

F. No. 202/4/2010-BM
Government of India
Ministry of New and Renewable Energy
(Biomass Division)

Block No. 14, CG.O. Complex,
Lodi Road, New Delhi-110003
Dated: 28th April 2010

To

Head, State Nodal Department /
State Nodal Agencies (SNA's) /
Other concerned Implementing Agencies

Subject: Continuation of “Biomass Gasifier based Programmes” during 2009-10– sanction regarding,

Sir,

I am directed to convey the Sanction of the President of India for implementation of the following Biomass Gasifier based Programmes of the Ministry of New and Renewable Energy, Government of India during 2010-11:

- i. **Biomass Gasifier based Distributed / Off-grid power programme for Rural Areas.**
- ii. **Biomass Gasifier based Grid Connected Power Programme**
- iii. **Biomass gasifier based programmes in Rice Mills.**

2. The above programme / scheme will be implemented during 2010-11 as per the same funding norms / guidelines and other provisions applicable during 2009-10 and until such time the same is superseded by fresh / new programmes / schemes which are required to be formulated in alignment with the 11th Plan proposals. A physical target of 3 MW for decentralized / distributed system, 5 MW for grid-connected system and 15 MW for Industries have been set during 2010-11.

3. All State Nodal Agencies / State Nodal Departments and other concerned implementing agencies etc. are requested to initiate necessary action for implementation of **“Biomass Gasifier based programmes”** during the current financial year 2010-11 as per the guidelines enclosed at Appendix-I.

4. The expenditure on implementation of the afore-mentioned scheme will be met from the budget provision as indicated below:

- i. **Grid Connected Biomass Gasifier System**
Major Head - 2810 – New and Renewable Energy
Minor Head – 00.101 – Grid Interactive and distributed renewable power
Sub-head – 01-grid interactive renewable power
Detailed Head – 03 – Biopower
Object Head – 01.03.33 – subsidy (out of Rs. 41.75 crore, Rs. 6.00 crore for grid connected biomass gasifier system)

- ii. **Decentralized / Distributed Biomass Gasifier System**
Major Head - 2810 – New and Renewable Energy
Minor Head – 101 – Grid Interactive and distributed renewable power
Sub-head – 02 – Off-grid / distributed and decentralized renewable power
Detailed Head – 03 – Biopower
Object Head – 02.03.31 – grand-in-aid (out of Rs. 1.45 crore, Rs. 0.25 crore for Decentralized / Distributed Biomass Gasifier System)
Object Head – 02.03.33 – subsidy (out of Rs. 31.15 crore, Rs. 5.00 crore for Decentralized / Distributed Biomass Gasifier System)
- iii. **Biomass Gasifier for Industries**
Major Head - 2810 – New and Renewable Energy
Minor Head – 101 – Grid Interactive and distributed renewable power
Sub-head – 02 – Off-grid / distributed and decentralized renewable power
Detailed Head – 03 – Biopower
Object Head – 02.03.31 – grand-in-aid (out of Rs. 1.45 crore, Rs. 0.25 crore for Decentralized / Distributed Biomass Gasifier System)
Object Head – 02.03.33 – subsidy (out of Rs. 31.15 crore, Rs. 3.00 crore for Biomass Gasifier System in Industries)
5. This Sanction issues under the powers delegated to this Ministry and with the concurrence of Integrated Finance Division dated 27.04.2010 vide their No. IFD/-92/2010-11 dated 16.04.2010.

Yours faithfully

(Dr. D.K.Khare)
Director
011-24363402
Email – dkkhare@nic.in

Copy to: -

1. The Principal Director of Audit, CW&M-II (Scientific Departments), DGACR Building, New Delhi
2. The Heads of all States / UTs Implementing Departments/ Agencies
3. All Advisers / Joint Secretary
4. MD, IREDA
5. All Directors, MNRE
6. Director (Finance), MNRE
7. PS to Minister
8. Sr. PPS to Secretary, MNRE
9. P.S to AS&FA
10. CA, MNRE / PAO, MNRE / Cash Section / IFD, MNRE
11. All Regional Offices of MNRE
12. Sanction Folder

(Dr. D.K.Khare)
Director

Subject: Implementation of Biomass Gasifier Programme - Revised Guidelines for the implementation during 2010-11 and remaining period of the 11th Plan – reg.

1.0 Refer to the “Biomass Gasifier based Programmes announced vide No. 202/3/2009-BM dated 1st December 2009 and to convey the sanction for the guidelines for the implementation of the scheme during 2010-11 and the remaining period of the 11th Plan as per the following guidelines and details:

2.0 Programme Components:

- i. Biomass Gasifier based Distributed / Off-grid power programme for Rural Areas:** Biomass gasifier based distributed / off grid power systems in rural areas limited to 250 kW installed capacity, which have surplus biomass resources and unmet demand of electricity for *interalia* lighting, water pumping and microenterprises including telecom towers etc will be supported. The project may preferably be set up following a cluster approach.
- ii. Biomass gasifier based captive power generation in Rice Mills:** Biomass gasifier based captive power plants will be supported in rice mills for meeting their captive needs and surplus power fed into the grid / distributed in local areas.
- iii. Biomass Gasifier based Grid Connected Power Programme:**
 - a. Biomass gasifier based MW level grid connected power plants with 100% producer gas engines will be supported.
 - b. Besides, biomass based grid connected Boiler-Turbine-Generator (BTG) projects, preferably at tail end of the grid and having a decentralized distribution component would also be supported.
 - c. The maximum installed capacity of each such project would be 2 MW.
- iv. Promotional Activities:** Support to activities such as awareness creation, publicity measures, seminars / workshops / business meets / training programme etc. and to expand local manufacturing capacity and also support service facilities under the programme.

3.0 Implementation Strategy:

3.1 Programme Implementing Agencies / Organizations: Project proposals as per guidelines could be submitted online / directly to the Ministry by State Nodal agencies / Departments, Energy Service Companies (ESCOs), Co-operatives, Panchayats, SHGs, NGOs, manufacturers or entrepreneurs, independent power producers, promoters & developers etc.

3.2 Submission & Approval Process:

3.2.1 The following methodology would be followed for submission and approval of project proposals:

- i. Programme Implementing Agencies / Organizations will submit proposals to the Ministry with requisite information separately for village based proposals through gasifiers, gasifier based captive power project in rice mills using husk as per indicative proforma given respectively at **Annexure-I & II**.
- ii. Grid connected project proposals should contain Detailed Project Reports (DPRs) covering salient features as per the format. The project developer should enter into agreement with the utilities for sale of power or 3rd party sale and furnish copies of the PPA, copies of all clearance from statutory angle along with loan agreement or supporting documents for meeting balance funds etc. Only grid interactive projects would be supported which has envisaged fuel linkage mechanisms to ensure regular supply of the required quantity of biomass feed stock and provision of collection, processing and storage of biomass. Suggested points to be covered in the Detailed Project Reports (DPR) and Application Format for biomass gasifier based grid power generation projects as per indicative proforma given at **Annexure-III & IV**. The projects based on BTG route should have provision for decentralized distribution component and details should be provided in the project proposal.
- iii. A Project Advisory Committee (PAC) set up by the Ministry would evaluate and recommend the proposals for issue of in-principle approval based on the programme guidelines, project details, commissioning schedule. PAC would consider in-principle approval for the projects cumulatively costing up to 125% of the approved budgetary allocation for the given year.

4.0 Pattern of Central Financial Assistance (CFA):

4.1 Pattern of Central Financial Assistance (CFA) for various components is given below:

S No.	Items	Pattern of CFA
i.	Distributed / off grid power projects in rural areas and grid connected power projects with 100% producer gas engines or biomass based combustion projects.	Rs.15,000 per kW
ii.	Biomass gasifier systems retrofitted with dual fuel mode engines	Rs. 2,500 per kW
iii.	Captive power projects (captive power less than 50%) and / or feeding surplus power to grid in rice mills (with 100% producer gas engines or biomass based combustion projects).	Rs.10,000 per kW
iv.	Projects involving installation of 100% gas engines with an existing gasifier.	Rs.10.00 lakh per 100 kW
v.	Biomass gasifier projects for Distributed / Off-grid for Rural Areas and grid connected power projects for ensuring regular availability of biomass, provision of collection, processing and storage and operation &	Rs.1.50 lakh per 50 kW

	maintenance including compulsory AMC for 5 years after the guarantee period.	
vi.	Support towards lighting devices and distribution network	Financial support limited to a maximum of 3 km i.e. Rs.3.00 lakh per project (@ Rs.1.00 lakh per km).
vii.	Support towards project formulation	Financial incentives of Rs.5000/- per projects to the banks / FIs, manufacturers, promoters, consultants & service providers for developing firmed up and bankable proposals for a minimum of 10 projects or above.
viii.	Service charges for Verification and Certification	Rs.10,000/- per 100 kW subject to maximum of Rs.1.00 lakh for a project of 1 MW capacity. A minimum service charge would be Rs.10,000/- per site
ix.	Preparation of Detailed Project Report (DPRs) for centralized distributed / grid connected / captive power generation project: - Projects between 100-500 kW capacities - Projects above 500 kW capacities. - DPR is not required for the projects below 100 kW capacities.	Rs.0.50 lakh Rs.1.00 lakh
x.	HRD & Training - O&M Technician's Course - Gasifier Entrepreneur Development Course - Awareness promotions such as organization of seminars, business meets, workshops etc	- @Rs.2.00 lakh per course - @Rs.3.00 lakh per course - Maximum upto Rs.3.00 lakh
xi.	Support for gasifier manufacturers / suppliers for establishing service centers in areas where cluster of systems, minimum 10, have been set up in one district / region.	Rs.5.00 lakh (One-time funding)
xii	Special category states and Islands	20% higher CFA

5.0 Pattern of Release of funds:

- i. CFA as applicable under the scheme will be disbursed post-commissioning through one installment directly to the promoters or lending institutions / FIs after receipt of commissioning & verification reports and submission of the requisite documents / reports.
- ii. The service charges for Independent Verification Agency (IVA) or State Nodal Agencies (SNAs), as the case may be would be provided after

commissioning and certification by the designated agencies as per guidelines. The service charges would be provided to the designated agencies, including the state nodal agencies and FIs including banks to cover their expenses.

- iii. Programmes relating to Training & Awareness Promotion, 75% of the eligible CFA will be released to implementing organizations alongwith the sanction order. The balance will be released on receipt of the utilization certificate, audited statement of expenditure and the final report.

6.0 Independent Verification system

- 6.1 The Ministry will also separately empanel Independent Verification Agencies (IVA) other than State Nodal agencies.
- 6.2 Verification would be conducted after operation of project at least for a period of one month.
- 6.3 The Independent Verification Agencies would be required to furnish the following requisite documents / reports:
 - i. Verification and commissioning reports along with Joint Commissioning Report as per the indicative format given at **Annexure-V**. The verification report would be submitted covering various items as per details as per indicative proforma given in **Annexure-VI**.
 - ii. Statement of Expenditure duly audited by the Chartered Accountant or other designated authority as per Govt. of India Rules.
 - iii. The Utilization Certificates in the prescribed format as per the GFR Form -19A to be submitted after receipt of funds (**Annexure-VII**).
 - iv. Verifying agency certificate that the agreement between the user and supplier of the gasifier systems for full guarantee and warrantee for one year followed by AMC for two years has been entered into.

7.0 HRD & Training:

7.1 O&M Technician's Course

7.1.1 Financial support would be provided for organizing training programmes to train gasifier operators at selected Engineering Colleges / Polytechnics in the identified cluster involving programme implementation organizations, gasifier and engine manufacturers. The training would be for eight weeks involving limited classroom exercises with hands-on training. Each training programme will have a minimum of 10 candidates. The tentative schedule for such training course is suggested below:

• Training at Institute:	4 weeks
• Visit to biomass gasifier and engine manufacturer:	2 weeks.
• Field visits:	2 weeks.
Total	8 weeks

7.1.2 Under these training programmes, stipend @ Rs.5000/- per month (total Rs.10,000/-) would be paid to the trainees for entire 8 week duration. In addition,

financial support for Institutional Charges, field visits, materials, tools including contingencies etc., would be provided @Rs.2.00 lakh per course.

7.2 Gasifier Entrepreneur Development Course

7.2.1 Financial assistance will be provided for organization of Entrepreneurship Development Programmes (EDP). Such EDP would be provided for about 3 months for 15 persons per batch. Financial assistance would include institutional faculty charges; training expenses - field visit, class room training, Manuals & other materials, contingencies etc. Such course would be supported @Rs.3.00 lakh per course as per existing provisions of the scheme.

7.2.2 Single or multiple courses would be organized in association with Engineering Colleges / Polytechnics, gasifier manufacturers, programme implementing organizations etc.

8.0 Technology Demonstration Component:

8.1 The objective is to demonstrate the techno-economic feasibility of replacing inefficient steam engines with gasifier, using the captive biomass to meet the captive requirement and also to generate additional electricity feeding into the grid. Waste heat from gasifier system would be used for steam generation and for setting up of cooling / chilling system to increase the economic viability. As this integrated concept has not been demonstrated till now, it is proposed to take up demonstration projects under the scheme.

8.2 For the purpose, the existing level of subsidy will be provided for the gasifier with 100% producer gas engines components. In addition, financial assistance up to 50% of the cost of plant and machineries i.e. Vapor Absorption Machine (VAM) for cooling / chilling system and steam generating system from waste heat would be provided. Financial assistance would not be provided for land & building.

8.3 It is proposed to take up about 25 demonstration projects in rice mills replacing steam engines / boilers with biomass gasifier coupled with 100% producer gas engines for power generation along with provision for meeting entire thermal requirement through waste heat recovery. Under some of these projects, demonstration of cold storage or ice making units would also be taken up using waste heat for chilling / cold storage through VAM and steam generating systems.

8.4 Technology Demonstration Projects would be taken up as per RD&D policy of this Ministry for Technology Demonstration on 50:50 cost sharing basis. The proposals will be examined by a "Committee" set up in the Ministry for the purpose. The selected projects will be placed before TDPAC, as provided under the RD&D Policy of the Ministry.

9.0 Other Terms & Conditions:

9.1 The general terms and conditions for the grant are given at **Annexure-VIII**. The aforesaid programmes are subject to such change(s) and modification(s) as may be decided by the MNRE, Government of India from time to time and subject to availability of funds. The Ministry shall in no way be liable for expenditure incurred by promoters for pre-project preparation or other activities, merely on the basis of this circular and / or related announcement made by the Ministry. In case of any dispute on interpretation of any provisions under the scheme, the decision of the Ministry shall be final and binding.

Annexure-I

**On line indicative Proforma for submission of the Project Proposal on
Biomass Gasification Based Distributed / Off-grid Power Generation for rural areas
(<100 kW)**

Name of the developer	<input type="text"/>	SNA	<input type="text"/>
Contact Address	<input type="text"/>	Tel	<input type="text"/>
Fax	<input type="text"/>	Email	<input type="text"/>
Project Type	Village Electrification	Biomass	Rice Husk / Wood / other agro residues and biomass (give list)
Project Village	<input type="text"/>	Village Census Code	<input type="text"/>
Tehsil	<input type="text"/>	District	<input type="text"/>
State	<input type="text"/>	Electrification	Electrified / Un-Electrified
Gasifier Capacity	<input type="text"/>	Project Type	100% Gasification / dual fuel mode
Project Cost with break up	Civil / Plant & Machinery / Distribution Line	Equity	Give total Amount with %
	Lakhs	Loan	Give total Amount with %
Load	<input type="text"/>	Domestic / no of House Holds	kW / nos of H/H
	kW	Commercial	kW
Expected Date of Commissioning	<input type="text"/>	Industrial	kW
		Other	kW
		Distribution Line length (m)	<input type="text"/>
<i>(If case of Loan from Bank: Details.....)</i>			
Bank & Branch Name with address	<input type="text"/>	Branch Code	<input type="text"/>
RTGS Code	<input type="text"/>	Account No	<input type="text"/>
Gasifier Supplier	<input type="text"/>		
Engine Supplier	<input type="text"/>		
Verification Responsibility	Bank / approved authorized agency		
Any other relevant Information e.g. Proposed Hours of operation; Tariff / Fee to be charged per customer Yrs of AMC proposed by supplier, Performance guarantees if any by supplier etc. in brief.			
<input type="text"/>			
			Submit

Guidelines for Filling up of Proforma for submission of the Project Proposal on Proforma for submission of the Project Proposal on Biomass Gasification Based Distributed / off-grid Power Generation for rural areas (<100 kW)

The following inputs are required in the proforma (Annexure-I) given in the Guidelines issued vide No. F. No. 202/3/2009-BM dated 1st December, 2009 against each items*.

- 1. Name and full postal address of the Implementing Organization / Agency / NGOs**
 - a. Name of the contact persons
 - b. Name and full postal address of the Implementing Organization / Agency
 - c. Fax No / Email.: if any
 - d. Telephone No.
 - e. Mobile No.
 - f. Registration details of the implementing organization / agency / NGOs (Enclose copy of the Registration Certificate, Memorandum of Association, and By-laws etc.)

- 2. Details of the Proposed site:**
 - a. Name of the village (s), tehsil, district, state.
 - b. Census Code No of the Village (s) to be covered
 - c. Proposed village (s) is / are Electrified or Unelectrified
 - d. Total number of the households in a village (s)
 - e. Indicate total number of house holds of the village (s) to be connected

- 3. Proposed Load Profile**
 - a. Furnish load profile in table given below:

S. No	Load	Unit	Load (in Watt)	Total load (in watt)	Time of Supply of Electricity (0100 hrs to 2400 hrs)																							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Domestic	Nos. of H/H	CFL watt and nos.....																									
2.	Commercial	Nos. of units																										
3.	Industrial	Nos. of units																										
4.	Irrigation	Nos. of pumps																										

* - in the absence of full details, proposals will not be considered for approval in-principle.

- b. If proposed to provide electricity for irrigation purposes, give following details
 - i. No of pumps to be connected and average hours of operation
 - ii. Capacity of the pumps (HP / kW)
 - iii. Existing Diesel consumption per pump (liters per hours)
 - iv. Likely Diesel saving per pump (liters per hours)
 - v. No of days irrigation required (total number days in one year)
 - vi. Total area to be irrigated annually (acres / hectare)
 - vii. Hours of supply (from ... AM / PM to ... AM / PM)
- 4. Fixed cost**
- a. **Details of proposed Gasifier and 100% producer gas engines and cost**
 - i. Name of the supplier of gasifier
 - ii. Name of the supplier of producer gas engine and generator
 - iii. Capacity of gasifier (kW)
 - iv. Capacity of the 100% producer gas engine (kW)
 - v. Rice Husk / Biomass consumption Kg/hr
 - vi. Cost of Gasifier
 - vii. Cost of producer gas engine
 - viii. Civil & Other cost
 - ix. **Total system cost - in Rs.....**
 - x. Copy of Invoice, time schedule for supply & terms and condition of warrant and charges for 2 years AMC (Please attach copies)
 - xi. Expected date of commissioning.
 - b. **Transmission / Distribution line (follow safety norms)**
 - i. Total length of transmission lines (in meters)
 - ii. No of poles per km
 - iii. Cost of the transmission lines (in Rs.) indicating the following
 - 1. Cost of wire,
 - 2. Cost of poles,
 - 3. Other installation expenses
 - 4. Average cost of distribution line for household connection
 - iv. **Total Cost of Transmission & Distribution lines**
 - c. **Total Fixed Project Cost**
 - i. Cost of Gasifier
 - ii. Cost of producer gas engine & generator
 - iii. Cost of Transmission / distribution lines
 - iv. Civil cost
 - v. Any other cost (please specify)
 - vi. **Total Project Cost**

5. Expected Revenue Generation

S. No.	Load	Unit Rate	No.	Monthly (in Rs.)	Yearly (in Rs.)
1.	Domestic	Rs. per Households per Month	No of Connection		
2.	Commercial	Rs. per Month			
3.	Industrial	Rs. per Month			
4.	Irrigation	Rs. per hour of operation	Capacity and Nos. of pump sets		
			Total		

6. Recurring Cost

S. No	Component	Unit Cost	Quantity	Monthly (in Rs.)	Yearly (in Rs.)
1	Biomass	Rs./ton	tones		
2.	Manpower	Salary per person	No of person		
3.	Interest if any	Rate of interest	Total Amount		
4.	Consumable				
5.	AMC				
6	Any other such as interest on loans etc.				
			Total		

7. Surplus Revenue Expected Revenue Generation (-) Recurring Cost = Rs..... per year

8. Biomass availability and sustainable supply option

- a. Type of biomass (Please enclose details of availability of biomass)
 - i. Rice husk
 - ii. Other (Please specify)
- b. Quantity required
 - i. Daily
 - ii. Yearly
- c. Cost of Biomass at site (Rs. per ton)
- d. Proposed biomass storage facility

9. Financing Details

- a. Own Equity - Rs.
- b. If loan sought form the banks
 - i. Total loan Amount sanctioned / sought – Rs.
 - ii. Name & full Address of the Bank / Branch
- c. Central Financial assistance (Subsidy from MNRE) Rs.....
- d. Any other source of funding (please give full details)

- 10. Details of Bank Account of Implementing Organization / Agency / NGOs:**
- Name of account Holder
 - Name & Address of the Bank& Branch
 - Branch Code
 - RTGS Code
 - Bank Account No
- 11. In case, loan taken from bank**
- Name & Address of the Bank& Branch
 - Branch Code
 - RTGS Code
 - Loan Account No of the Bank
- 12.** Please enclose any other details for justification of the project indicating financial viability, revenue / business model, economical and social benefits, mode of Operation & Maintenance, collection mechanism of biomass, electricity charges etc.
- 13. Certificates:** Please send the following certificates while submitting the proposal to the MNRE along with covering letter seeking financial support from the MNRE addressed to Dr D K Khare, Director, Ministry of New & Renewable Energy, Block No. 14, CGO Complex, Lodhi Road, New Delhi-110003 (E-mail dkkhare@nic.in Tele Fax no 011-24363402):

Certificate from developer / Implementing Organization / Agency / NGOs

This is to certify that the above information are correct to the best of my knowledge.

()

Signature of the Developer /
Implementing Organization /
Agency / NGOs with full name &
address with seal.

Date:

Place

Certificate from Forwarding Agency, if any

This is to certify that the all the above information have been verified and are found correct to the best of my knowledge.

()

Signature of the Forwarding
Agency with full name, & address
with seal.

Date:

Place

**On line indicative Proforma for submission of the Project Proposal on
Biomass Gasification Based Captive Power Generation in Rice Mills (<100 kW)**

Name of the Rice Mills and developer		SNA	
Contact Address		Tel	
Fax		Email	
Project Type	Captive Generation and / or Distributed Power	Biomass	Rice Husk / Wood / other agro residues and biomass (give list)
City/Village		District	
Tehsil			
State			
Capacity of: Rice mills (ton/hr)		kW	Project Type
Existing Engines (kW) / Gasifier (kW) / Producer Gas Engine (kW)			100% Gasification / Dual fuel
Project Cost		Lakhs	Equity
Present Diesel consumption			Give total Amount with %
Proposed Load	Captive / Distributed	kW	Loan
Expected Date of Comm			Give total Amount with %
<i>(If case of Loan from Bank: Details.....)</i>			
Bank & Branch Name with address		Branch Code	
RTGS Code		Account No	
Gasifier Supplier			
Engine Supplier			
Verification Responsibility	Bank / approved authorized agency		
Any other relevant Information e.g. Estimated savings in Diesel fuel, Yrs of AMC proposed by supplier, Performance guarantees if any by supplier etc. in brief. If distributed component proposed, give details of domestic consumption, commercial, industrial etc. Indicate nos of house holds etc			
			Submit

**Guidelines for Filling up of Proforma for submission of the Project Proposal on
Biomass Gasification Based Captive Power Generation in Rice Mills (<100 kW) and Proposed
Distributed Power to the Villages**

The following inputs are required in the proforma (Annexure-II) given in the Guidelines issued vide No. F. No. 202/3/2009-BM dated 1st December, 2009 against each items*.

- 1. Name and full postal address of the rice mills**
 - a. Name of the contact persons
 - b. Name and full postal address of the rice mills
 - c. Fax No / Email.: if any
 - d. Telephone No.
 - e. Mobile No.
 - f. Registration No. of Rice Mill (e.g. SSI etc.)

- 2. Details of the Rice Mill:**
 - a. Capacity of Rice mill - ton per hours
 - b. Average daily operation hrs per day
 - c. Average days of operation in a year days /years
 - d. Whether having electricity connection - Yeas / No
 - e. Existing Diesel Engines
 - i. Capacity-kW
 - ii. Make / Model No.
 - iii. Year of purchase
 - iv. Present Diesel consumption liter per hour

- 3. Details of proposed Gasifier and also 100% producer gas engines, if required.**
 - a. Name of the supplier of gasifier / producer gas engine
 - b. Capacity (kW)
 - c. Rice Husk consumption Kg/hr
 - d. Cost of Gasifier / producer gas engine
 - e. Civil & Other cost
 - f. Total cost - in Rs.....
 - g. Copy of Invoice, time schedule for supply & terms and condition of warrant and charges for 2 years AMC (Please attach copies)
 - h. Expected date of commissioning.

- 4. Financing Details**
 - a. Own Equity - Rs.
 - b. If loan sought form the banks
 - i. Total loan Amount sanctioned / sought – Rs.
 - ii. Name & full Address of the Bank / Branch
 - c. Central Financial assistance (Subsidy from MNRE) Rs.....

*** - in the absence of full details, proposals will not be considered for approval in-principle.**

5. **Details of Bank Account of Rice Mill / Rice Mill owner:**
 - a. Name of account Holder
 - b. Name & Address of the Bank& Branch
 - c. Branch Code
 - d. RTGS Code
 - e. Bank Account No
6. **In case, loan taken from bank**
 - a. Name & Address of the Bank& Branch
 - b. Branch Code
 - c. RTGS Code
 - d. Loan Account No of the Bank
7. **If distributed electricity component proposed, give following details;**
 - a. Name of the village, tehsil, district, state.
 - b. Proposed domestic load (kW) and hours of supply
 - c. Indicate total number of house holds of the villages to be connected
 - d. Distribution line – total length in meters
 - e. Commercial Load (kW) and hours of supply
 - f. Industrial Load (kW) and hours of supply
 - g. Proposed electricity charges for domestic/ commercial / industrial
 - h. Brief detail of mode of operation (please enclose separate sheet)
8. **Certificates** - Please send the following certificates while submitting the proposal to the MNRE along with covering letter seeking financial support from the MNRE addressed to Dr D K Khare, Director, Ministry of New & Renewable Energy, Block No. 14, CGO Complex, Lodhi Road, New Delhi-110003 (E-mail dkkhare@nic.in Tele Fax no 011-24363402):

Certificate from developer / owner of the rice mill

This is to certify that the above information is correct to the best of my knowledge.

()
Signature of the developer / owner
of the rice mill with full name &
address with seal.

Date:
Place

Certificate from Forwarding Agency, if any.

This is to certify that the above information has been verified and are found correct to the best of my knowledge.

()
Signature of the forwarding agency
with full name & address with seal.

Date:

Place

Indicative points to be covered in the Detailed Project Reports (DPR) for biomass gasifier based off grid / distributed power generation projects (>100 kW)

The Detailed Project Report (DPR) should provide information on the following aspects:

- i. Demand – Current and expected (tentative).
- ii. Load management – Load chart preparation taking into account seasonal variations in use of electricity, especially for irrigation etc.
- iii. Plant sizing - Sizing of the plant, capacity utilization factor for the plant as per the load chart.
- iv. Technological options – (Gasification / Biomass-Turbine–Generator (BTG) taking into account load pattern, capacity utilization factor and type of biomass fuel available.
- v. Project Details
 - a. Proposed Installed capacity (kW)
 - b. Cost of the project (As approved by FIs if loan is tie up)
 - i. Civil Works
 - ii. Plant & Machinery
 - iii. Misc. Equipment
 - iv. Pre-operative expenses & Others
 - c. Anticipated commissioning schedule
- vi. Project cost estimates and financial calculations. Costs details of each item, i.e., equipments, power distribution network, civil work etc.
- vii. Details of Power Distribution Network (PDN) along with a drawing indicating types and no. of poles, length, specifications of the wires, fixtures, service lines from pole to the households and inside house wirings etc.
- viii. Proposed system, energy balance etc.
- ix. Technical specifications of each of the system/equipment proposed.
- x. Sources of biomass – current and potential, its stability
- xi. Proposed Fuel Linkages mechanisms.
- xii. Financing plan – Capital expenditure for power plant and other investments needed to reach projected demand. Sourcing working capital, sources of revenue, tariff setting, other non-tariff sources of revenue, operational sustainability, cash flow statement, plan to meet revenue gap if any, pay back period.
- xiii. Utilities & maintenance facilities – power, water, biomass storage & handling etc
- xiv. Environmental aspects
- xv. Human resources – Community empowerment, involving them in ownership and decision-making, training in operation and management of the power plant
- xvi. Strategy for operation and maintenance of electricity generating system and other systems and devices, economics of operation and maintenance Risk management – Identification of risk and how it would be managed.
- xvii. Project implementation plan – Tasks and milestones with timelines and clear identification of responsibilities should be presented.
- xviii. Details of cost of energy/electricity generation, tariff to be charged, revenue collection from the beneficiary households, revenue and expenditure gap, if any, and the mode of filling up this gap. The net proposed payment from the each household must be clearly indicated.

**Indicative Application Format for Biomass Gasifier Based
Grid Power Generation Projects and
BTG with Captive Consumption / Distributed power / Grid Power
projects (>500 kW- 2 MW)**

1. GENERAL
 - a. Name, Address, Phone, Fax & Email of applicant.
 - b. Name and designation of authorized signatory
 - c. Constitution (Private Sector/Proprietorship/joint sector/Coop. etc.)
 - d. Location Address of project (Village, District, State)
2. PROJECT DETAILS
 - a. Proposed Installed capacity (MW)
 - b. Proposed Captive / Distributed component and surplus to grid (kW)
 - c. If proposes, waste heat utilization (heating / cooling) furnish details with possible use for cold storage etc with cost and source of finances.
 - d. Cost of the project (As approved by FIs if loan is tie up)
 - i. Civil Works
 - ii. Plant & Machinery
 - iii. Misc. Equipment, Pre-operative expenses, Others
 - e. Anticipated commissioning schedule
3. WHETHER TIE-UP/AGREEMENT FINALISED
 - a. PPA: (Yes/No)
 - i. Whether power purchase agreement with SEB or private utilities has been made? If yes, Copy of PPA
 - b. Firming of equipment/technology: (Yes/No)
4. TECHNOLOGY Proposed: Gasification with 100% producer Gas Engines / Biomass-Turbine-Generator (BTG)
5. BIOMASS
 - a. Biomass used & Quantity used per day / per year
 - b. Envisaged Fuel linkage mechanism.
6. AVERAGE COST OF GENERATION (Rs/kWh)
7. FINANCING
 - a. Total cost of project as approved by FIs
 - b. Means of financing
 - c. Debt: Equity Ratio
 - d. Promoter's contribution (Equity)
 - e. Term loans with rate of Interest (FI wise)
 - f. Any other source
 - g. Name of the Lead FI (and other FIs, Lending to the Project) complete **Bank & Branch Name with address, Branch Code, RTGS Code, Account No** telephone number, fax number, e-mail etc., and name & designation of the contact person with bank.
8. TECHNICAL
 - a. Design & make of gasifier with detail
 - b. Capacity
 - c. Capacity of 100% gas engines & make / Turbines & Generators
 - d. Grid voltage at which interconnection is to be done

(Authorized Signatory)

Date /Place

Annexure-V

**INDICATIVE FORMAT FOR JOINT COMMISSIONING REPORT (JCR)
BIOMASS GASIFIER BASED DISTRIBUTED / OFF-GRID / GRID POWER
GENERATION PROJECTS**

Reference MNRE in-principle approval Letter No. & Date	Users Name & Address	Name of Manufacturer / Supplier	Rating / capacity of systems, both for gasifier and engines kW / KVA	Mode of application	Machine No.	Date of Commissioning	Amount of CFA
1	2	3	4	5	6	7	8

Certified that:

- i. Training on operation and maintenance and safety aspects has been given adequately to users/ operators of the Institutes/Organizations concerned.
- ii. Operating manuals, warranty card etc. have been provided to the Institute/ Organization concerned.
- iii. Undertakings for the regular operation & maintenance of the systems have been obtained from the concerned Institute/Organization.
- iv. Gasifier system and sub-system (including equipments and instruments) have been verified at site and functioning satisfactorily as per terms & reference of the grant.
- v. Verified operation of project at least a period of one month.
- vi. Verified agreement between the user and supplier of the gasifier systems for full guarantee and warrantee for one year followed by AMC for two years

Name & Address of the Manufacturer / Supplier with seal

User Name & Signature

Signature of authorized verifying authority

Date:

Place:

Annexure-VI

Indicative Proforma- Verification Check list

1	Project File No. and date of in-principle approval		
2	Name & address of the Developer		
3	Location of the system (Full address)		
		Approved	Verified
4	Project Type (Gasification / BTG)		
	Captive Generation in Rice Mills		
	Off grid / Distributed power for villages		
	Grid Connected Project or Combination with captive / distributed / grid		
5	Biomass		
	Rice Husk		
	Wood		
	Other Agro residues (give details of agro residues)		
	Multiple Biomass (give details of other biomass)		
6	Project Type		
	100% Gasification / BTG		
	Dual fuel		
7	Gasifier Supplier Name and Address		
8	Gasifier / BTG Capacity (kW)		
9	Machine number of Gasifier, producer gas engines / turbine / generator set (as provided by the manufacturer)		
10	Load (kW)		
11	Engine / turbines manufacturer		
12	Rating of the engine / turbines (kVA)		
13	Date of commissioning		
14	Total Project Cost (Lakhs) Indicate cost of gasifiers, engine, turbines etc		
15	Amount of CFA (Lakhs) sanctioned		
16	O&M as per logs		
	Hours of operation		
	Amount of biomass / rice husk consumed per unit		
	Number of filters changed in a month		
	Shutdowns in the last three months		
	Revenue collected during last two - three months		
	Training to operators (by manufacturer): Duration of training On O&M	On site	External
	Duration of training: On Safety aspects		
17.	Attach original Commissioning Report, Utilization certificates and audited statement of expenditure (as per proforma).		
18.	Verified operation of project at least a period of one month through log book or other supporting documents.		
19	Verified agreement between the user and supplier of the gasifier systems for full guarantee and warrantee for one year followed by AMC for two years	Attach copy	
20	Support towards project formulation – Indicate Name & Address, Account No of the promoter complete details of Bank & Branch Name with address, Branch Code, RTGS Code,		
Gasifier system and sub-system (including equipments and instruments) have been verified at site and functioning satisfactorily as per terms & reference of the grant			
Signature of authorized independent verification authority			
Date / Place:			

ANNEXURE-VIII

GENERAL TERMS AND CONDITIONS FOR GRANTS BY GOVERNMENT FOR BIOMASS ENERGY & CO-GENERATION PROGRAMME

- (i) Approval of the proposal and the grant being released is for specific project and the grant is required to be spent for the project within the stipulated time. Any portion of the amount sanctioned which is not utilized would be required to be surrendered to the Government of India and carry forward of funds to the next financial year for utilization for the project during that year may be considered with the specific approval of this Ministry.
- (ii) The achievements made during the course of the project will be photographically covered from time to time and a copy of each such photograph will be sent to this Ministry for information and record.
- (iii) The organization will arrange to display a Notice Board at prominent place at the project site to the effect that the project has been financially supported by Ministry of New & Renewable Energy (MNRE).
- (iv) The organization shall ensure that the time schedule laid down for the execution of the project is strictly followed.
- (v) The organization would render to this Ministry an audited statement of accounts including comments of the Auditor(s) regarding the observance of the condition governing the grant within six months following the end of each financial year.
- (vi) The Comptroller and Auditor General or any other Agency/officer(s) authorized by this Ministry will have the right of access to the books and accounts of the organization for grant received from the Government.
- (vii) The recipient financial institution shall provide utilization certificates in the prescribed format as per the **GFR form 19A (Annexure-VII)**. Audited Statement of Expenditure to be submitted by the grantee organization at the time of seeking next installment as per the Terms & Condition of the sanction.
- (viii) Equipments acquired with Govt. of India assistance should not be disposed of or encumbered or utilized for purpose other than for which grant has been sanctioned without prior approval of the Ministry. Separate Stock Register has to be maintained by the Organization for these items procured through Government funds and whose value is more than Rs 10,000/-.
- (ix) The organization shall furnish a final commissioning report within three months of project commissioning incorporating salient technical features of the project and summary of its performance.
- (x) MNRE reserves the right to add/alter/change these conditions at its sole discretion in the wider interest of the scheme.