Nagaland Electricity Regulatory Commission (NERC)

Provisional Tariff Order

10 MW Biomass based Power Project at A.K. Industrial Village, Ganeshnagar, Dimapur

Dated: 24/05/2022.

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CONTENT

1.	ORDER	1
2	INTRODUCTION	
	1.1. Nagaland Electricity Regulatory Commission	3
	1.1.1. Functions of the NERC	3
	1.1.2. Tariff Petition	4
	1.2. Admission of Petition and Publication	4
	1.3. Notice of Public Hearing	5
3.	SUMMARY OF TARIFF PETITION	
	2.1. Project Background	6
	2.2. Project Cost & Annual Fixed Charges	7
	2.3. Engineering, Procurement and Construction (EPC)	8
	2.4. Prayers of Petition	9
4.	PUBLIC HEARING	
	3.1. Public Hearing	10
	3.2. Proceedings of Public Hearing	10
5.	PROJECT IMPLEMENTATION AND COST	
	4.1. Overview of the Project	14
	4.2. Grid Connectivity (Power Evacuation)	14
	4.3. Capital Cost Petitioner's Submission	14
	4.4. Commission's Analysis	17
	4.5. Debt Equity Ratio	18
6.	ANNUAL FIXED CHARGES	
	5.1. Overview of Annual Fixed Charges	19
	5.2. Operation and Maintenance Expenses	19
	5.3. Depreciation	20
	5.4. Interest on Loan Capital	20
	5.5. Interest on Working Capital	21
	5.6. Return on Equity	22
7.	FUEL COST	
	Overview of the Fuel Parameters	
	6.1. Fuel	24
	6.2. Calorific Value	24
	6.3. Fuel Cost	24
8.	PLANT LOAD FACTOR	26
9.	AUXILIARY CONSUMPTION	26
10.	TRANSMISSION LOSS	27
11.	USEFUL LIFE OF THE PROJECT	27
12.	TARIFF DESIGN	27
13.	DIRECTIVES	29
14.	ANNUAL FIXED CHARGES & TARIFF	30

TABLE OF CONTENT

Table 1: Project & AFC projected by petitioner 7

Table 2: Revised Project & AFC projected by petitioner 8

Table 3: Total Estimated Project Cost 15

Table 4: Revised Total Estimated Project Cost 15

Table 5: Details of Buildings and Civil Works 16

Table 6: Details of Plant & Machinery 16

Table 7: Approved Parameters 30

Table 8: Tariff Components and AFC 31

Table 9: Calculation of Discounted Tariff 32

Table 10: Calculation of Tariff 33

ABBREVIATIONS

Abbreviation	Description
ARR	Aggregate Revenue Requirement
CERC	Central Electricity Regulatory Commission
CoS	Cost of Supply
CPSU	Central Power Sector Undertakings
Cr	Crores
CWIP	Capital Work in Progress
DE	Debt Equity
ER	Eastern Region
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
KV	Kilovolt
KW	Kilo Watt
kWh	kilo Watt hour
LT	Low Tension
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
NER	North Eastern Region
NERC	Nagaland Electricity Regulatory Commission
NTP	National Tariff Policy
O&M	Operation & Maintenance
PLF	Plant Load Factor
PLR	Prime Lending Rate
R&M	Repairs and Maintenance
RoR	Rate of Return
Rs.	Rupees
S/s	Sub Station
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
YoY	Year on Year

Before the

Nagaland Electricity Regulatory Commission (NERC)

Nagaland, Kohima

Case No: 01/2021-22

In matter of determination of levellised Tariff for Renewable Energy Generation of 10 MW Biomass Power Plant in Dimapur for a period of 25 years on Petition filed by M/s. Hutah Industries Private Limited (HIPL).

Present: Er. Khose Sale
Chairman-cum-Member,
NERC, Kohima.

Petitioner: M/s. Hutah Industries Private Limited (HIPL).

Date of Filing of Petition	:	19/08/2021
Date of Admission of Petition	:	28/01/2022
Date of Hearing	:	16/03/2022
Date of Order	:	24/05/2022

ORDER

1. M/s. Hutah Industries Private Limited (HIPL), Nagaland (hereinafter referred to Project Developer/Petitioner) proposed to develop 10 MW Biomass based power project in A.K. Industrial Village at Ganeshnagar, under Dimapur District.
2. The Project Developer submitted the Project cost as Rs. 68.53 Cr and proposed levellised tariff as Rs. 5.99/Unit upto 25 Years. The Developer proposed to complete the project in the quickest possible and proposed the date of commercial operation as 01st October, 2022.
3. However, after the observations of the stakeholders in public hearing dated 16thMarch, 2022 the petitioner revised their proposal vide letter No. HI/07/22 dated 24th March, 2022.

4. The Petitioner revised the project cost of Rs. 69.75 Cr considering the increase in pipe line length form nearest source to the site and cost of construction of power evacuation line from generating station to 66/33 KV Ganeshnagar sub-station.

5. The Nagaland Electricity Regulatory Commission (NERC), upon following the procedures and in exercise of powers vested by Section 62 and Section 64 of the Electricity Act, 2003 and in accordance with the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 and other enabling provisions in this behalf, has approved the Provisional Generation Tariff @ Rs. 5.06/kWh upto 25 Year subject to the following conditions:

   a. That, the tariff shall be reviewed/revised based on the capital expenditure actually incurred up to the date of commercial operation duly audited and certified by the statutory auditors.

   b. That, in the event of any financial assistance extended to this project either by the Ministry or State Government, the rate approved now shall further be revised.

   c. That, any escalation in the Tariff shall not be allowed beyond the approved rate unless on account of uncontrollable factors.

   d. That, the signing of Power Purchase Agreement (PPA) is done between the Project Developer and the buyer(s) i.e. Distribution Licensee(s), Traders/ Exchange etc.

   e. That, the Execution and Commissioning is completed within the scheduled time as prescribed in the DPR failing which the developer shall apply for time extension specifying the reason for delay in execution of the project.

6. **Power Evacuation (Grid Connectivity):**
   The evacuation of power from the said Power Plant shall be at 66 kV level connected to the 66/33 kV Sub-station at Ganeshnagar. Additional cost to facilitate the arrangement upto the injecting point shall be borne by the project developer.

Place: Kohima, Nagaland.
Date: 24th May, 2022.

sd/-
Er. KHOSE SALE
Chairman-cum-Member,
NERC, Kohima.

1. INTRODUCTION

1.1. Nagaland Electricity Regulatory Commission

In exercise of the powers conferred by the Electricity Act, 2003, the State Government of Nagaland constituted an Electricity Regulatory Commission to be known as "Nagaland Electricity Regulatory Commission" for the State of Nagaland, as notified on 21st February, 2008.

The Commission is a one-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Nagaland. The powers and the functions of the Commission are as prescribed in the Electricity Act, 2003. The head office of the Commission is presently located at Kohima, Nagaland.

The Nagaland Electricity Regulatory Commission for the State of Nagaland started to function with effect from 4th March, 2008 with the objectives and purposes for which the Commission has been established.

1.1.1. In accordance with the provisions of the Act, the Nagaland Commission discharges the following functions:

(a) Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under Section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

(b) Regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

(c) Facilitate intra-State transmission and wheeling of electricity;

(d) Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

(e) Promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

(f) Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;

(g) Levy fee for the purposes of this Act;

(h) Specify State Grid Code consistent with the Grid Code specified under Clause (h) of subsection (1) of Section 79;

(i) Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;

(j) Fix the trading margin in the intra-State trading of electricity, if considered, necessary.

(k) Discharge such other functions as may be assigned to it under the Act.

1.1.2. Tariff Petition:

The Project Developer filed a Petition before the Commission on 19/08/2022 for determination of Generation Tariff for the 10 MW Biomass Power Project located at A.K. Industrial Village Ganeshnagar, Dimapur. The Developer submitted the project cost as Rs. 68.53 Cr, estimated generation of energy as 67.26 MU/Annum and levellised Tariff as Rs. 5.99/kWh upto 25 Year.

1.2. Admission of Petition and Publication:

The Commission could not admit the Petition without the Chairman (vacant) till mid January, 2022. However, the Petition was admitted only after the joining of the new Chairman. The Commission, after receiving requisite additional information & clarifications from the Project Developer, admitted the petition on 28th January, 2022 vide case No. 01/2021-22.

In accordance with section 64 of the Electricity Act, 2003 and to ensure public participation, the summary of the petition in the abridged form was published by the petitioner on 15th February, 2022 in following local Newspapers inviting the stakeholders/public/Consumers to submit their objections and suggestions, if any, in writing or in person, to the Secretary NERC on the petition on or before 28th February, 2022.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	Nagaland Page	English	15-02-2022
2	The Morung Express	English	15-02-2022
3	Eastern Mirror	English	15-02-2022

No objection/suggestion was received by the Commission on the petition till the last date of submission.

1.3. Notice for Public Hearing:

In order to ensure more transparency in the process of Tariff Determination, the Commission published Public Notice on 10th March, 2022 inviting the interested stakeholders, general public and consumers to the public hearing scheduled to be held on 16th March, 2022 from 11:00am onwards at DPN's Conference Hall, Kohima on the said petition. The detail minutes of the Public Hearing is given in Chapter-3.

2. SUMMARY OF TARIFF PETITION

2.1 Project Background - As per Submission

M/s. Hutah Industries Private Limited ("HIPL" or "Company"), incorporated on 4th November 2020 under the Companies Act 2013 and that the Company is limited by shares. The Company registered office is located at Thahekhu Village, House number 125, Dimapur, Nagaland, 797112. The CIN of the Company is U40108NL2020PTC013541. The PAN of the Company is AAFCH5266F and TAN of the Company is SHLH01718D.

The Management of the Company is now considering setting up 10 MW biomass based power plant in Nagaland. The proposed project will utilise bamboo as the fuel for producing power. It is noted that the state of Nagaland is rich in growth on bamboo and the local Government is willing to provide ample amount of bamboo plantation for the Company to utilise the same. The bamboo will be cut, converted into chips/briquettes, which will be fed in the boiler system. The bamboo plants will not be uprooted, instead will be cut from stem level, allowing the plant to regrow in next couple of years, to be available for re-harvesting.

The overall project cost for setting up the said Project has been ascertained at Rs. 68.53 Crores, which is proposed to be funded in a debt-equity ratio of 1.86: 1, meaning Promoters Contribution in form of equity/ quasi equity/ unsecured loan to the tune of Rs. 23.98 Crores and long term debt component of Rs. 44.54 Crores. The snapshot of other parameters of the Project are:

1. The project will have an installed capacity of 10 MW, with wet bamboo as basic input as raw material.
2. The Company has already approached the Government of Nagaland for allotment of the project and in-principal approval has been provided by the Government. Apart from receiving the approval from the State Government, the Company has taken 1500 acres of land on long lease of 99 years. The said land already has 500 acres of bamboo plantation and around 950 acres will be further planted during the course of implementation of the Project.
3. The overall project cost for setting up the said 10 MW bamboo based biomass power project will be around Rs. 68.56 Crores, which will be funded in a debt-equity ratio of 1.86:1.
4. The Net Present Value (NPV) of the Project has been ascertained at Rs. 3075 Crores, meanwhile the IRR at 18.71% is higher than weighted average cost of capital (WACC) at 10.65%, indicating the project is financially viable.
5. The average Debt Service Coverage Ratio (DSCR) of the Project has been ascertained at 1.75, indicating fair repayment capacity of the Project.

2.2. Project Cost & Annual Fixed Charges:

The Petitioner in its petition has proposed the project cost of the 10 MW Biomass Power Project at A.K. Industrial Village, Ganeshnagar, Dimapur Nagaland along with Annual Fixed Charges & levellised Tariff. The proposed project cost &Tariff are shown in Table below.

Table 1: Project & AFC projected by petitioner (Rs. in Lakhs)

Description	Claimed
Land	505.00
Building and Civil Work	1,070.00
Plant & Machinery	3,726.00
Miscellaneous Fixed Assets	115.00
Preliminary and Pre-Operative	592.00
Interest during Construction	500.00
Contingency	246.00
Margin Money for Working Capital	100.00
Total	**6,853.00**
Tariff/kWh (Rs.)	5.99

The proposed project is expected to be funded in a Debt Equity Ratio of 1.86: 1, whereby the promoters will bring in a contribution of Rs. 23.98 Crores and the bank borrowing will be to the tune of INR 44.54 Crores. The means of finance for the proposed project has been provided in the exhibit below:

Description	Unit	31-Mar-21	31-Mar-22	31-Mar-23	Total
Equity	Rs. Crores	7.23	12.60	4.16	23.98
Debt	Rs. Crores	13.42	23.40	7.72	44.54
Total Means of Finance	**Rs. Crores**	**20.65**	**36.00**	**11.88**	**68.53**

The broad terms for the proposed loan have been provided below:

Nature of Borrowing	Term Loan (Proposed)
Loan Amount	INR 44.54 Crores
Interest Rate	10.25%
Commercial Operation Date	Quarter 3 of FY 2022-23
Repayment Start	Quarter 1 of FY 2023-24
Repayment	31 equated quarterly installments

However, after the observations of the stakeholders in public hearing dated 16th March, 2022 the project developer revised their project cost to Rs. 69.75 Cr along with other operational parameters vide letter No. HI/07/22 dated 24th March, 2022. Revised project cost and tariff are shown below:

Table 2: Revised Project & AFC projected by petitioner (Rs. in Lakhs)

Description	Claimed
Total Project Cost as per Petition	6,853.00
Additional cost on account of water pipe line & power evacuation	122.00
Net Total	**6,975.00**
Revised Tariff/kWh (Rs.)	5.87

2.3. Variate Consultants Private Limited (EPC)

Variate Consultants Private Limited ('VCPL' or Consultants) is an engineering, procurement and construction contracting company, which is primarily focussed on renewable energy project. The Company since its inception during the year 2014 has been involved in undertaking PV cell based solar power project, wind power project, biomass based projects, along with waste to energy projects, across India. The Company is promoted by Technocrats, with combined experience of over 120 years of project implementation and management experience between them.

Recently, VCPL has implemented its own cow dung to fertilizer and power project, under Public Private Partnership model, along with the Government of Rajasthan in Shri Ganganagar district. The Project is currently undergoing commissioning and will commence commercial operations from December 2020.

The team at VCPL has prior experience in handling biomass based projects with various feedstocks which include mustard stalk, sweet shorgum stalk, rice husk, molasses and bamboo to name a few.

2.4. Prayers of Petition:

The Petitioner has prayed in its petition for the following:

- To admit and approve the Petition for the 10 MW Biomass Power Project at A.K. Industrial Village, Ganeshnagar, Dimapur Nagaland.
- To approve the tariff submitted by petitioner.
- Condone any inadvertent delay/omissions/errors/rounding off differences/shortcoming and Petitioner may please be permitted to add/change/modify/alter the petition.
- Permit petitioner to file additional data/information as may be necessary.
- Pass such orders as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

3. PUBLIC HEARING

3.1. Public Hearing:

As envisaged in the Electricity Act, 2003 and also to ensure transparency in the process of determination of tariff, public hearing was held as scheduled on 16th March, 2022 in the DPN's Conference Hall, Kohima.

3.2. Proceedings of Public Hearing:

The Public Hearing was chaired by Er. Hekavi N Ayemi, Asst. Engineer (Tariff), NERC and the welcome addressed was delivered by Er. Khose Sale, Chairman, Nagaland Electricity Regulatory Commission (NERC). The Chairman welcomed all the Members present and expressed his wishes for a good interaction and a fruitful discussion. To begin with the public hearing, a power point presentation on the proposed 10MW Biomass Power Plant was presented by the Project Developer followed by queries and replies. During the hearing, participants were given adequate opportunity to raise queries & comments if any, on the Petition filed by the project developer. There were queries and replies on many points as under.

1) **Query by DPN:**
Basic raw material for the project is bamboo which will be consumed @ 95,000 tons in a year for the plant. More details on the bamboo supply/linkage to feed the plant may be furnished.

Reply by Firm:
The Company has taken an existing bamboo plantation spread over 1500 acres of land on long term lease of 99 years. The estimate of bamboo supply from the said plantation has been presented below:

Description	unit	value
Min weight of single clump	kg	15.00
Max weight of single clump	kg	20.00
Average weight of single clump	kg	17.50
Number of clumps in single clump	Nos	10.00
weight of single clump	kg	175.00
Clumps in 1 acre (5m x 4m spacing)	Nos	202.00
Clumps in 1 acre (3m x 2m spacing)	Nos	675.00
Average clump in 1 acre	Nos	439.00
10% mortality	Nos	44.00

Net clumps in 1 acres	Nos	395.00
Weight of bamboo from 1 acre	Tons	69.00
Area of plantation	Acre	1500.00
Possible yield of bamboo	Tons	103688.00

It should be noted that the bamboo is already planted at site, which will be sufficient for 1.50 years, as the total requirement during first 1.50 year will be 98,280 Tons. Meanwhile the Company is in discussions for taking another plantation of 1500 acres on long lease basis. HIPL is also planning to sow fresh fast-growing variety of bamboo, which is available for harvesting in 3 years of time instead of 5 years.

Further, with reduced peak capacity utilisation level of 85%, the peak requirement of bamboo reduced from earlier estimated 95,000 per year to 89,500 Tons per year.

Any shortfall in bamboo production will be procured from open market, where the prevailing price of bamboo is Rs. 2,000/ Ton. The peak annual purchase from outside will not be more than 5,000 Tons.

Comment by DPN

Documents on the studies conducted for bamboo availability may be furnished.

2) **Query by DPN:**

Water requirement for the project is estimated to be about 100KL per day which will be supplied by a perennial stream flowing near the proposed project.

Reply by Firm:

The water is proposed to be procured from 2 separate sources i.e., natural water tank located about 1.50 Km from the proposed project site and which stores rain water. The tank will be further deepened to preserve more water. Additionally, there are 2 streams flowing nearby, which will tapped by building pipeline, the cost of which has now been included in the overall project cost.

Comment by DPN

Documents on the studies conducted for water availability may be furnished.

3) **Query by DPN:**

The DPR mentions that the company has included the cost of establishing necessary evacuation infrastructures in the project cost. However, in the project cost head wise (page 43), there is no such component.

In this regard, evacuation and injection to Power Department's grid has to be at 66kV voltage level at 66/33kV Ganeshnagar sub-station.

Reply by Firm:
The Power evacuation will be at 66kv level transmission line from 66/33kV Ganeshnagar substation as suggested.

4) **Query by DPN:**
Transmission loss is projected at 2.5% which is on the higher side considering that the plant is very close to the evacuation sub-station which needs to be reviewed.

Reply by Firm:
The transmission loss can be further reduced in revised calculation to 0.50% considering transmission distance at 1 Km maximum.

5) **Query by DPN:**
Auxiliary consumption of 12.5% is very high and needs to be reviewed.

Reply by Firm:
Based on the suggestion by Department of Power, the auxiliary consumption shall be reduced to 9%.

6) **Statement by DPN:**
The DPN being a state owned commercial department will only enter into an agreement to buy power which are reasonable with the existing market rate so as to supply power at an affordable rate to its consumer.

At present, DPN is procuring power at an average cost of Rs. 3.8/kWh (approx) at source and even if the POC & SLDC charges are included the total average cost comes to around Rs. 5/kWh only. Therefore, the final tariff may be fixed at a reasonable rate while finalizing the tariff.

Reply by Firm:
The Tariff can be further negotiated and can decide at a mutual agreed rate. However, it may kindly be noted that biomass based generation cost is relatively higher than other available source of Generation.

7) Conclusion:

After hearing both the parties, the Commission is of the view that the public hearing is one of the processes for determination of tariff. Therefore, the Commission will determine and finalize the proposed tariff by taking into consideration all the relevant aspect raised during the course of Public Hearing and shall pass reasonable Orders as deem fit and proper.

The list of Members attended the Public Hearing are as follows:

1. Er. Khose Sale, Chairman, NERC.
2. Er. Nribemo Mozhui, Engineer-in-Chief, DPN.
3. Er. Moa Aier, Chief Engineer (D&R), DPN.
4. Er. Wabangmeren Jamir, Addl. CE (T&G), DPN
5. Er. Tiameren Walling, Addl. CE (D&R), DPN.
6. Er. Kasho Chishi, SE, DPN.
7. Er. Lobosang Jamir, SE, DPN.
8. Er. T. Lithrichum Sangtam, SE, DPN.
9. Er. Hekaito Assumi, Asst. CE, DPN.
10. Er. Chutsusie Thowachu, EE(Tech), DPN.
11. Er. Hiusinlo Tep, SDO (Trans), DPN.
12. Mr. Aditya Pandit, CEO, Hutah Industries Private Limited.
13. Ms. Vinatoli Yeptho, MD, Hutah Industries Private Limited.
14. Mr. M. C. Konyak, Vice President, Hutah Industries Pvt Ltd.
15. Mr. Amung Konyak, COO, Hutah Industries Private Limited.
16. Mr. Vatsal Mishra, CTO, Hutah Industries Private Limited.
17. Mr. Seyie Keretsu, Reporter, Nagaland Post.
18. Mr. Rajat Limbu, Video Journalist, NE8-Nagaland Post.
19. Mr. Temjen Yanger, Correspondent Nagaland Post.
20. Mr. Kevilelu Metha, Video Journalist (Nagaland TV).
21. Er. Hekavi N Ayemi, Assistant Engineer, NERC.
22. Mr. Limawapang, Legal Consultant, NERC.
23. Mr. Shivito Wotsa, Accounts Officer, NERC.

4. PROJECT IMPLEMENTATION AND COST

4.1. Overview of the Project:

This 10 MW Biomass power project will utilise bamboo chips/briquettes as the fuel for generating power. Nagaland is rich in growth of bamboo. The petitioner has taken 1500 acres of land on long lease of 99 years. The said land already has 500 acres of bamboo plantation and around 950 acres will be further planted during the course of implementation of the project. The bamboo will not be uprooted, instead it will be cut from stem level, allowing the plant to re-grow in next couple of years to be available for re-harvesting. The forest cover will remain and the bamboo will be utilised in optimum manner for generation of power. Main objective of the project is to utilise the natural resources to meet the power shortage as well as to tap renewable energy sources. The total capacity of the project is 10 MW.

4.2. Grid Connectivity (Power Evacuation):

Developer's Submission:

The Project Developer submitted in the petition that the power generated at 11 KV shall be stepped-up to either 33 KV or 66 KV as required by the STU for transmission / evacuation.

Further, the Developer re-submitted vide letter no. HI/07/22 dated 24th March, 2022 that the power will be evacuated at the level of 66 KV voltage level from 66/33 KV Ganeshnagar sub-station which is 1 Km away from the site.

4.3. Capital Cost Petitioner's Submission:

4.3.1. The 10 MW Biomass Power Project shall be implemented through a turnkey engineering, procurement and construction (EPC) contract.

The capital cost includes the Civil Works, E&M works & other costs including preliminary & pre-operative expenses. It also includes design, engineering, supply procurement and transport, construction, assembly and testing of equipment and materials to site. Table below presents summary of the capital cost estimate for the proposed 10 MW Biomass Power Project.

Table 3: Total Estimated Project Cost **(Rs. in Lakhs)**

Description	Claimed
Land	505.00
Building and Civil Work	1,070.00
Plant & Machinery	3,726.00
Miscellaneous Fixed Assets	115.00
Preliminary and Pre-Operative	592.00
Contingency	246.00
Margin Money for Working Capital	100.00
Total Project Cost	**6,353.00**
Interest during Construction (IDC)	500.00
Net Project Cost	**6853.00**

However, after the observations of the stakeholders in public hearing dated 16th March, 2022 the project developer revised the project cost to Rs. 69.75 Cr along with other operational parameters vide letter No. HI/07/22 dated 24th March, 2022. Revised project cost and tariff are shown below:

Table 4: Revised Total Estimated Project Cost **(Rs. in Lakhs)**

Description	Claimed
Total Project Cost as per Main Petition	6,853.00
Additional cost on account of water pipe line & power evacuation system	122.00
Net Total	**6,975.00**

4.3.2. Means of Finance

The total estimated project cost is Rs. 6975.00 Lakhs. The project cost is expected to be funded by mix of Equity and Long-Term Debt.

4.3.3. Project Components & Assumptions

❖ **Civil Works:**

The cost of civil works is estimated based on preliminary designs and drawings prepared for various components of the project. The main components are Bunker, Furnace Boiler, Prefab and Turbine Building, Cooling Tower etc. The details of the civil works are as follows:

Table 5: Details of Buildings and Civil Works (Rs. in Lakhs)

Description	Value
EPC Cost	
Bunker	310.00
Furnace Boiler	150.00
Prefab	120.00
Office & Reception	1.00
Turbine Building	150.00
Cooling Tower	90.00
Switch Yard	10.00
Chimney	10.00
Foundation for DM W	30.00
Bio Gas + Bag House	25.00
Others Foundation- DG, Liquid Fuel Area, Lime Tank, Lime Holding, ETP	10.00
Taxes, Duties, Charges etc.	163
Total Building and Civil Works	**1070.00**

❖ **Plant & Machinery:**

The cost of plant and machinery have been worked out based on preliminary designs and drawings prepared for the project. The tax rate has been considered at 18%.The details of Plant & Machinery are as follows:

Table 6: Details of Plant & Machinery (Rs. in Lakhs)

Description	Value
EPC Work	
Total price design, engineering, manufacturing, supply, despatch of 50TPH Bamboo fired travel grate stacker boiler with coal option of mixing by 30% with 10 MW condensing turbine on ex-work basis, taxes are extra at actual	2950.00
Non-EPC Plant and Machinery (utilities)	**150.00**
Taxes	**558.00**
Transportation Cost	31.00
Insurance	37.00
Total Plant and Machinery Cost	**3726.00**

❖ **Other Cost:**

The following are the items estimated towards other costs.

(a) **Preliminary and Pre-Operative Expenses:** A provision of Rs. 592 Lakh of total project cost including of Rs. 250 Lakh for Start-up expenses has been made as Preliminary & Pre-Operative Expenses.

(b) **Land & Land Development Expenses:** The cost of land and land development is estimated at Rs. 505 Lakh which includes Rs. 233 Lakhs for long-term lease expenses of 1500 acres and balance of Rs. 272 Lakh towards land development expenses.

(c) **Miscellaneous Fixed Asset Expenses:** This expense is estimated at Rs. 115.00 Lakh, which include Fire Fighting Equipment, Furniture & Fixtures, Computers, and other miscellaneous fixed assets.

(d) **Margin Money for Working Capital:** A lumpsum provision of Rs. 100 Lakh is made towards requirement of margin money for working capital.

(e) **Contingency:** A Provision of 5% on cost of building and civil works, plant & machinery, and miscellaneous fixed assets has been made towards contingency and the same works out to Rs. 246.00 Lakh.

(f) **Interest during Construction:** The debt drawdown will commence from 4th quarter of FY 2020-21 and the final withdrawal will be in second quarter of FY 2022-23. Operations are expected to commence in 3rd quarter of FY 2022-23. Interest prior to that will be added to the project cost which is estimated at Rs. 500 lakh.

4.4. Commission's Analysis:

The project cost of 10 MW Biomass Power Plant submitted by the petitioner is Rs. 68.53 Cr. However, after the observations of the stakeholders in public hearing dated 16th March, 2022 the project developer revised their project cost to Rs. 69.75 Cr vide letter No. HI/07/22 dated 24th March, 2022 considering the cost of additional pipeline for drawing water, and cost of evacuation of the power at Ganeshnagar Sub Station.

In the view of the facts and circumstances of the case, Commission feels it appropriate to allow the project cost of Rs. 69.75 Cr for 10 MW Biomass Power Plant. The petitioner is directed to submit audited actual capital cost to the Commission after commissioning of the project along with the impact of the same on the tariff.

4.5. Debt Equity Ratio:

Provisions relating to the Debt Equity ratio for calculation for interest on loan & return on equity, as given in Regulation 13 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 has been considered for determination of Debt-Equity. The Regulation provides as follows:

(1) For determination of generic tariff and project specific tariff, the debt equity ratio shall be considered as 70:30.

Provided that, for project specific tariff, where the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

Provided further that for project specific tariff where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Provided also that debt equity ratio shall be considered after deducting the amount of grant or capital subsidy received for the project for arriving at the amount of debt and equity.

Debt & Equity for calculation of RoE & Interest on Loan has been considered in accordance with the above Regulation.

5. Annual Fixed Charges

5.1. Overview of Annual Fixed Charges:

The CERC Regulations provides for the components of AFC and various parameters as provided below:

(a) Operation and Maintenance expenses;
(b) Depreciation;
(c) Interest on loan;
(d) Interest on working capital;
(e) Return on equity.

Further, being a Biomass project, fuel cost shall also be a variable cost component apart from the above. Each of the above components are analysed and discussed in the subsequent sections.

5.2. Operation and Maintenance Expenses:

The Project Developer has claimed O&M expenses at the rate of 3% of the total GFA for the 1st year of the project life. The O&M expenses for the subsequent years have been claimed by escalating 1st year O&M expenses at the rate 3% year over year.

Commission's Analysis:

Regulation 19 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides as follows:

(1) Operation and Maintenance expenses shall be determined for the Tariff Period of the project based on normative O&M expenses specified in these regulations for the first year of the Control Period.

(2) Normative O&M expenses allowed during first year of the Control Period i.e. financial year 2020-21 under these regulations shall be escalated at the rate of 3.84% per annum for the Tariff Period.

Further, Regulation 35 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides as follows:

Normative O&M Expenses for the first year of the Control Period i.e. financial year 2020-21 shall be Rs.46.42 lakhs per MW and shall be escalated at the rate specified in Regulation 19 of these Regulations for the Tariff Period.

In the view of the above, the Commission has considered the normative O&M expenses of Rs. 46.42 Lakh/MW for the base year i.e. FY 2020-21 and escalated the same at the rate of 3.84% per annum to arrive at the O&M expenses for 1st year of operation i.e. FY 2022-23. Further, escalation rate of 3.84% per annum has been considered year over year to determine O&M expenses for subsequent years of the project life.

5.3. Depreciation:

Regulation 15 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides as follows:

(1) The value base for the purpose of depreciation shall be the capital cost of the project admitted by the Commission. The salvage value of the project shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the project:

Provided that, no depreciation shall be allowed to the extent of grant or capital subsidy received for the project.

(2) Depreciation rate of 4.67% per annum shall be considered for the first 15 years and remaining depreciation shall be evenly spread during remaining Useful Life of the project.

(3) Depreciation shall be computed from the first year of commercial operation: Provided that, for determination of project specific tariff, in case of commercial operation of the project for part of the year, depreciation shall be computed on pro rata basis.

The above provisions as given in the CERC RE Regulations, 2020 has been considered for determining the depreciation in this order.

5.4. Interest on Loan Capital:

The petitioner has submitted the rate of interest as 10.25% p.a. and tenure of loan as 8 years.

Regulation 14 (1) of The Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides that,

> *"For determination of generic tariff and project specific tariff, loan tenure of 15 years shall be considered."*

Further, Regulation 14 (2) of the CERC (Renewable Energy) Regulation, 2020 provides that:

(a) *The loans arrived at in the manner indicated in Regulation 13 shall be considered as gross normative loan for calculation for interest on loan. For project specific tariff, the normative loan outstanding as on 1st of April of every year shall be worked out by deducting the cumulative repayment up to 31st March of previous year from the gross normative loan.*

(b) *For the purpose of computation of tariff, normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months shall be considered.*

(c) *Notwithstanding any moratorium period availed by project developer, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.*

The above regulation provides that the normative interest rate shall be 2% above the State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months. The six months average of State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (One Year Tenure) is 7%, accordingly, allowable rate of interest on loan is 9% (7%+2%).

The Commission has considered the above provisions of CERC Renewable Energy Regulation, 2020 while calculating & approving the interest on loan.

5.5. Interest on Working Capital:

Regulation 17 (2) of The Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides as follows:

"The Working Capital requirement in respect of biomass power projects with Rankine cycle technology, biogas power projects, biomass gasifier-based power projects, non-fossil fuel-based co-generation projects, municipal solid waste-based power projects and refuse derived fuel-based power projects shall be computed in accordance with the following:

a) Fuel costs for four months equivalent to normative Plant Load Factor;

b) Operation and Maintenance expense for one month;

c) Receivables equivalent to 45 days of tariff for sale of electricity calculated on the plant load factor; and

d) Maintenance spares equivalent to 15% of Operation and Maintenance expenses."

Regulation 17 (4) of The Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for the rate to be considered for interest on working capital. The provisions are reproduced below:

"Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred and fifty (350) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months."

The above regulation provides that the normative interest rate shall be 3.5% above the State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months. The six months average of the State Bank of India MCLR (One Year Tenure) is 7%, accordingly, allowable rate of interest on working capital is 10.50% (7%+3.50%).

Therefore, the Commission has approved IoWC at the rate of 10.50% for determination of tariff for 10 MW Biomass Power Plant.

5.6. Return on Equity:

Regulation 16 of The Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for the Return on Equity. The provisions are reproduced below:

"(1) The value base for equity shall be as determined under Regulation 13.

(2) The normative Return on Equity shall be 14%. The normative Return on Equity shall be grossed up by the latest available notified Minimum Alternate Tax (MAT) rate for the first 20 years of the Tariff Period and by the latest available notified Corporate Tax rate for the remaining Tariff Period."

In the view of the above, the Commission has considered RoE at the rate of 16.40% (RoE @ 14% grossed up by MAT @ 17.16%) for first 20 Years of the Project life and for remaining life, RoE has been considered at the rate of 17.52% (RoE @ 14% grossed up by Corporate Tax @ 25.17%).

6. Fuel Cost

6. Overview of the Fuel Parameters

6.1. Fuel:

The Project Developer submitted that the project will primarily consume bamboo as feedstock for generation of power. Apart from that, the Project will have flexibility to consume coal as secondary fuel. The Company will be utilising own planted and grown bamboo as raw material, which will be grown in 1450 acres of land, adjacent to the proposed project site. Hence, effectively there will be no raw material cost. However, it has considered raw material cost of Rs. 1800/- per Ton of Bamboo, which is the cost of manpower for chopping/ cutting bamboo, cost of re-plantation, cost of water for re-plantation, fuel cost for operating harvesters, chippers etc. Based on these assumptions, the raw material cost of the Project has been estimated. The petitioner has considered 100% bamboo as fuel accordingly, coal is not included in the fuel mix and fuel cost calculation.

6.2. Calorific Value:

Regulation 37 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for calorific value for biomass fuel as 3100 kcal/kg.

The petitioner has considered calorific value of bamboo as 3500 Kcal/Kg and station heat rate of 4200 Kcal/kWh. Accordingly, fuel required for generation is proposed as 1.20 Kg/ kWh.

The Commission has considered the submission of the petitioner and accordingly, fuel consumption has been approved on the basis of calorific value of bamboo as 3500 Kcal/Kg and station heat rate of 4200 Kcal/ kWh. The bamboo fuel consumption is approved at 1.20 Kg/ kWh.

6.3. Fuel Cost:

Regulation 38 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020, has specified the Biomass fuel price of Rs. 3557/MT (as applicable to Other

States) for first year of the control period i.e. FY 2020-21. It further provides that the specified fuel cost for the FY 2020-21 shall be escalated at the rate of 5% per annum to arrive at the base price for subsequent years.

The Petitioner has submitted that the project will be utilising own planted and grown bamboo as raw material, which will be grown in 1450 acres of land, adjacent to the proposed project site. Hence, effectively there will be no raw material cost. However, it has considered raw material cost of Rs. 1800/- per Ton of Bamboo, which is the cost of manpower for chopping/ cutting bamboo, cost of re-plantation, cost of water for re-plantation, fuel cost for operating harvesters chippers etc.

Considering the approved fuel consumption of 1.20 Kg/kWh and raw material cost of Rs. 1800/- per Ton, year wise fuel cost has been determined & approved.

In the view of the above, Commission deems it appropriate to allow fuel cost as per petitioner's claim.

7. Plant Load Factor:

Regulations 32 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for the Plant Load Factor. The provisions are reproduced below:

> *"For the purpose of determination of tariff, the Plant Load Factor shall be considered as 80%."*

The petitioner has submitted PLF of 75% in initial year and increased the same to 80%, 85% & upto 90% in subsequent years.

However, subsequently, the petitioner revised their claim and capped the PLF at 85% vide letter No. HI/07/22 dated 24th March, 2022.

Considering the submissions of the petitioner, stakeholders & provisions of the CERC Regulations, 2020, Commission deems it appropriate to approve the PLF for the project at 82%.

8. Auxiliary Consumption

Regulations 33 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for the Auxiliary Consumption. The provisions are reproduced below:

The normative auxiliary consumption shall be as follows: -

a) *For projects using water-cooled condenser: 10%*

b) *For projects using air-cooled condenser: 12%*

The petitioner claimed auxiliary consumption of 12.50% in the petition. However, subsequently, the petitioner revised the claim of auxiliary consumption to 9% vide letter No. HI/07/22 dated 24th March, 2022.

In view of the above, the Commission deems it appropriate to approve the auxiliary consumption at 9%.

9. Transmission loss

The petitioner claimed transmission losses on account of transmitting the power from the power plant to the nearest grid injection point at 2.5%. However, subsequent to the views of the stakeholders in the public hearing on 16th March, 2022, the petitioner has revised the transmission loss projection vide letter No. HI/07/22 dated 24th March, 2022. The petitioner has proposed injection point at 66 kV voltage level at 66/33 kV Ganeshnagar sub-station. The distance of the injection point from site is 1 Km and accordingly, transmission loss has been revised to 0.50%.

In view of the above, the Commission deems it appropriate to approve the transmission loss at 0.50%.

10. Useful Life of the Project

Regulations 2(1)(hh) of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for the useful life of the generating stations. The provisions are reproduced below:

'Useful Life' in relation to project, including dedicated evacuation system, from the date of commercial operation of such project, shall mean the following: - ……..

(ii) Biomass power project with Rankine cycle technology 25 years……

In view of the above, useful life for determination of Tariff has been considered as 25 years.

11. Tariff Design

Regulations 10 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 provides for the tariff on levellised basis for the Tariff period. The provisions are reproduced below:

(1) The generic tariff shall be determined, on levelized basis, considering the year of commissioning of the project, for the tariff period of the project:

Provided that for renewable energy projects having single part tariff with two components, fixed cost component shall be determined on levelized basis considering the year of commissioning of the project while fuel cost component shall be determined on year of operation basis in the Tariff Order to be issued by the Commission.

(2) For the purpose of levelized tariff computation, discount factor equivalent to post-tax weighted average cost of capital shall be considered.

(3) The above principles shall also apply for project specific tariff.

The above provisions have been considered for determining the levellised tariff for the useful life of the project. Further, the discount factor for the purpose of levellised tariff computation has been considered at post-tax weighted average cost of capital of 10.14%.

12. DIRECTIVES:

12.1 Submission of Actual Capital Expenditure:

The petitioner is directed to submit the actual capital expenditure incurred up to the date of commercial operation of the generating station duly certified by the statutory auditors for review of this tariff order based on the actual Capital Cost.

12.2. Loan Agreements:

The petitioner has projected interest rate on working capital at 10.25% but has not provided any loan agreements/communication from any bank/financial institution in this regard. Therefore, the petitioner is directed to submit the agreement between the parties at the earliest.

12.3. Status and Compliance Report:

The Project developer is directed to submit the Status and Compliance Report of the above Directives to the Commission at the end of each quarter in a year. The Commission will review the status in the Month following the end of the quarter.

12.4. Penalty for non-compliance:

Penalty for non-compliance of the directives of the Commission shall be dealt with as per Section 142 of the Indian Electricity Act, 2003.

13. Annual Fixed Charges & Tariff:

Based on the parameters approved above, the Annual Fixed Charges (AFC) & levellised Tariff for the 10 MW Biomass Power Project has been determined. The details of Tariff components & levellised Tariff for the project life of 25 year is provided in the Tables below.

Table 7: Approved Parameters

Particulars	Unit	MCLR	Additional above MCLR	Parameters_1
Capital cost	Rs. Lakhs			6975.00
Return on Equity (Grossed up with MAT)	%			16.40%
Interest on loan	%	7.00%	2.00%	9.00%
Interest on Working Capital	%	7.00%	3.50%	10.50%
Depreciation	%			4.67%
O&M	Lakhs/MW			46.42
Plant Load Factor (As per CERC Regulations)	%			82.00%
Gross Generation	MUs			71,832
Auxilliary Consumption	%			9.00%
Transmission Loss	%			0.50%

Table 8: Tariff Components & AFC **(Rs. in Lakhs)**

YEAR	Head of Expense						
	O&M Expense	Return on Equity	Interest on Loan	Depreciation	Interest on Working Capital	Fuel Cost	Total
2022-23 (1st Year)	249.58	171.11	432.12	162.30	111.80	773.66	1,900.58
2nd Year	519.76	343.17	410.17	325.50	109.23	1551.57	3,259.40
3rd Year	539.71	343.17	380.88	325.50	109.61	1551.57	3,250.44
4th Year	560.44	343.17	351.58	325.50	110.01	1551.57	3,242.27
5th Year	581.96	343.17	322.29	325.50	110.44	1551.57	3,234.93
6th Year	604.31	343.17	292.99	325.50	110.90	1551.57	3,228.44
7th Year	627.51	343.17	263.70	325.50	111.40	1551.57	3,222.85
8th Year	651.61	343.17	234.40	325.50	111.93	1551.57	3,218.18
9th Year	676.63	343.17	205.10	325.50	112.49	1551.57	3,214.47
10th Year	702.61	343.17	175.81	325.50	113.10	1551.57	3,211.76
11th Year	729.59	343.17	146.51	325.50	113.74	1551.57	3,210.09
12th Year	757.61	343.17	117.22	325.50	114.41	1551.57	3,209.49
13th Year	786.70	343.17	87.92	325.50	115.13	1551.57	3,210.00
14th Year	816.91	343.17	58.63	325.50	115.90	1551.57	3,211.68
15th Year	848.28	343.17	29.33	325.50	116.70	1551.57	3,214.56
16th Year	880.86	343.17	7.34	232.75	116.43	1551.57	3,132.13
17th Year	914.68	343.17	-	139.50	116.40	1551.57	3,065.32
18th Year	949.80	343.17	-	139.50	117.73	1551.57	3,101.77
19th Year	986.28	343.17	-	139.50	119.11	1551.57	3,139.63
20th Year	1,024.15	343.17	-	139.50	120.55	1551.57	3,178.94
21st Year	1,063.48	366.68	-	139.50	122.35	1551.57	3,243.58
22nd Year	1,104.31	366.68	-	139.50	123.90	1551.57	3,285.96
23rd Year	1,146.72	366.68	-	139.50	125.51	1551.57	3,329.98
24th Year	1,190.75	366.68	-	139.50	127.18	1551.57	3,375.68
25th Year	1,236.48	366.68	-	139.50	128.91	1551.57	3,423.14
26th Year	643.74	183.84	-	69.94	122.27	777.91	1,797.71

Table 9: Calculation of Discounted Tariff **(in Rs.)**

Particulars	ARR (Rs. in Lakhs)	Net Generation (In Mu)	Tariff (Rs.)	Discounting Factor 10.14%		Discounted Tariff (Rs.)
1st Year	1,900.58	32.43	5.86	1	1.00	5.86
2nd Year	3,259.40	65.04	5.01	2	0.90	4.50
3rd Year	3,250.44	65.04	5.00	3	0.81	4.04
4th Year	3,242.27	65.04	4.99	4	0.73	3.62
5th Year	3,234.93	65.04	4.97	5	0.65	3.24
6th Year	3,228.44	65.04	4.96	6	0.59	2.91
7th Year	3,222.85	65.04	4.96	7	0.53	2.61
8th Year	3,218.18	65.04	4.95	8	0.47	2.34
9th Year	3,214.47	65.04	4.94	9	0.43	2.10
10th Year	3,211.76	65.04	4.94	10	0.38	1.89
11th Year	3,210.09	65.04	4.94	11	0.34	1.69
12th Year	3,209.49	65.04	4.93	12	0.31	1.52
13th Year	3,210.00	65.04	4.94	13	0.28	1.37
14th Year	3,211.68	65.04	4.94	14	0.25	1.23
15th Year	3,214.56	65.04	4.94	15	0.22	1.11
16th Year	3,132.13	65.04	4.82	16	0.20	0.97
17th Year	3,065.32	65.04	4.71	17	0.18	0.85
18th Year	3,101.77	65.04	4.77	18	0.16	0.77
19th Year	3,139.63	65.04	4.83	19	0.15	0.70
20th Year	3,178.94	65.04	4.89	20	0.13	0.64
21st Year	3,243.58	65.04	4.99	21	0.12	0.59
22nd Year	3,285.96	65.04	5.05	22	0.11	0.54
23rd Year	3,329.98	65.04	5.12	23	0.10	0.49
24th Year	3,375.68	65.04	5.19	24	0.09	0.44
25th Year	3,423.14	65.04	5.26	25	0.08	0.40
26th Year	1,797.71	32.61	5.51	26	0.07	0.38

Table 10: Calculation of Tariff

Sl. No.	Particulars	Discount Rate	FY 2020-21 (1st Year)	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year
1	**ARR (₹ in Lakhs)**		1900.58	3259.40	3250.44	3242.27	3234.93	3228.44	3222.85	3218.18
2	**Net Generation (In Mus)**		32.43	65.04	65.04	65.04	65.04	65.04	65.04	65.04
3	**Tariff (Rs./unit)**		5.86	5.01	5.00	4.99	4.97	4.96	4.96	4.95
4			1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
5	Discounting Factor	10.14%	1.00	0.90	0.81	0.73	0.65	0.59	0.53	0.47
6	Discounted Tariff (Rs./unit)		5.86	4.50	4.04	3.62	3.24	2.91	2.61	2.34

9th Year	10th Year	11th Year	12th Year	13th Year	14th Year	15th Year	16th Year	17th Year	18th Year	19th Year
3214.47	3211.76	3210.09	3209.49	3210.00	3211.68	3214.56	3132.13	3065.32	3101.77	3139.63
65.04	65.04	65.04	65.04	65.04	65.04	65.04	65.04	65.04	65.04	65.04
4.94	4.94	4.94	4.93	4.94	4.94	4.94	4.82	4.71	4.77	4.83
9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00
0.43	0.38	0.34	0.31	0.28	0.25	0.22	0.20	0.18	0.16	0.15
2.10	1.89	1.69	1.52	1.37	1.23	1.11	0.97	0.85	0.77	0.70

20th Year	21st Year	22nd Year	23rd Year	24th Year	25th Year	26th Year	Total
3178.94	3243.58	3285.96	3329.98	3375.68	3423.14	1797.71	81112.96
65.04	65.04	65.04	65.04	65.04	65.04	32.61	1626.01
4.89	4.99	5.05	5.12	5.19	5.26	5.51	130.40
20.00	21.00	22.00	23.00	24.00	25.00	26.00	
0.13	0.12	0.11	0.10	0.09	0.08	0.07	9.25
0.64	0.59	0.54	0.49	0.44	0.40	0.38	46.81

Particulars	Tariff
Total of Tariff	46.81
Total of Discounting Factor	9.25
Levellised tariff - 25 years - Rs./kWh	5.06

Therefore, the Commission approves the levellised Tariff @ Rs. 5.06/kWh for 25 years of the project life in respect of proposed 10 MW Biomass Project at Ganeshnagar, Nagaland.

By order of the Commission

Sd/-
Er. HEKAVI N AYEMI
Deputy Director, NERC