.08	7.96	7.85	7.74	7.63	7.53	7.44

O & M expenses	Rs/kWh	1.36	1.43	1.51	1.59	1.67	1.76	1.85	1.95	2.05	2.16
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Interest on term loan	Rs/kWh	2.94	2.73	2.53	2.33	2.13	1.92	1.72	1.52	1.31	1.11
Interest on Working Capital	Rs/kWh	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Return on Equity	Rs/kWh	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Tariff	Rs/kWh	8.46	8.33	8.20	8.08	7.96	7.85	7.74	7.63	7.53	7.44
Discount Factor		1	0.913	0.834	0.762	0.695	0.635	0.580	0.530	0.484	0.442

Levellised Tariff Rs/kWh **7.80**

Determination of tariff for Hydel plant

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	59.07	62.17	65.43	68.87	72.48	76.29	80.29	84.51	88.95	93.62
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	23.67	18.39	13.12	7.85	2.58	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.57	4.63	4.69	4.77	4.85	4.37	4.54	4.73	4.93	5.13
Return on Equity	Rs Lakh	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00
Total Fixed Cost	Rs Lakh	191.27	189.15	187.21	185.44	183.87	144.85	149.03	153.43	158.07	162.94
Tariff	Rs/kWh	7.35	7.27	7.20	7.13	7.07	5.57	5.73	5.90	6.08	6.26

O & M expenses	Rs/kWh	2.27	2.39	2.51	2.65	2.79	2.93	3.09	3.25	3.42	3.60
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.91	0.71	0.50	0.30	0.10	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.18	0.18	0.18	0.18	0.19	0.17	0.17	0.18	0.19	0.20
Return on Equity	Rs/kWh	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Tariff	Rs/kWh	7.35	7.27	7.20	7.13	7.07	5.57	5.73	5.90	6.08	6.26
Discount Factor		0.403	0.368	0.336	0.307	0.280	0.256	0.234	0.214	0.195	0.178

Levelised Tariff Rs/kWh

Determination of tariff for Hydel plant

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	98.53	103.70	109.15	114.88	120.91	127.26	133.94	140.97	148.37	156.16
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	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	5.58	5.81	6.05	6.31	6.57	6.85	7.15	7.46	7.79	8.14
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	183.35	188.75	194.43	200.42	206.72	213.35	220.32	227.67	235.39	243.53
Tariff	Rs/kWh	7.05	7.25	7.47	7.70	7.95	8.20	8.47	8.75	9.05	9.36

O & M expenses	Rs/kWh	3.79	3.99	4.20	4.42	4.65	4.89	5.15	5.42	5.70	6.00
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	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/kWh	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.30	0.31
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	Rs/kWh	7.05	7.25	7.47	7.70	7.95	8.20	8.47	8.75	9.05	9.36
Discount Factor		0.163	0.149	0.136	0.124	0.113	0.103	0.094	0.086	0.079	0.072

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	164.36	172.99	182.07	191.63	201.69	212.28	223.42	235.15	247.49	260.49
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	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	8.50	8.88	9.28	9.71	10.15	10.62	11.12	11.64	12.18	12.76
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	252.09	261.10	270.59	280.57	291.08	302.13	313.77	326.02	338.91	352.48
Tariff	Rs/kWh	9.69	10.04	10.40	10.78	11.19	11.61	12.06	12.53	13.03	13.55

O & M expenses	Rs/kWh	6.32	6.65	7.00	7.37	7.75	8.16	8.59	9.04	9.51	10.01
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	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/kWh	0.33	0.34	0.36	0.37	0.39	0.41	0.43	0.45	0.47	0.49
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	Rs/kWh	9.69	10.04	10.40	10.78	11.19	11.61	12.06	12.53	13.03	13.55
Discount Factor		0.066	0.060	0.055	0.050	0.046	0.042	0.038	0.035	0.032	0.029

Levellised Tariff Rs/kWh

Parameters for determination of tariff for Hydel plant above 10 MW upto 25 MW					
S No	Assumption Head	Sub-head	Sub-head 2	Unit	Value
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	10.270
		Power Plant Cost		Rs. Cr	10.27
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	7.189
			Total equity amount	Rs Cr.	3.081
		Debt component	Loan amount	Rs Cr	7.189
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	3.081
			ROE for first 20 years	%	18.18%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.51%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.30
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	30
			Interest on WC	%	12.24%

Determination of tariff for Hydel plant 10 MW to 25 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	30.23	31.82	33.49	35.25	37.10	39.04	41.09	43.25	45.52	47.91
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96
Interest on term loan	Rs Lakh	76.38	71.11	65.84	60.57	55.30	50.02	44.75	39.48	34.21	28.94
Interest on Working Capital	Rs Lakh	4.10	4.09	4.09	4.08	4.08	4.09	4.10	4.12	4.14	4.16
Return on Equity	Rs Lakh	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00
Total Fixed Cost	Rs Lakh	214.68	210.98	207.37	203.86	200.44	197.12	193.91	190.81	187.83	184.97

O & M expenses	Rs/kWh	1.16	1.22	1.29	1.35	1.43	1.50	1.58	1.66	1.75	1.84
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Interest on term loan	Rs/kWh	2.94	2.73	2.53	2.33	2.13	1.92	1.72	1.52	1.31	1.11
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Return on Equity	Rs/kWh	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Tariff	**Rs/kWh**	**8.25**	**8.11**	**7.97**	**7.84**	**7.70**	**7.58**	**7.45**	**7.33**	**7.22**	**7.11**
Discount Factor		1	0.913	0.834	0.762	0.695	0.635	0.580	0.530	0.484	0.442
Levellised Tariff	Rs/kWh	**7.42**									

Determination of tariff for Hydel plant

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	50.43	53.07	55.86	58.79	61.88	65.13	68.55	72.15	75.93	79.92
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	23.67	18.39	13.12	7.85	2.58	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.19	4.23	4.27	4.32	4.38	3.87	4.02	4.18	4.35	4.53
Return on Equity	Rs Lakh	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00
Total Fixed Cost	Rs Lakh	182.24	179.66	177.21	174.92	172.79	133.19	136.76	140.52	144.48	148.64

O & M expenses	Rs/kWh	1.94	2.04	2.15	2.26	2.38	2.50	2.63	2.77	2.92	3.07
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.91	0.71	0.50	0.30	0.10	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.17	0.17	0.15	0.15	0.16	0.17	0.17
Return on Equity	Rs/kWh	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Tariff	**Rs/kWh**	**7.00**	**6.91**	**6.81**	**6.72**	**6.64**	**5.12**	**5.26**	**5.40**	**5.55**	**5.71**
Discount Factor		0.403	0.368	0.336	0.307	0.280	0.256	0.234	0.214	0.195	0.178
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plant

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	84.12	88.53	93.18	98.07	103.22	108.64	114.34	120.35	126.67	133.32
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	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	4.94	5.14	5.34	5.56	5.79	6.03	6.28	6.55	6.83	7.12
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	168.29	172.91	177.76	182.87	188.24	193.90	199.86	206.13	212.73	219.67

O & M expenses	Rs/kWh	3.23	3.40	3.58	3.77	3.97	4.18	4.39	4.63	4.87	5.12
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	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/kWh	0.19	0.20	0.21	0.21	0.22	0.23	0.24	0.25	0.26	0.27
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	**Rs/kWh**	**6.47**	**6.65**	**6.83**	**7.03**	**7.24**	**7.45**	**7.68**	**7.92**	**8.18**	**8.44**
Discount Factor		0.163	0.149	0.136	0.124	0.113	0.103	0.094	0.086	0.079	0.072
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plant

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	140.31	147.68	155.43	163.59	172.18	181.22	190.74	200.75	211.29	222.38
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	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	7.43	7.76	8.10	8.47	8.85	9.25	9.67	10.11	10.58	11.07
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	226.98	234.67	242.77	251.29	260.26	269.70	279.64	290.10	301.10	312.69

O & M expenses	Rs/kWh	5.39	5.68	5.97	6.29	6.62	6.97	7.33	7.72	8.12	8.55
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	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/kWh	0.29	0.30	0.31	0.33	0.34	0.36	0.37	0.39	0.41	0.43
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	**Rs/kWh**	**8.72**	**9.02**	**9.33**	**9.66**	**10.00**	**10.37**	**10.75**	**11.15**	**11.57**	**12.02**
Discount Factor		0.066	0.060	0.055	0.050	0.046	0.042	0.038	0.035	0.032	0.029
Levellised Tariff	Rs/kWh										

Parameters for determination of tariff for Hydel plant up to 2 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	8.900
		Power Plant Cost		Rs. Cr	8.9
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.23
			Total equity amount	Rs Cr.	2.67
		Debt component	Loan amount	Rs Cr	6.23
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	2.67
			ROE for first 20 years	%	18.18%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.51%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.42
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	30
			Interest on WC	%	12.24%

Determination of tariff for Hydel plant up to2 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	41.74	43.93	46.24	48.67	51.22	53.91	56.74	59.72	62.85	66.15
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56
Interest on term loan	Rs Lakh	66.19	61.63	57.06	52.49	47.92	43.35	38.78	34.21	29.65	25.08
Interest on Working Capital	Rs Lakh	4.25	4.27	4.30	4.34	4.39	4.43	4.49	4.55	4.62	4.70
Return on Equity	Rs Lakh	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53
Total Fixed Cost	Rs Lakh	202.27	199.92	197.69	195.59	193.62	191.79	190.10	188.58	187.21	186.02
Tariff	Rs/kWh	7.77	7.68	7.60	7.52	7.44	7.37	7.31	7.25	7.20	7.15

O & M expenses	Rs/kWh	1.60	1.69	1.78	1.87	1.97	2.07	2.18	2.30	2.42	2.54
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Interest on term loan	Rs/kWh	2.54	2.37	2.19	2.02	1.84	1.67	1.49	1.32	1.14	0.96
Interest on Working Capital	Rs/kWh	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18
Return on Equity	Rs/kWh	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Total Tariff	**Rs/kWh**	**7.77**	**7.68**	**7.60**	**7.52**	**7.44**	**7.37**	**7.31**	**7.25**	**7.20**	**7.15**
Discount Factor		1	0.913	0.834	0.762	0.695	0.635	0.580	0.530	0.484	0.442
Levellised Tariff	Rs/kWh	**8.07**									

Determination of tariff for Hydel plan

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	69.63	73.28	77.13	81.18	85.44	89.93	94.65	99.62	104.85	110.35
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	20.51	15.94	11.37	6.80	2.24	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.78	4.87	4.97	5.08	5.20	4.84	5.05	5.27	5.50	5.74
Return on Equity	Rs Lakh	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53	48.53
Total Fixed Cost	Rs Lakh	185.01	184.19	183.57	183.16	182.97	150.40	155.33	160.51	165.98	171.72
Tariff	Rs/kWh	7.11	7.08	7.06	7.04	7.03	5.78	5.97	6.17	6.38	6.60

O & M expenses	Rs/kWh	2.68	2.82	2.96	3.12	3.28	3.46	3.64	3.83	4.03	4.24
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.79	0.61	0.44	0.26	0.09	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.18	0.19	0.19	0.20	0.20	0.19	0.19	0.20	0.21	0.22
Return on Equity	Rs/kWh	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87
Total Tariff	**Rs/kWh**	**7.11**	**7.08**	**7.06**	**7.04**	**7.03**	**5.78**	**5.97**	**6.17**	**6.38**	**6.60**
Discount Factor		0.403	0.368	0.336	0.307	0.280	0.256	0.234	0.214	0.195	0.178
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	116.14	122.24	128.66	135.41	142.52	150.00	157.88	166.17	174.89	184.07
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	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	6.20	6.47	6.76	7.05	7.37	7.70	8.05	8.42	8.80	9.21
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	191.01	197.38	204.08	211.13	218.56	226.37	234.59	243.25	252.36	261.95
Tariff	Rs/kWh	7.34	7.59	7.84	8.12	8.40	8.70	9.02	9.35	9.70	10.07

O & M expenses	Rs/kWh	4.46	4.70	4.95	5.20	5.48	5.77	6.07	6.39	6.72	7.08
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	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/kWh	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.34	0.35
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**7.34**	**7.59**	**7.84**	**8.12**	**8.40**	**8.70**	**9.02**	**9.35**	**9.70**	**10.07**
Discount Factor		0.163	0.149	0.136	0.124	0.113	0.103	0.094	0.086	0.079	0.072
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	193.74	203.91	214.61	225.88	237.74	250.22	263.36	277.19	291.74	307.05
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	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	9.64	10.09	10.57	11.06	11.59	12.14	12.73	13.34	13.98	14.66
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	272.04	282.66	293.84	305.61	318.00	331.03	344.75	359.19	374.39	390.38
Tariff	Rs/kWh	10.46	10.86	11.29	11.75	12.22	12.72	13.25	13.81	14.39	15.00

O & M expenses	Rs/kWh	7.45	7.84	8.25	8.68	9.14	9.62	10.12	10.65	11.21	11.80
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	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/kWh	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.54	0.56
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**10.46**	**10.86**	**11.29**	**11.75**	**12.22**	**12.72**	**13.25**	**13.81**	**14.39**	**15.00**
Discount Factor		0.066	0.060	0.055	0.050	0.046	0.042	0.038	0.035	0.032	0.029
Levellised Tariff	Rs/kWh										

Annexure: 2

Parameters for determination of tariff for Co- generation Plant					
S No	Assumption Head	Sub-head	Sub-head 2	Unit	Value
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	38%
			Auxiliary consumption	%	8.5%
			Useful Life	Years	25
			Gross Generation	MU	3.33
			Auxiliary consumption	MU	0.28
			Net generation	MU	3.05
2	Project cost	Capital cost/MW		Rs Cr/MW	5.620
		Power Plant Cost		Rs. Cr	5.62
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	3.934
			Total equity amount	Rs Cr.	1.686
		Debt component	Loan amount	Rs Cr	3.934
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	1.686
			ROE for first 20 years	%	16.96%
			ROE for 21 year onwards	%	21.52%
			Discount Rate	%	9.21%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.30
			Escalation factor	%	5.25%
			Fuel cost	Month	1

5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	30
			Interest on WC	%	12.24%

Determination of tariff for Co-Generation plant

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	30.42	32.02	33.70	35.47	37.33	39.29	41.35	43.52	45.81	48.21
Depreciation	Rs Lakh	26.25	26.25	26.25	26.25	26.25	26.25	26.25	26.25	26.25	26.25
Interest on term loan	Rs Lakh	41.80	38.91	36.03	33.14	30.26	27.37	24.49	21.61	18.72	15.84
Interest on Working Capital	Rs Lakh	11.34	11.66	12.00	12.35	12.71	13.09	13.49	13.90	14.33	14.78
Return on Equity	Rs Lakh	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh	138.41	137.44	136.57	135.81	135.15	134.60	134.17	133.87	133.70	133.67
Tariff	Rs/kWh	4.54	4.51	4.48	4.46	4.44	4.42	4.41	4.40	4.39	4.39

O & M expenses	Rs/kWh	1.00	1.05	1.11	1.16	1.23	1.29	1.36	1.43	1.50	1.58
Depreciation	Rs/kWh	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Interest on term loan	Rs/kWh	1.37	1.28	1.18	1.09	0.99	0.90	0.80	0.71	0.61	0.52
Interest on Working Capital	Rs/kWh	0.37	0.38	0.39	0.41	0.42	0.43	0.44	0.46	0.47	0.49
Return on Equity	Rs/kWh	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Tariff	**Rs/kWh**	**4.54**	**4.51**	**4.48**	**4.46**	**4.44**	**4.42**	**4.41**	**4.40**	**4.39**	**4.39**
Variable CoG	Rs/kWh	4.93	5.10	5.27	5.45	5.64	5.84	6.04	6.25	6.46	6.68
Discount Factor		1	0.916	0.839	0.768	0.703	0.644	0.590	0.540	0.494	0.453
Levellised Tariff	Rs/kWh	**4.50**									

Determination of tariff for Co-Generat

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	50.74	53.41	56.21	59.16	62.27	65.54	68.98	72.60	76.41	80.42
Depreciation	Rs Lakh	26.25	26.25	26.25	26.25	26.25	11.21	11.21	11.21	11.21	11.21
Interest on term loan	Rs Lakh	12.95	10.07	7.18	4.30	1.41	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	15.24	15.73	16.23	16.76	17.31	17.68	18.32	18.99	19.68	20.40
Return on Equity	Rs Lakh	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60	28.60
Total Fixed Cost	Rs Lakh	133.78	134.05	134.47	135.07	135.84	123.03	127.11	131.40	135.90	140.63
Tariff	Rs/kWh	4.39	4.40	4.41	4.43	4.46	4.04	4.17	4.31	4.46	4.62

O & M expenses	Rs/kWh	1.67	1.75	1.85	1.94	2.04	2.15	2.26	2.38	2.51	2.64
Depreciation	Rs/kWh	0.86	0.86	0.86	0.86	0.86	0.37	0.37	0.37	0.37	0.37
Interest on term loan	Rs/kWh	0.43	0.33	0.24	0.14	0.05	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.50	0.52	0.53	0.55	0.57	0.58	0.60	0.62	0.65	0.67
Return on Equity	Rs/kWh	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Tariff	**Rs/kWh**	**4.39**	**4.40**	**4.41**	**4.43**	**4.46**	**4.04**	**4.17**	**4.31**	**4.46**	**4.62**
Variable CoG	Rs/kWh	6.91	7.15	7.40	7.66	7.92	8.19	8.48	8.77	9.07	9.38
Discount Factor		0.415	0.380	0.348	0.318	0.291	0.267	0.244	0.224	0.205	0.188
Levellised Tariff	Rs/kWh										

Determination of tariff for Co-Genera

Particulars	Year	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05
Fixed Cost	Year	21	22	23	24	25
O & M expenses	Rs Lakh	84.64	89.09	93.77	98.69	103.87
Depreciation	Rs Lakh	11.21	11.21	11.21	11.21	11.21
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	21.26	22.04	22.84	23.68	24.55
Return on Equity	Rs Lakh	36.28	36.28	36.28	36.28	36.28
Total Fixed Cost	Rs Lakh	153.40	158.62	164.10	169.86	175.92
Tariff	Rs/kWh	5.04	5.21	5.39	5.58	5.78

O & M expenses	Rs/kWh	2.78	2.92	3.08	3.24	3.41
Depreciation	Rs/kWh	0.37	0.37	0.37	0.37	0.37
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.70	0.72	0.75	0.78	0.81
Return on Equity	Rs/kWh	1.19	1.19	1.19	1.19	1.19
Tariff	**Rs/kWh**	**5.04**	**5.21**	**5.39**	**5.58**	**5.78**
Variable CoG	Rs/kWh	9.71	10.04	10.39	10.75	11.12
Discount Factor		0.172	0.157	0.144	0.132	0.121
Levellised Tariff	Rs/kWh					

Parameters for determination of tariff for Solar PV Power plant upto 2 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	21%
			Auxiliary consumption	%	0.25%
			Useful Life	Years	25
			Gross Generation	MU	1.84
			Auxiliary consumption	MU	0.0046
			Net generation	MU	1.84
2	Project cost	Capital cost/MW		Rs Cr/MW	3.50
		Power Plant Cost		Rs. Cr	3.50
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	2.45
			Total equity amount	Rs Cr.	1.05
		Debt component	Loan amount	Rs Cr	2.45
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	1.05
			ROE for first 20 years	%	16.96%
			ROE for 21 year onwards	%	21.52%
			Discount Rate	%	9.21%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.09
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.24%

Determination of tariff for Solar PV Power Plant up to 2 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	9.26	9.75	10.26	10.80	11.36	11.96	12.59	13.25	13.94	14.68
Depreciation	Rs Lakh	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35
Interest on term loan	Rs Lakh	26.03	24.23	22.44	20.64	18.84	17.05	15.25	13.46	11.66	9.86
Interest on Working Capital	Rs Lakh	1.33	1.33	1.32	1.32	1.32	1.31	1.32	1.32	1.32	1.33
Return on Equity	Rs Lakh	17.81	17.81	17.81	17.81	17.81	17.81	17.81	17.81	17.81	17.81
Total Fixed Cost	Rs Lakh	70.78	69.46	68.18	66.91	65.68	64.48	63.31	62.18	61.08	60.02
Tariff	Rs/kWh	3.86	3.79	3.72	3.65	3.58	3.51	3.45	3.39	3.33	3.27

O & M expenses	Rs/kWh	0.50	0.53	0.56	0.59	0.62	0.65	0.69	0.72	0.76	0.80
Depreciation	Rs/kWh	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Interest on term loan	Rs/kWh	1.42	1.32	1.22	1.12	1.03	0.93	0.83	0.73	0.64	0.54
Interest on Working Capital	Rs/kWh	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Return on Equity	Rs/kWh	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Tariff	**Rs/kWh**	**3.86**	**3.79**	**3.72**	**3.65**	**3.58**	**3.51**	**3.45**	**3.39**	**3.33**	**3.27**
Discount Factor		1	0.916	0.839	0.768	0.703	0.644	0.590	0.540	0.494	0.453
Levellised Tariff	Rs/kWh	**3.39**									

Determination of tariff for Solar PV P

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	15.45	16.26	17.11	18.01	18.95	19.95	21.00	22.10	23.26	24.48
Depreciation	Rs Lakh	16.35	16.35	16.35	16.35	16.35	6.98	6.98	6.98	6.98	6.98
Interest on term loan	Rs Lakh	8.07	6.27	4.47	2.68	0.88	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	1.33	1.34	1.35	1.36	1.38	1.26	1.31	1.36	1.41	1.47
Return on Equity	Rs Lakh	17.81	17.81	17.81	17.81	17.81	17.81	17.81	17.81	17.81	17.81
Total Fixed Cost	Rs Lakh	59.00	58.02	57.09	56.20	55.37	46.01	47.10	48.25	49.47	50.74
Tariff	Rs/kWh	3.22	3.16	3.11	3.06	3.02	2.51	2.57	2.63	2.70	2.77

O & M expenses	Rs/kWh	0.84	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33
Depreciation	Rs/kWh	0.89	0.89	0.89	0.89	0.89	0.38	0.38	0.38	0.38	0.38
Interest on term loan	Rs/kWh	0.44	0.34	0.24	0.15	0.05	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.08	0.08
Return on Equity	Rs/kWh	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Tariff	**Rs/kWh**	**3.22**	**3.16**	**3.11**	**3.06**	**3.02**	**2.51**	**2.57**	**2.63**	**2.70**	**2.77**
Discount Factor		0.415	0.380	0.348	0.318	0.291	0.267	0.244	0.224	0.205	0.188
Levellised Tariff	Rs/kWh										

Determination of tariff for Solar PV P

Particulars	Year	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1
Net Power Generation	MU	1.84	1.84	1.84	1.84	1.84
Fixed Cost	Year	21	22	23	24	25
O & M expenses	Rs Lakh	25.77	27.12	28.54	30.04	31.62
Depreciation	Rs Lakh	6.98	6.98	6.98	6.98	6.98
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	1.60	1.66	1.72	1.78	1.85
Return on Equity	Rs Lakh	22.60	22.60	22.60	22.60	22.60
Total Fixed Cost	Rs Lakh	56.94	58.35	59.84	61.40	63.05
Tariff	Rs/kWh	3.10	3.18	3.26	3.35	3.44

O & M expenses	Rs/kWh	1.40	1.48	1.56	1.64	1.72
Depreciation	Rs/kWh	0.38	0.38	0.38	0.38	0.38
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.09	0.09	0.09	0.10	0.10
Return on Equity	Rs/kWh	1.23	1.23	1.23	1.23	1.23
Tariff	**Rs/kWh**	**3.10**	**3.18**	**3.26**	**3.35**	**3.44**
Discount Factor		0.172	0.157	0.144	0.132	0.121
Levellised Tariff	Rs/kWh					

Parameters for determination of tariff for Biogas based Plant					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	90%
			Auxiliary consumption	%	12.0%
			Useful Life	Years	25
			Gross Generation	MU	7.88
			Auxiliary consumption	MU	0.95
			Net generation	MU	6.94
2	Project cost	Capital cost/MW		Rs Cr/MW	13.540
		Power Plant Cost		Rs. Cr	13.54
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	9.478
			Total equity amount	Rs Cr.	4.062
		Debt component	Loan amount	Rs Cr	9.478
			Repayment Period	Year	15
			Interest rate	%	10.99%
		Equity Component	Equity Amount	Rs Cr	4.062
			ROE for first 20 years	%	16.96%
			ROE for 21 year onwards	%	21.52%
			Discount Rate	%	9.21%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.76
			Escalation factor	%	5.25%
			Fuel cost	Month	1
			O & M expenses	Month	1

Parameters for determination of tariff for Biogas based Plant					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
5	Working Capital	For fixed charges	Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.24%
6	Fuel related assumptions		Specific Fuel Consumption	kg/kWh	3
			Base price of feedstock	Rs/MT	1761
			Fuel price escalation factor	%	3.45%

Determination of tariff for Biogas based plant

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	76.04	80.03	84.23	88.66	93.31	98.21	103.37	108.79	114.50	120.51
Depreciation	Rs Lakh	63.23	63.23	63.23	63.23	63.23	63.23	63.23	63.23	63.23	63.23
Interest on term loan	Rs Lakh	100.70	93.75	86.80	79.85	72.90	65.95	59.00	52.05	45.10	38.15
Interest on Working Capital	Rs Lakh	30.58	31.46	32.39	33.35	34.35	35.40	36.48	37.62	38.80	40.03
Return on Equity	Rs Lakh	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91
Total Fixed Cost	Rs Lakh	339.46	337.39	335.56	334.00	332.70	331.70	330.99	330.60	330.54	330.84
Tariff	Rs/kWh	4.89	4.86	4.84	4.81	4.80	4.78	4.77	4.77	4.76	4.77

O & M expenses	Rs/kWh	1.10	1.15	1.21	1.28	1.34	1.42	1.49	1.57	1.65	1.74
Depreciation	Rs/kWh	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Interest on term loan	Rs/kWh	1.45	1.35	1.25	1.15	1.05	0.95	0.85	0.75	0.65	0.55
Interest on Working Capital	Rs/kWh	0.44	0.45	0.47	0.48	0.50	0.51	0.53	0.54	0.56	0.58
Return on Equity	Rs/kWh	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Tariff	**Rs/kWh**	**4.89**	**4.86**	**4.84**	**4.81**	**4.80**	**4.78**	**4.77**	**4.77**	**4.76**	**4.77**
Variable CoG	Rs/kWh	6.00	6.21	6.42	6.65	6.88	7.11	7.36	7.61	7.87	8.15
Discount Factor		1	0.916	0.839	0.768	0.703	0.644	0.590	0.540	0.494	0.453
Levellised Tariff	Rs/kWh	**4.88**									

Determination of tariff for Biogas bas

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	126.84	133.50	140.51	147.89	155.65	163.82	172.42	181.48	191.00	201.03
Depreciation	Rs Lakh	63.23	63.23	63.23	63.23	63.23	27.01	27.01	27.01	27.01	27.01
Interest on term loan	Rs Lakh	31.20	24.25	17.30	10.35	3.40	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	41.31	42.64	44.03	45.48	46.98	48.05	49.79	51.59	53.46	55.41
Return on Equity	Rs Lakh	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91	68.91
Total Fixed Cost	Rs Lakh	331.49	332.54	333.98	335.85	338.17	307.79	318.13	328.99	340.39	352.36
Tariff	Rs/kWh	4.78	4.79	4.81	4.84	4.87	4.44	4.59	4.74	4.91	5.08

O & M expenses	Rs/kWh	1.83	1.92	2.03	2.13	2.24	2.36	2.49	2.62	2.75	2.90
Depreciation	Rs/kWh	0.91	0.91	0.91	0.91	0.91	0.39	0.39	0.39	0.39	0.39
Interest on term loan	Rs/kWh	0.45	0.35	0.25	0.15	0.05	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.60	0.61	0.63	0.66	0.68	0.69	0.72	0.74	0.77	0.80
Return on Equity	Rs/kWh	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Tariff	**Rs/kWh**	**4.78**	**4.79**	**4.81**	**4.84**	**4.87**	**4.44**	**4.59**	**4.74**	**4.91**	**5.08**
Variable CoG	Rs/kWh	8.43	8.72	9.02	9.33	9.65	9.99	10.33	10.69	11.05	11.44
Discount Factor		0.415	0.380	0.348	0.318	0.291	0.267	0.244	0.224	0.205	0.188
Levellised Tariff	Rs/kWh										

Determination of tariff for Biogas bas

Particulars	Year	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94
Fixed Cost	Year	21	22	23	24	25
O & M expenses	Rs Lakh	211.58	222.69	234.38	246.69	259.64
Depreciation	Rs Lakh	27.01	27.01	27.01	27.01	27.01
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	57.72	59.82	62.00	64.26	66.62
Return on Equity	Rs Lakh	87.41	87.41	87.41	87.41	87.41
Total Fixed Cost	Rs Lakh	383.73	396.93	410.81	425.38	440.68
Tariff	Rs/kWh	5.53	5.72	5.92	6.13	6.35

O & M expenses	Rs/kWh	3.05	3.21	3.38	3.56	3.74
Depreciation	Rs/kWh	0.39	0.39	0.39	0.39	0.39
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.83	0.86	0.89	0.93	0.96
Return on Equity	Rs/kWh	1.26	1.26	1.26	1.26	1.26
Tariff	**Rs/kWh**	**5.53**	**5.72**	**5.92**	**6.13**	**6.35**
Variable CoG	Rs/kWh	11.83	12.24	12.66	13.10	13.55
Discount Factor		0.172	0.157	0.144	0.132	0.121
Levellised Tariff	Rs/kWh					