

PART B – SECTOR SPECIFIC INFORMATION**BIOMASS /BAGASSE BASED COGENERATION PROJECT****1.0 GENERAL**

- 1.1 Proposed Capacity of the Cogeneration Project :
 Licensed _____ MW
 Installed _____ MW
- 1.2 Proposed location of the Project :
 Village : _____
 Taluk : _____
 District : _____
 State : _____
 Telephone/Fax : _____
- 1.3 Accessibility to proposed location of the Project :

Particulars	Name	Distance from Project Site (km)
Nearest Tehsil/Block HQ		
Nearest Road Head		
Nearest Railway Station		
Nearest Airport		
Nearest Grid/Substation		

- 1.4 Special Category if any – Location based :

Tick as applicable						
NE States & Sikkim	Islands & Estuaries	Hilly Area	Jammu & Kashmir	Deserts	Newly formed states	Not applicable

- 1.5 Details of proposed Project Land(Please tick appropriate)

Particular	Area	Acquired	Whether land is Mortgagable
Govt. Land			(*)
Pvt. Land			
Forest Land			
Other Specify			
Total			

*** (In case of Govt. Land is not mortgagable, please enclose letter from the concerned Govt. Authority)**

2.0 TECHNICAL

2.1 Details relating to Resources:

2.1.1 Type of industry :
(Sugar/Rice/Paper etc.)

2.1.2 Plant Crushing / processing capacity :
- Licensed (TCD /TPD)
- Actual (TCD /TPD)

2.1.3 Capacity utilization (%)

2.1.4 No. of days of operation : Season:,
Off-season:.....

2.1.5 Bagasse % on cane, in case of Sugar mill

2.1.6 Price of sale of surplus Biomass / Bagasse (Rs/MT)

2.1.7 Details of Biomass Fuel utilization

- Bagasse / Biomass generated (MT)
- Consumed (MT)
- Bought out (MT)
- Saved / Surplus (MT)
- Cost (Rs. /MT)

2.1.8 Type of other Biomass fuels , if any proposed to be used in the project. :

Present		Proposed	
		-	
Name of Biomass fuel	Calorific value	Qty in MT/ yr	Landed Cost (Rs/MT)
(*)			
Total			

*(For biomass fuels which are new & not test fired, please enclose Fuel analysis report)

2.1.9 Availability of Bagasse / Biomass fuel within 50 kms radius :

- ◆ Captive source (own)
- ◆ Bought out

Name of Biomass fuel	Qty in MT/ yr	Qty consumed in MT/ yr	Surplus Qty in MTs/ yr

2.1.10 Bagasse / Biomass fuel (Average) requirement

- kg/KWh
- MT/annum

2.1.11 Details of Alternative Fuel(s) for the Project :

- Name of the alternate fuel
- Proposed usage mix with alternate fuel (%)
- Calorific value of fuel (Kcal /kg)
- Alternate fuel consumption (Kg/KWh)
- Actual requirement (MT/annum)
- Landed cost of the alternate fuel. (Rs/MT)

2.1.12 Name(s) of other nearby Bagasse / Biomass Cogeneration project and Biomass Power projects within 50 kms radius & within the same district, separately

Name	Cap. (MW)	Name of the District	Radial Dist. (Kms)	Name(s) of Fuels used	Status of implementation

2.1.13 Arrangements made for Biomass / Alternate fuels

- Please enclose a Detailed write-up on the proposed fuel procurement / collection /transportation / storage mechanism for the proposed power plant.

2.1.14 Steam generation data:

- Generation (MT/h)
- Demand at Medium pressure (MT/h)
- Demand at Medium pressure (MT/h)
- Others, specify

Present	Proposed

2.1.15 Details on Water requirement for the project:

- Source of water (Borewells/ canal/ river etc.)
- Quality of water
- Raw water requirement(m3/hr)
- Storage facilities (raw water, DM water etc in m3/hr)

Present	Proposed

2.2 Estimation of Energy Generation

- ♦ Average PLF @ operating days, hours
- ♦ Gross Energy generation - in Million units
- ♦ Energy for Auxiliary consumption - in Million units
- ♦ Energy for Inhouse captive consumption - in Million units
- ♦ Surplus Energy for export / sale/ captive use in Million units
- ♦ Net Energy taken for financial evaluation – in Million units

2.3 Project Configuration

		Existing facilities, if applicable	Proposed facilities
2.3.1	Boiler i. Furnace Type ii. Make iii. Pressure/Temperature (ata/°C) iv. Capacity (TPH)	:	
2.3.2	▪ Steam generation data: ▪ Generation (MT/h) ▪ Demand at Medium pressure (MT/h) ▪ Demand at Medium pressure (MT/h) ▪ Others, specify	:	
2.3.3	Turbo-Generator i. Type ii. Make iii. Power Rating (MW) iv. Inlet Parameters <ul style="list-style-type: none"> - Pressure (ata) - Temperature (°C) - Steam Flow (TPH) v. Outlet Parameters <ul style="list-style-type: none"> - Pressure (ata) - Temperature (°C) - Steam Flow (TPH) vi. Extraction, if any	:	

2.4

Procurement Procedure

- 2.4.1 Basis of selection of the Plant & Machinery & Details of Procurement Procedure followed. :
- ☐Single Quotation / ☐RFQ Procedure /
☐Limited Tender / ☐Published Tender /
☐Any Other

(Please enclose copies of the budgetary offers, summary of technical / cost comparison statement for various equipment / packages and also contracts / agreements with Suppliers, if available etc., shall be enclosed.)

2.5 Power Evacuation

- 2.5.1 Generation voltage :
- 2.5.2 Evacuation voltage :
- 2.5.3 Details of Nearest sub-station viz. :
Name, capacity, distance from the
project site etc.
- 2.5.4 Length of the transmission line in Kms. :
- 2.5.5 Wheeling arrangement :

2.6**I) Mode of Implementation**

2.6.1 Mode of implementation of project : EPC / Spilt package / Any other
(Please tick appropriate)

2.6.2 Details of Technical Consultancy :
engaged, if any for execution of the
project

3.0 COMMERCIAL**3.1 Proposed Project cost Estimates :**

PARTICULARS	AMOUNT (Rs. IN LACS)
Land Cost & Site Development	
Buildings and Civil Works including foundation	
Plant & machinery incl. erection & commissioning	
Misc. Fixed Assets	
Engineering Consultancy & Technical Know-how fees	
Preliminary & Pre-operative expenses	
Provision for Contingencies	
Interest during Construction (IDC)	
Margin money for Working Capital	
Margin Money for Bank Guarantee/Fixed Deposit Receipt (FDR)	
Others, if any (please Specify)	
Total Project Cost	

3.2 Proposed Means of Financing

Particulars	Amount (Rs. in lacs)
A) Promoter's contribution	
- Equity Share Capital - Internal Cash Accruals - Unsecured loans from friends, relatives & associates etc. - Others, if any - specify	
B) Term Loan Proposed	
From IREDA	
From Others (_____)	
C) Subsidy / Grant , if any*	
D) Others, if any	
Total Project Cost	

* (Capital subsidy / Grant, if any /available will reduce IREDA's loan)

3.3 Purpose of Proposed Project : (Please tick mark) Rate (Rs./Unit)

a) Captive consumption	<input type="checkbox"/>	<input type="checkbox"/>
b) Selling power to Sister concern / subsidiary company	<input type="checkbox"/>	<input type="checkbox"/>
c) Selling power to State Electricity Board	<input type="checkbox"/>	<input type="checkbox"/>
d) Selling to third party *	<input type="checkbox"/>	<input type="checkbox"/>

(*Please enclose copy of Power Purchase agreement, as applicable. In case of sale to third party, please enclose copies of latest 3 years Annual report of the Company whom you propose to sell power)

3.4 Marketing Arrangement :

3.4.1 Status of SERC approved PPA in case of sale to State Utility / Third party :

- a. Date of signing of PPA : _____
- b. Validity period of PPA : _____
- c. Tariff applicable in the 1st year of operation : _____
- d. Annual escalation : _____
- e. Discount / Penalty clause : _____

3.4.2 In case of Captive Consumption

- a. Connected load (MW) : _____
- b. Average monthly energy consumption ** : _____
- c. Present tariff rate of SEB**

** (Information given is to be supported by necessary documents and recent electricity bills paid for the last 3 months)

3.5 Implementation Schedule :

- 3.5.1 Expected month & year of completion : _____

3.6 Assumptions taken for Performance Indicators :

- a. Capacity :
 - Installed
 - Gross Power generation
 - Auxiliary / In-plant consumption
 - Captive, if any
 - Transmission Losses, if any

- b. Net Energy available for sale in MU
- c. Rate of Interest for proposed loan : _____
from IREDA & others, if applicable
- d. Repayment period (Years) : _____
- e. Moratorium (Years) : _____
- f. Capacity Utilization Factor : _____
- g. Fuel cost (Rs./ ton) : _____
- h. Annual escalation of Fuel cost (%) : _____
- i. Annual O & M Charges : _____
- j. Annual escalation of O & M Charges : _____
- k. Tariff Rate (as per SERC approved & : _____
signed Power Purchase Agreement)
- l. Tariff Rate escalation per annum : _____
- m. Depreciation rate : _____
- m. Banking charges, if applicable : _____
- n. Wheeling charges, if applicable : _____
- o. Sales Tax benefit, if any. : _____
- p. Income Tax Holiday (in years) : _____
- q. Corporate Tax : _____
- r. Minimum Alternate Tax : _____
- s. Working capital limits with interest : _____
rate
- t. Any others (Please Specify) : _____

(Please enclose detailed cash flow statements if the same are not annexed with the DPR)

(In case of existing companies with main business, a detailed cash flow for the company as a whole i.e., taking into account the revenue stream of main business shall also be furnished.)

Note: A soft copy of the cash flow statement in a floppy / CD shall also be furnished.

4.0 ENVIRONMENTAL BENEFITS

4.1 Provide details of environmental benefits expected by putting up the Cogeneration project:

Coal Savings (MTCR)	Tonnes	CO ₂ Abatement	Million Kg
		SO _x Abatement	Million Kg
Furnace Oil Savings	Million litres	NO _x Abatement	Million Kg

* (Metric Tonne Equivalent of Coal Replacement)

4.2 Impact on Environment

Major Environmental issues (e.g. Forest, Land, Water, Pollution etc.)	
Is there any environmental mitigation or management plan available.	
Area of forest/ agricultural/ tribal land, if any required for the project	

Details on access road, if any to the proposed site	
Is there evidence / record available of endangered biological (flora & fauna) species in the project area	
Is there any village irrigation scheme in the canal / river / or any other source from which water is proposed to be drawn	
Area of land (agricultural / forest etc.) proposed to be cleared for 1. Access Road 2. Transmission line 3. Project site	
Details on afforestation / Deforestation by the project Implementation	
Area / Methodology for fly ash / effluent / any other waste material disposal	
Is there any community complaints against the Project?	

5.0 EXPECTED SOCIAL BENEFITS

Particulars	During Construction	After Implementation
Total Direct Employment		
Total Indirect Employment		
Average monthly income per person (Rs.)		
Total Revenue for Employment from the Project	Rs..... Lacs	
Is there any families, affected /displaced by the Project		
Is there any notable change in the cultivation pattern due to the project		
Details of social benefits, envisaged through the proposed project		

6.0 SECTOR SPECIFIC APPROVALS

Details	Obtained/ enclosed	To be Applied
Copy of Project Site & Project Capacity Registration Letter from State Nodal Agency		
In-Principle consent / Clearance from State Pollution		

Control Board		
Clearance for the project from Department of Environment & Forest, if applicable.		
No objection Certificate (NOC) from State Electricity Board or any other Authority		
Approved Power Purchase Agreement (PPA)		
Agreement for third party sale of electricity, if applicable		
No objection certificate / Clearance / Approval for drawl of water from State / Central concerned authorities.		
Land Clearance if applicable		
Other Clearances (Please Specify) a) b) c) d)		

7.0 OTHER DOCUMENTS TO BE SUBMITTED WITH APPLICATION

Note:

The DPR submitted along with the application shall have contents as indicated in the enclosed Annexure- A

7.1	Land, Site & Civil Work related
•	Copy of Sale/lease Deed for Land
•	Copy of Agreement for Sale of Land
•	Land Conversion Certificate
•	Architect's Estimate of Civil cost
7.2	Environment related
•	Environment Impact Assessment (EIA) Report
7.3	Fuel related
•	Copy of "Taluka Level Biomass Assessment Report" carried out by State Nodal Agency, if any covering the proposed site.
•	Copy of proposed 'Site Specific Detailed Report on Biomass Assessment (A site specific & independent report clearly indicating the land usage pattern, cropping pattern, area under cultivation, biomass utilization/consumption, availability of biomass fuels proposed within 15, 25 & 50 km range from the proposed site location.
•	Cane availability / cane crushing report for the last 5 years, in case of Sugar Mill (Project specific & independent report clearly indicating command area, area under cane cultivation, cane production, season duration, plant crushing details etc.)
•	Copies of Raw Material supply contract entered with Suppliers / Farmers
•	Copies of Consent letters for Raw Material supply from Agro-Industries / Others
•	Authenticated Agricultural Production data in the Region covering the proposed site.

7.4	Water related
•	A detailed Ground water availability report, if ground water is proposed for use.
•	Test report on the quality of water.
7.5	Organisation Chart
7.6	Implementation schedule (BAR/PERT chart)
7.7	Status on sanction of working capital limits for the project.

Place :

Signature : _____

Name & Designation : _____

Date :

Rubber Stamp : _____

