



ASSAM ELECTRICITY REGULATORY COMMISSION

FILE NO. AERC. 408/2013

PETITION NO. IA 01/2015

ORDER SHEET

12.07.2016

M/s NewGen Power Company Private Limited (hereinafter referred to as NPCPL/ the Petitioner) submitted an interlocutory petition (registered as IA No 1/2015) on 06.01.2015 for determination of tariff of 1.2MW (3x400KW) Biomass Gasifier Based Renewable Energy Power Plant at Bicrapur Tea Estate in Chandranathpur, Cachar District of Assam. The petitioner made the following prayers:

- *To declare interim Tariff of NewGen plant urgently so that cost of power can be recovered from APDCL.*
- *Pass any order as the Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.*

Background:

- On 15.11.2012, the Petitioner signed a Power Purchase Agreement (PPA) with Assam Power Distribution Company Limited (hereinafter referred to as APDCL/ the Respondent) for sale of surplus power from its Biomass Gasifier Based Renewable Energy Power Plant to be set up at Bicrapur Tea Estate in Chandranathpur, Cachar District of Assam. As per the PPA, the applicable tariff for sale of power will be the "Pooled Cost of Purchase" of APDCL and the Tariff applicable will change only if the "Pooled Cost of Purchase" of APDCL changes.
- However, on 08.02.2013, the petitioner filed Petition No 9/2013, requesting the Commission for approval of "preferential tariff" (generic levelised generation tariff) for its 1.2MW project at Bicrapur Tea Estate as per the AERC (Terms & Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2012 for sale of power to APDCL, stating that the Renewable Energy Certificate (REC) market has not performed as envisaged at the time of signing of PPA.
- Thereafter, the Commission conducted due proceedings of the Petition No. 9/2013 and on 26.12.2013 passed an order, whereby, the petitioner and respondent were advised to mutually resolve the matter of changing clause in PPA from "Pooled Cost of Purchase" to "Preferential Tariff".
- After issuance of Order dated 26.12.2013, the Petitioner requested APDCL for changing the clause related to rate of power. However, vide letter dated 20.10.2014, APDCL expressed their unwillingness to amend the agreement and mentioned that as the tariff matter is pending for disposal by the Commission, APDCL would abide by the decision of the Commission.
- Thereafter, the Petitioner submitted the present Interlocutory petition on 06.01.2015 stating that they are not optimistic about solving the issue of Tariff mutually with APDCL.

Procedural History of the case:

1. The salient points of the petition are:
 - a. The Petitioner and APDCL had entered into a Power Purchase Agreement (PPA) on 15.11.2012 and as per the said agreement, APDCL will buy power from the Petitioner's plant at "Pooled Cost of Purchase" of APDCL.
 - b. However, on 08.02.2013 the petitioner filed a Petition (Petition No 9/2013) requesting the Commission for approval of "preferential tariff" for its 1.2 MW Biomass project at Bicrapur Tea Estate in Chandranathpur, Cachar District of Assam, stating that REC market has not performed as envisaged.
 - c. Thereafter, on 26.12.2013, the Commission passed an order, whereby, the petitioner and respondent were advised to mutually resolve the matter of change in clause of PPA.
 - d. After issuance of Order dated 26.12.2013, the Petitioner requested APDCL for changing the clause related to rate of power. However, vide letter dated 20.10.2014, APDCL expressed their unwillingness to amend the agreement and mentioned that as the tariff matter is under pendency of the Commission, APDCL would abide by the decision of the Commission.
2. Thereafter, the Petitioner submitted the present Interlocutory petition on 06.01.2015 stating that they are not optimistic about solving the issue of Tariff mutually with APDCL.
3. After preliminary scrutiny of the petition, public comments were invited vide Notice dated 29.01.2015. However, no comments were received from the public in general.
4. The Petitioner, thereafter, made additional submissions vide various letters in reply to Commission's queries, whereby, DPR of the project, detailed capital structure, financial statements, agreement with Bicrapore Tea-Estate, Vouchers/Orders for supply of Biomass fuel (Wood) from 3rd party etc were submitted. The salient points of the submissions made by the Petitioner are:
 - a. Capital Cost
 - As per the Audited Statement of Accounts as on 29.02.2016, submitted by the Petitioner, the capital cost of the project is Rs. 1069.20 Lacs.
 - b. Funding pattern
 - The Petitioner claimed that project is funded 100% through Equity.
 - However, as per the Statement of Accounts as on 29.02.2016, the Petitioner has got a Share Capital of Rs.21.38 Lac.
 - c. Fuel Supply Agreement (FSA)
 - The Petitioner has got long term FSA with Bicrapore Tea-Estate, however, the Petitioner is presently purchasing fuel on ad-hoc basis from 3rd party at a rate of Rs.2599.80/MT due to lack of supply received from the Bicrapore Tea-Estate.
 - The Petitioner also submitted certain bills related to the Fuel cost.
 - d. Tariff Computation

The Petitioner proposed a 20 year levelised fixed Tariff of Rs 3.08/unit and first year fuel charge of Rs 3.61/unit with annual escalation of 5%.

Operation and Financial Data proposed:

SI No.	Particulars	Proposed
1	Installed Capacity (MW)	1.20
2	Annual Gross Generation (MU)	8.94
3	Annual Net Generation (MU)	8.04
4	Capital Cost (Rs Lac/MW)	891.00
5	Capital Cost (Rs Lac)	1069.20
6	Capital Subsidy (Rs Lac)	180.00
6	Net Project Cost including IDC (Rs Lac)	889.20
7	Landed price of Biomass (Rs/MT)	2599.80
	Financial details	
8	Debt (70%) (Rs Lac)	622.00
9	Equity (30%) (Rs Lac)	267.00
10	Discount rate (%)	10.70%

Financial & Technical norms proposed:

SI No.	Particulars	Proposed
1	O & M (Lac/MW)	49.97
2	Depreciation Rate (%)	5.83% (for upto 12 th year) & 2.51% (13 th year onwards) on 90% initial capital cost
3	Return on Equity (%)	20% (for 1 st 10 years) & 24% (from 11 th year onwards)
4	Interest on Term Loan (%)	12.76%
5	Interest on working capital (%)	13.26%
6	O & M Escalation Rate (%)	5.72%
7	Auxiliary Power Consumption (%)	10%
8	Normative PLF (%)	85.00%
9	Sp Fuel Consumption (kg/unit)	1.25

e. Power Purchase Agreement (PPA) with North Western Cachar Tea Company Ltd. at Bircampore Tea-Estate:

- The Petitioner has got a PPA with North Western Cachar Tea Company Ltd. at Bircampore Tea-Estate. As per the PPA, the Petitioner will meet the 100% power and heat requirement of the Estate. Further, any surplus power left after meeting 100% power requirement of the Estate, can be sold by the Petitioner to State Electricity Board (APDCL) and/or third party off-taker.
- The Petitioner submitted that as because the Bircampore Tea-Estate is yet to put up the infrastructure to receive power from the power plant, 100% of power generated is being supplied to APDCL presently. However, the petitioner is ready to meet the requirement of the power of Bircampore Tea-Estate.
- The petitioner further submitted that presently parties are trying to renegotiate the terms of the PPA

f. PPA with APDCL

- The Petitioner has got a PPA with APDCL and as per the agreement, APDCL will purchase surplus power from the Petitioner's plant at Pooled Cost of Purchase of APDCL.

- As per the Commission's order dated 26.12.2013, the Petitioner was advised to mutually sort out the issue pertaining to tariff for the plant with APDCL. But, till now APDCL has not agreed to change the clause pertaining to rate of power purchase.
 - The Petitioner has mentioned that tariff clause of the PPA will be changed only after determination of tariff by the Commission.
5. Considering certain differences on the claim of the Petitioner vis-à-vis submitted documents and normative parameters, the following clarifications were sought for vide Letter dated 24.05.2016:
- a. Clarification regarding claim of such high Capital Cost as compared to the norm.
 - b. Clarification with regard to amount of Equity- as per the latest Statement of Accounts the Equity is Rs. 21.38 Lac as on 29.02.2016, whereas, the Petitioner has claimed that the project is funded through 100% equity.
6. The Petitioner submitted their replies vide Letter dated 26.05.2016 and the salient points of their submission are:
- a. In reply to query on reasons for higher capital cost compared to norms, the petitioner referred to the following:
 - The generating plant is planned & developed to support 1.6 MW but installed only 1.2 MW (3X400W) of generators.
 - Use of low speed marine engines and generators, which are more expensive than normal high speed generators
 - High transportation cost for carrying capital goods from outside Assam
 - Installation of fuel drying system to tackle the high moisture content in fuel
 - Covered shed construction for keeping storing the fuel in dry condition.
 - b. Further, in reply to query related to amount of Equity for the project, the Petitioner mentioned that Shareholders fund is same as equity and referred to a letter from Auditors. In the submitted letter from Auditor, the auditors have shown 2 values of Share Holder's fund i.e. Rs 374.81 Lac and Rs 903.11 Lac. Further, they have stated various components of Share Holder's fund such as Share Capital (Equity share capital, preference share capital etc), Reserves and Surplus and Money received against such warrants. However, the Auditor's certificate did not clarify about the amount of Equity.
7. In the meanwhile, APDCL was also asked for submission of their views and comments on the Petition, vide letter dated 27.01.2016 and thereafter, additional documents submitted by the Petitioner were forwarded vide Letter dated 13.06.2016. APDCL submitted their replies on 18.06.2016. The salient points of APDCL reply are:
- a. Tariff should be finalised as per the PPA, where the agreed tariff for the 1.2 MW project of Power Company Pvt Ltd was pooled cost of purchase of APDCL.
 - b. Regarding Capital cost, APDCL mentioned that as because the installed capacity of the plant is 1.2 MW not 1.6 MW, the cost of only 1.2 MW should be considered on pro-rata basis.
 - c. APDCL prayed that all benefits like earning from the sale of manure if any, CDM benefit, industrial subsidy and any other benefits entitled and allowed to

the petitioner as per the prevailing policies of the Governments should be considered.

8. Thereafter, the Commission vide its Notice dated 14.06.2016, scheduled a hearing at 11 AM on 27.06.2016 in the office of the Commission.

9. The Commission conducted the Hearing as per the schedule and the following were present:

a. Petitioner Representative-

- Mr. Assiem Mittal, Director, NewGen Power Company Pvt. Ltd.

b. Respondent Representative-

- Mr. K Talukdar, GM (TRC), APDCL
- Mr. K. Goswami, DGM (Com), APDCL
- Mr. A. N. Dev Choudhury, AGM (TRC), APDCL

c. Public-

- Mr. D. Barua, President, Guwahati Management Association
- Mr. P Roy, Member, Guwahati Management Association

i. The representative of Petitioner made the following submissions:

- At the time of signing of PPA with APDCL, the Petitioner envisaged that the Renewable Energy Certificate (REC) market will develop and hence decided to sell power to APDCL at average pooled power purchase cost & accordingly PPA was signed. However, considering the present scenario of REC market, the Petitioner intends to change the clause in the PPA from "Pooled cost of Purchase of APDCL" to "preferential tariff as determined by the Commission".
- The Petitioner has installed all plant components with a rated capacity of 1.6 MW, except the generator which is of 1.2 MW. Regarding, APDCL's comment for reducing the capital cost on pro-rata basis from 1.6 MW to 1.2 MW, the Petitioner submitted that it is difficult to apportion the cost, however, the Commission may decide on the same.
- Regarding requirement of Fuel drying system, the Petitioner mentioned that the Moisture content in the fuel is considerably high (~50-60%) due to weather condition. Therefore, there is requirement of additional drying mechanism over and above initial drying in sun shine. Accordingly, new system of Heat Exchangers were erected using the Engine Exhaust gas and also the heat from the Producer gas coming from the Gas producer.
- The Petitioner submitted that even though the Bircampore TE is not able to supply fuel as per the Long Term FSA, they will be meeting the fuel requirement by purchase of fuel from other sources.
- Regarding amount of Equity for the project, the petitioner mentioned that over and above Share Capital, premiums collected for issuance of shares and Reserves & Surplus should also be considered as part of Equity.
- The Petitioner mentioned that as because they are using Biomass gasification process, the emission is zero. Even the ash of fuel can be re-used as fertilizer or for making bricks.

ii. The representative of the Respondent (APDCL) made the following submissions:

- At the time of signing of PPA, APDCL was open to either purchase of power at preferential tariff or at average pooled power purchase cost. However, at the request of the Petitioner only, the PPA was signed by keeping the clause that power will be purchased by APDCL from the NewGen Power Company Ltd. at

Pooled Cost of Purchase of APDCL. As the existing PPA between APDCL & the Petitioner is still valid the same should be followed by the Petitioner.

- APDCL mentioned that as because the installed capacity of the plant is 1.2 MW, the proposed capital cost for only 1.2 MW should be considered by adjusting the proposed capital cost on pro-rata basis from 1.6 MW to 1.2 MW.
- Regarding requirement of fuel drying system, APDCL requested the Commission to decide on the same.

iii. On behalf of Guwahati Management Association, Mr. D. Barua made the following submissions:

- In principle an agreed rate between two parties should not be changed after the agreement is signed. Because, this way all developers may quote a different rate at the time of signing of agreement and later pray for increasing the rate of power.
- He further pointed out that even if prayer of the Petitioner is accepted for tariff fixation, before finalizing Tariff, the Commission should verify the justifiability of the increased capital cost as compared to the norm.

Commission's analysis and decision:

1. On scrutiny of the submissions made by the petitioner, it is observed that:

- a. As per the PPA between the Petitioner and North Western Cachar Tea Company Ltd. (Bicrampore Tea-Estate), the petitioner is required to meet 100% of power requirement of the Bicrampore Tea-Estate and after meeting the power requirement of Bicrampore Tea-Estate, the surplus power will be sold to APDCL.
- b. The clause related to rate of power purchase has not been revised in the PPA between the Petitioner & APDCL as advised vide Order dated 26.12.2013. This means, as per the PPA with APDCL, power supplied by the Petitioner will be paid by APDCL at pooled cost of purchase of APDCL. This means the Petitioner has already got a rate of power for recovery of cost.
- c. Even though the Petitioner has got Long Term FSA with Bicrampore Tea-Estate, presently the Petitioner is purchasing fuel from third party at a rate of Rs. 2559.80/MT. As per the Tariff calculation submitted by the Petitioner, the rate of fuel is considered as Rs. 2599.80/MT for the first year with escalation of 5%.
- d. The Petitioner has planned and developed the plant to support installation of 1.6 MW capacity and accordingly, installed all plant components with a rated capacity of 1.6 MW. However, generator of only 1.2 MW (3X400W) is installed. The present Petition is also for 1.2 MW capacity of Biomass Gasification project.
- e. Even though the Petitioner has claimed that project is funded through 100% Equity, it was not able to substantiate its claim with relevant documents.
- f. It is seen that the Petitioner is having 2 nos of PPAs with APDCL & North Western Cachar Tea Company Ltd. (Bicrampore Tea-Estate). As such, the Tariff fixed vide this Order can be adopted subject to revision/amendment of respective PPAs.

2. The treatment made for some of key parameters while determining the tariff are stated below:

- a. Capital Cost: The Petitioner proposed a project cost of Rs 1069.20 Lac. However, from the submissions of the Petitioner it is understood that, the Petitioner has planned & developed the plant to support 1.6 MW capacity and accordingly installed all plant components with a rated capacity of 1.6 MW, except the generator, which is of only 1.2 MW (3X400kW) capacity. The break-up details of Capital Cost of plant of 1.6 MW & generator of 1.2 MW is not submitted, therefore, specific capital cost pertaining to plant capacity of 1.2 MW plant along with the generator cannot be ascertained. Moreover, the present Petition is filed for 1.2 MW Biomass Gasification plant and not for 1.6 MW Biomass Gasification plant. Therefore, it is deemed fit to reduce the Capital cost on pro-rata basis.
- b. Funding Pattern: The Petitioner has claimed that the project is 100% Equity funded, however, as per the Statement of Accounts as on 29.02.2017 the Equity of the project is only Rs.21.38 Lac. Though the Petitioner has claimed that premium collected while issuance of shares and Reserves & Surplus can be treated as part of equity, however, the utilisation of the same for capital expenditure could not be ascertained due to non submission of relevant documents. Therefore, Equity of Rs 21.38 Lac considered and as per the AERC Regulations the remaining portion is considered to be loan.
- c. Capital Subsidy: The Petitioner has proposed a Capital Subsidy of Rs 150 Lakh/MW. The same is considered as proposed.
- d. Cost of Fuel: The Petitioner has proposed Landed Cost of Biomass of 2599.80 Rs/MT against the CERC norm of Rs. 3003.01 Rs/MT for the FY 2016-17. Therefore, considered the same as proposed, however, the Petitioner is required to fulfil the guidelines of MNRE on which type of fuel to be used for bio gasification project. Thereafter, normative escalation of 5% is applied as per the norm.
- e. Financial & Technical parameters: The Petitioner has proposed the Financial & Technical parameters as per the norms. Therefore, the same is considered.

Operation and Financial Data:

SI No.	Particulars	Proposed	Considered
1	Installed Capacity (MW)	1.20	1.20
2	Annual Gross Generation (MU)	8.94	8.94
3	Annual Net Generation (MU)	8.04	8.04
4	Capital Cost (Rs Lac/MW)	891.00	668.25
5	Capital Cost (Rs Lac)	1069.20	801.90
6	Capital Subsidy (Rs Lac)	180.00	180.00
6	Net Project Cost including IDC (Rs Lac)	889.20	621.90
7	Landed price of Biomass (Rs/MT)	2599.80	2599.80
8	Yearly Escalation in Fuel cost (%)	5%	5%
9	Debt (Rs Lac)	622.00	600.53
10	Equity (Rs Lac)	267.00	21.38
11	Discount rate (%)	10.70%	10.70%

Financial & Technical norms:

SI No.	Particulars	Proposed	Considered
1	O & M (Lac/MW)	49.97	49.97
2	Depreciation Rate (%)	5.83% (for upto 12 th year) & 2.51% (13 th year onwards) on 90% initial capital cost	5.83% (for upto 12 th year) & 2.51% (13 th year onwards) on 90% initial capital cost
3	Return on Equity (%)	20% (for 1 st 10 years) & 24% (from 11 th year onwards)	20% (for 1 st 10 years) & 24% (from 11 th year onwards)
4	Interest on Term Loan (%)	12.76%	12.76%
5	Interest on working capital (%)	13.26%	13.26%
6	O & M Escalation Rate (%)	5.72%	5.72%
7	Auxiliary Power Consumption (%)	10%	10%
8	Normative PLF (%)	85.00%	85.00%
9	Sp Fuel Consumption (kg/unit)	1.25	1.25

Based on the above parameters, the Commission has arrived at a 20 year levelised fixed tariff of Rs. 2.18/kWh and a first year fuel cost of Rs. 3.61/kWh (which will be annually escalated @5%). The detail calculation is shown in Annexure-I. Thus, the Tariff for the first year works out to be Rs 5.80/kWh and for subsequent years upto the 20th year, the above Tariff will get escalated to the extent of increase in fuel cost 5% annually.

With the above observations and decisions, the Interlocutory Petition No IA 1/2015 stands disposed of.

Sd/-
(Subhash C Das)
Member, AERC

Sd/-
(Dipak Chakravarty)
Member, AERC

Sd/-
(N. K. Das)
Chairperson, AERC

Determination of preferential Tariff for 1.2 MW Biomass Gasifier Project of M/S NGPCPL for the year 2016-17

Annexure-I

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Installed Capacity	MW	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
Gross Generation		8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	8.94	
Auxiliary Consumption	MU	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Net Generation	MU	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	
Variable Cost																						
Biomass Cost	Rs. Lakh		290.37	304.89	320.13	336.14	352.95	370.60	389.13	408.58	429.01	450.46	472.98	496.63	521.47	547.54	574.92	603.66	633.84	665.54	698.81	733.75
Fixed Cost																						
O & M Expenses	Rs. Lakh		59.96	63.39	67.02	70.85	74.90	79.19	83.72	88.51	93.57	98.92	104.58	110.56	116.88	123.57	130.64	138.11	146.01	154.36	163.19	172.53
Depreciation	Rs. Lakh		32.63	32.63	32.63	32.63	32.63	32.63	32.63	32.63	32.63	32.63	32.63	32.63	14.05	14.05	14.05	14.05	14.05	14.05	14.05	14.05
Interest on term loan	Rs. Lakh		73.43	67.05	60.66	54.28	47.89	41.51	35.12	28.74	22.35	15.96	9.58	3.19	-	-	-	-	-	-	-	-
IWC (13.26%)	Rs. Lakh		12.31	12.68	13.07	13.50	13.96	14.44	14.96	15.52	16.11	16.74	17.43	18.15	18.56	19.51	20.51	21.57	22.68	23.85	25.08	26.37
Return on Equity	Rs. Lakh		4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13
Total fixed cost	Rs. Lakh		182.61	180.02	177.66	175.53	173.66	172.04	170.71	169.66	168.93	168.53	169.35	169.66	154.62	162.26	170.33	178.86	187.87	197.39	207.45	218.08
Nominal Fixed cost	Rs. /KWH		2.27	2.24	2.21	2.18	2.16	2.14	2.12	2.11	2.10	2.10	2.11	2.11	1.92	2.02	2.12	2.22	2.34	2.45	2.58	2.71
Levelised tariff corresponding to useful life																						
	Year	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	
Variable COG	Rs. /KWH	5.09	3.61	3.79	3.98	4.18	4.39	4.61	4.84	5.08	5.33	5.60	5.88	6.18	6.48	6.81	7.15	7.51	7.88	8.28	8.69	9.12
O & M expn	Rs. /KWH	1.11	0.75	0.79	0.83	0.88	0.93	0.98	1.04	1.10	1.16	1.23	1.30	1.37	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15
Depreciation	Rs. /KWH	0.36	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Interest on term loan	Rs. /KWH	0.46	0.91	0.83	0.75	0.67	0.60	0.52	0.44	0.36	0.28	0.20	0.12	0.04	-	-	-	-	-	-	-	-
IWC	Rs. /KWH	0.20	0.15	0.16	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.23	0.24	0.26	0.27	0.28	0.30	0.31	0.33
ROE	Rs. /KWH	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Total COG	Rs. /KWH	7.28	5.88	6.03	6.19	6.36	6.55	6.75	6.96	7.19	7.44	7.70	7.99	8.29	8.41	8.83	9.27	9.73	10.22	10.73	11.27	11.84
Levelized Fixed tariff	2.18																					
Fuel Cost 1st yr	3.61																					
Applicable Tariff 1st year	5.80																					
IWC																						
O & M Expenses for one month	Rs. Lakh		5.00	5.28	5.58	5.90	6.24	6.60	6.98	7.38	7.80	8.24	8.71	9.21	9.74	10.30	10.89	11.51	12.17	12.86	13.60	14.38
Receivables equivalent to 2 months of Fixed and variable charges for sale of electricity calculated on the target PLF	Rs. Lakh		78.83	80.82	82.97	85.28	87.77	90.44	93.31	96.37	99.66	103.17	107.06	111.05	112.68	118.30	124.21	130.42	136.95	143.82	151.04	158.64
Maintenance spares @ 15% of O & M expenses	Rs. Lakh		8.99	9.51	10.05	10.63	11.24	11.88	12.56	13.28	14.04	14.84	15.69	16.58	17.53	18.54	19.60	20.72	21.90	23.15	24.48	25.88
Working Capital	Rs. Lakh		92.82	95.61	98.60	101.81	105.24	108.92	112.84	117.03	121.49	126.25	131.46	136.85	139.95	147.13	154.69	162.65	171.02	179.84	189.12	198.90
Interest on Working Capital @13.26%	Rs. Lakh		12.31	12.68	13.07	13.50	13.96	14.44	14.96	15.52	16.11	16.74	17.43	18.15	18.56	19.51	20.51	21.57	22.68	23.85	25.08	26.37
Discount Factor			1.00	0.90	0.82	0.74	0.67	0.60	0.55	0.49	0.45	0.40	0.36	0.33	0.30	0.27	0.24	0.22	0.20	0.18	0.16	0.15