



GUJARAT INDUSTRIES POWER COMPANY LIMITED (GIPCL)

EXPRESSION OF INTEREST (EOI)

FOR

**SUPPLY OF BIOMASS BRIQUETTES /PELLETS TO GIPCL'S
SURAT LIGNITE POWER PLANT (SLPP)**

**DOCUMENT REFERENCE NO.:
GIPCL/SLPP/BIOMASS/EOI/2022**

NOTICE OF EXPRESSION OF INTEREST (EOI)

REF : EOI No. - GIPCL/SLPP/BIOMASS/EOI/2022

Subject: Invitation for Expression of Interest (EOI) for supply of Biomass Briquettes/Pellets to GIPCL's Surat Lignite Power Plant (SLPP).

Gujarat Industries Power Company Limited (GIPCL) invites EOIs from the interested parties for supply of Biomass briquettes/Pellets to GIPCL's Surat Lignite Power Plant (SLPP).

Sr. No.	Item	Description
1	Subject of EOI	Supply of Biomass Briquettes/Pellets to GIPCL's Surat Lignite Power Plant (SLPP)
2	Power Plant Location	Gujarat Industries Power Company Limited (GIPCL) Surat Lignite Power Plant (SLPP), Village: Nani Naroli, Taluka: Mangrol, Dist.: Surat- 394112 (Gujarat).
3	Tentative Quantity for Biomass Briquettes/Pellets	Tentative Qty for trial in MT = 7,000 MT Post Successful Trial by GIPCL, Total tentative Qty for 1 Year (365 days) in MT = 180,000 MT Quantity of Biomass in TPD (Ton per day) basis = 800/1000 TPD
4	Availability of EOI	On GIPCL's Website i.e. www.gipcl.com , from 6 th June, 2022.
5	EOI Fee	Not Applicable / Free
6	Last date & time of Submission of EOI	26 th June, 2022 by 17:00 hrs (IST). Extended up to 04 th July,2022 by 17:00 hrs (IST) and further extended up to 15 th July,2022 by 17:00 hrs (IST)
7	Place of submission of EOI	Physical Copy shall be sent to: General Manager (SLPP). Gujarat Industries Power Company Limited Surat Lignite Power Plant Village: Nani Naroli, Taluka: Mangrol, Dist.: Surat-394 112, Gujarat.
8	Mode of submission of EOI documents	Soft Copy through Email to: nksingh@gipcl.com , csjadeja@gipcl.com , biomass@gipcl.com Physical copy may be submitted by hand delivery or through post/courier at above address so as to reach on or before the due date & time.

Complete EOI document is available and can be downloaded from the company website www.gipcl.com

A. INTRODUCTION:

Gujarat Industries Power Company Limited (GIPCL) (henceforth be named Company/GIPCL), is a premier power utility in the state of Gujarat with an installed capacity of 1184.4 MW. 310 MW Gas based combined cycle power plant at Vadodara and 4x125 MW (500 MW) Lignite based power plant at Village: Nani Naroli, Taluka: Mangrol, Dist.: Surat, Gujarat and 374.4 MW Renewable Energy comprising of Utility Scale Wind & Solar Projects.

GIPCL is operating 4x125 MW Lignite based Power Plant having CFBC Technology based Boilers at Surat Lignite Power Plant (SLPP) Village: Nani Naroli, Taluka: Mangrol, District: Surat, Gujarat. GIPCL has its own captive Mines for Lignite and Limestone.

Ministry of Power (MOP) issued Revised policy dated 08/10/2021 with Notification number 11/86/2017-Th. II, for Power generation through co-firing of Biomass in Coal Based Power Plants. The Policy mandates use of 5% to 10% blend of Biomass made, primarily agro residue along with Coal. Inline with MOP Policy, GIPCL intend to use Biomass fuel for blending with lignite for co-firing in CFBC Boilers.

Gujarat Industries Power Company Limited is hereby inviting Expression of Interest (EOI) from interested parties to get market feedback for Biomass availability and supplier's feedback/suggestion for finalising technical specification for Biomass Briquettes/Pellets.

B. SCOPE OF WORK:

The Brief Scope of Work under this EOI shall be submission of required technical details for Biomass Briquettes/Pellets, Biomass supply capacity, supplier's feedback/suggestion etc.

C. EOI SUBMISSION GUIDELINES AND TIMELINES:

- a) Interested bidders should submit the Expression of Interest (EOI) letter and details to below mentioned email addresses as follows:

1. nksingh@gipcl.com
2. csjadeja@gipcl.com
3. biomass@gipcl.com

Physical copy may be submitted by hand delivery or through post/courier at below address so as to reach on or before the due date & time.

General Manager (SLPP).

Gujarat Industries Power Company Limited
Surat Lignite Power Plant
Village:Nani Naroli, Taluka: Mangrol,
Dist.: Surat-394 112, Gujarat

- b) Deadline for submission of EOI: (26.06.2022, 17:00 Hrs., extended up to 04.07.2022,17:00 Hrs. and further extended up to 15.07.2022,17:00 Hrs.)
- c) Expression of Interest letter to be submitted along with details should include the following details:
- A covering letter duly signed by an authorized signatory clearly indicating your EOI to supply Biomass Briquettes/Pellets at GIPCL's Surat Lignite Power Plant.
 - The Applicant should have PAN and GSTIN. A copy of the registration certificate should be submitted.
 - Bidder to indicate authorized person name, contact number and e-mail id (mandatory) of the person to whom communications to be addressed.
 - Bidder to confirm their capability to supply trial quantity as well as long term one year quantity. Bidder to submit supporting credentials.
- d) At any time prior to the deadline for submission of Applications, GIPCL may, for any reason, whether at its own initiative, amend the Application/EOI documents. The corrigendum's/amendment's will be posted at website for viewing by the Applicant. The amendments will be binding on Applicants and it will be assumed that the information contained therein has been taken into account by the Applicant in its Application. Applicants are advised to regularly check regarding posting of Amendments, if any. To give prospective Applicants reasonable time to take the corrigendum/amendment into account in preparing their Application, GIPCL may, at its discretion, extend the deadline for the submission of Applications.
- e) GIPCL reserves the right to accept or reject any application, and to annul the EOI process and reject all application for EOI at any time, without incurring any liability to the affected applicant or any obligation to inform the affected agency (s) of the grounds for the GIPCL's action. GIPCL reserves the right to verify the authenticity of the information / documents furnished as well as accept / reject application(s) in full or part without assigning any reason whatsoever. No correspondence / queries will be entertained in this regard. Assessment of the applicants who submit the response may also be carried out, if felt necessary by GIPCL. Applicant should not have any objection to such assessment / verification, visit by GIPCL etc.
- f) EOI/Application Documents by any Applicant shall not construe that applicant is considered for Supply of Biomass to GIPCL.
- g) GIPCL reserves the right to reject any or all applications or cancel/ withdraw the Expression of Interest (EOI) without assigning any reason whatsoever and in such case no Applicant/ intending Applicant shall have any claim arising out of such action.
- h) After receipt of EOI, based on requirement, GIPCL may visit at vendor/agency's manufacturing location. GIPCL may contact vendor/agency for clarification, technical details etc.

i) Detailed Bid/Tender Document will be published separately by GIPCL.

1.0 TECHNICAL SPECIFICATION OF BIOMASS BRIQUETTES/PELLETS

Technical specifications for Biomass briquettes/Pellets are given below and Bidder/Vendor to provide their proposed Technical specification along with EOI:

Sr. No	Technical Data	Unit	Specifications of Biomass (a) Briquettes (b) Pellets (Non-Torrefied / Torrefied)	Specifications of Biomass (a) Briquettes (b) Pellets (Non-Torrefied / Torrefied) proposed by Bidder
1.	Base material	n. a.	Agro residue / Crop residue	
2.	Diameter	mm	(a) Briquette About 50-90 mm. No other dimension should exceed 100 mm. (b) Pellets: Diameter not more than 25 mm. No other dimension should exceed 35 mm	
3.	Length	mm	(a) Briquette: About 50-90 mm. No other dimension should exceed 100 mm. (b) Pellets: Length not more than 50 mm	
4.	Bulk density	Kg/m ³	Not less than 600 kg/m ³	
5.	Fines % (Length < 3 mm) (ARB*)	Weight %	Fines <=5%	
6.	Gross Calorific Value- GCV (ARB**)	Kcal/Kg	3300 to 4000 3400 to 5000 (for Torrefied)	
7.	Total Moisture (ARB*)	Weight %	Not more than 14%	
8.	Ash (ARB*)	Weight %	Not more than 20%	
9.	Free Chlorine	Weight %	Not more than 0.2	

10.	Sulphur	Weight %	Not more than 0.2	
11.	Ash elemental K ₂ O+Na ₂ O	Weight %	Lower side to the extent possible	
12.	Ash elemental Chlorides	Weight %	Lower side to the extent possible	
13.	Hard Groove Grindability Index (HGI)		Not less than 50	

*ARB – As Received Basis

** GCV ranges are indicative.

Notes:

- i. Bidder to specify specification for proposed (a) Biomass Briquettes and (b) Biomass Pellets (Non-Torrefied / Torrefied), along with EOI.
 - ii. Above technical specifications are tentative and based on feedback/suggestions and requirement there may be change in Biomass technical specifications during Bidding/Tendering stage.
 - iii. **Bidder to provide Biomass sample-10 kg each type at GIPCL-SLPP for testing /analysis along with Expression of Interest (EOI).**
- 1.1 Base material for Biomass Briquette/Pellet manufacturing shall be agro residue which means the leftover portion of the agriculture produce such as stubble/straw/stalk/husk of those agro residue which are surplus and not being used as animal fodder such as paddy, arhar, gwar, cotton, gram, jawar, bajara, moong, til, maize, sunflower, jute, coffee etc., groundnut shell, coconut shell etc., pine needle, elephant grass and horticulture waste such as dry leaves and trimmings generated during the maintenance and pruning of trees and plants. (Bidder to select appropriate bio product/ raw material to ensure lower alkali content and meeting other technical parameters)
 - 1.2 Agro residue Briquette/Pellet can be manufactured using single or multiple agro /crop residues together.
 - 1.3 Natural additives/ binder such as lignin, starch, animal dung etc. can be used for manufacturing Biomass briquette/Pellet, if required, by the process.
 - 1.4 Higher alkali content in Biomass has slagging characteristics and hence are not preferable. Alkali content in Biomass shall be restricted to lowest possible % and hence raw material/bio product shall be selected accordingly.
 - 1.5 Bidder may suggest corrections (if any) in the technical specifications for review by Owner/GIPCL. Bidder may suggest better technical parameters with reduced alkali content to avoid/reduce slagging characteristics. Basic objective of getting details/feedback/suggestions from supplier/vendor is to

select Biomass with appropriate technical parameters which shall not have any adverse impact in the CFBC Boilers GIPCL's Surat Lignite Power Plant.

Bidder to suggest their opinion /views/recommendation against each point listed below:

Sr.	Description	Details	Supplier's suggestion/opinion
1.	Price variation for GCV > 3300 kcal/Kg	GCV will be measured by GIPCL at site and the same shall be considered for Payment. Adjusted FOR price = [Quoted FOR Price x Actual GCV (ARB)] / Quoted GCV (ARB)	
2.	For GCV less than 3300 Kcal/Kg and more than or equal to 3000 Kcal/Kg	The downward GCV variation from Minimum limit, pro-rata price adjustment shall be done for GCV variation Adjusted FOR price = 0.75 x [Quoted FOR Price x Actual GCV (ARB)] / Quoted GCV (ARB)	
3.	For GCV less than 3000 Kcal/Kg and more than or equal to 2800 Kcal/Kg	The downward GCV variation from Minimum limit, pro-rata price adjustment shall be done for GCV variation Adjusted FOR price = 0.5 x [Quoted FOR Price x Actual GCV (ARB)] / Quoted GCV (ARB)	
4.	GCV < 2800 Kcal/Kg	In case of GCV (ARB) is less than 2800 kcal/Kg, NO PAYMENT shall be made.	
5.	Recovery on Account of Excess Fines	there shall be recovery on account of excess fines Recovery= Adjusted price of biomass x W x (Weight% of fines beyond 5%.)	
6.	Sampling methodology at site	As per BIS (IS 436 Part-1)	
7.	Testing method	(a) Dimension (Diameter & Length): ISO 17829 or Equivalent method. (b) Fines (%): ISO 18846 or Equivalent Method. (c) GCV(ARB): IS 1350 or equivalent method (d) Moisture content (ARB): Method based upon IS 1350 or equivalent method.	

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8.	Weighment at site	Weighment shall be done at GIPCL's weighbridge and will be considered for payment.	
9.	Waiting period at site for rejection test	There will be waiting period at site for collecting sample and performing analysis/test by GIPCL before weighment and unloading of vehicle.	
10.	Rejection of Consignment	Moisture > 14%	
11.	Type of vehicle	Tippling type for ease in unloading at site.	
12.	Covered Truck OR open truck	Covered truck with waterproof arrangement	
13.	Material supply in loose condition / bag packing	Loose supply with tippling type vehicle for ease in unloading	
14.	Unloading	In case of supply in normal truck/ bag packing, unloading in Supplier's scope	
15.	Based on experience, any other point, supplier would like to state		

Bidder /Vendor /Agency to furnish following details along with EOI:

Sr.	Description/details	Bidder's details	Remarks
1.	Name of firm/agency		
2.	PAN Number		
3.	GST Number		
4.	Location of (i) Registered office (ii) Manufacturing plant		
5.	Contact person (i) Name (ii) email ID and (iii) mobile number		
6.	Supplier Category (Manufacturer /Authorized dealer /distributor/ Trader/ Agent)		
7.	Raw material for manufacturing of Biomass (a) Briquettes (b) Pellets		
8.	Present manufacturing capacity of Biomass Briquette		
9.	Present manufacturing capacity of Biomass Pellets		

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10.	Present manufacturing capacity of Biomass Pellets (Torrefied)		
11.	Present orders on hand for supply of Biomass Briquette.		PO details may be submitted
12.	Present orders on hand for supply of Biomass Pellets		PO details may be submitted
13.	Present orders on hand for supply of Biomass Pellets (Torrefied)		PO details may be submitted
14.	Present client's Name & Address		
15.	Major orders handled /completed in last three financial years i.e. FY 2019-20, FY 2020-21 and FY 2021-22 (to demonstrate capacity)		PO details may be submitted
16.	Surplus capacity available with Bidder/Vendor for supply of Biomass Briquette		
17.	Surplus capacity available with Bidder/Vendor for supply of Biomass Pellets		
18.	Surplus capacity available with Bidder/Vendor for supply of Biomass Pellets (Torrefied)		
19.	Per day supply capacity for short term supply (Tone Per Day) :Biomass Briquette		
20.	Per day supply capacity for short term supply (Tone Per Day) : Biomass Pellets		
21.	Per day supply capacity for short term supply (Tone Per Day) : Biomass Pellets (Torrefied)		
22.	Per day supply capacity for long term supply (Tone Per Day) :Biomass Briquette		
23.	Per day supply capacity for long term supply (Tone Per Day) : Biomass Pellets		
24.	Per day supply capacity for long term supply (Tone Per Day) : Biomass Pellets (Torrefied)		
25.	Bidder's capacity per annum for consistent supply throughout year (barring monsoon period) (Tone per Annum) For Biomass Briquette		

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26.	Bidder's capacity per annum for consistent supply throughout year (barring monsoon period) (Tone per Annum) For Biomass Pellets		
27.	Bidder's capacity per annum for consistent supply throughout year (barring monsoon period) (Tone per Annum) For Biomass Pellets (Torrefied)		
28.	Turnover in last Three financial years (Rs. In Lacs)		CA certified Balance sheet / CA certificate
29.	Net worth in last FY (Rs. In Lacs)		CA certified Balance sheet / CA certificate
30.	General Payment terms with present orders		
31.	Type of truck being used for supply of Biomass Briquette in present ongoing orders (Tippling type/Normal)		
32.	Material Unloading scope at destination end		
33.	Methodology being followed for Cost/Rate for supply of Biomass briquettes /pellets (i.e. GCV based OR any other)		
34.	Typical Analysis of Biomass Briquette/Pellets to be submitted by Supplier/Bidder		
35.	Biomass briquette Dimension (diameter and length) (Supplier to provide details about various sizes/option available)		
36.	Biomass Pellet Dimension (diameter and length)		
37.	Delivery schedule (after getting order)		
38.	Loose/ baggage packaging (present practice being followed by supplier)		
39.	Sampling & testing methodology (present practice being followed as per supplier's experience)		
40.	Rejection criteria (present practice being followed)		
41.	Quality/quantity adjustment. (present practice being followed)		
42.	MSDS of Biomass Briquette / Pellets		

Bidder to provide Typical Analysis of Biomass Briquette/Pellet available with them as per details given below:

Proximate Analysis			
Sr.	Elements	Unit	Biomass (Briquettes/Pellets) Raw material used : _____
1	Fixed Carbon	% by weight	
2	Volatile Matter	% by weight	
3	Ash	% by weight	
4	Moisture	% by weight	
Ultimate Analysis			
1	Carbon	% by weight	
2	Hydrogen	% by weight	
3	Oxygen	% by weight	
4	Sulphur	% by weight	
5	Nitrogen	% by weight	
6	Ash	% by weight	
7	Moisture	% by weight	
8	GCV	Kcal/Kg	
9	Free chlorine	% by weight	
10	FC/VM	%	

Ash Analysis

Sr.	Elements	Unit	Biomass (Briquettes/Pellets)
1	SiO ₂	% by weight	
2	Al ₂ O ₃	% by weight	
3	TiO ₂	% by weight	
4	Fe ₂ O ₃	% by weight	
5	CaO	% by weight	
6	MgO	% by weight	
7	K ₂ O	% by weight	
8	Na ₂ O	% by weight	
9	P ₂ O ₅	% by weight	
10	MnO	% by weight	
11	SO ₃	% by weight	
12	Chlorides	% by weight	
13	ZnO	% by weight	
14	Ni	% by weight	
15	V	% by weight	
16	Others	% by weight	
