



**Centre for High Technology  
(Ministry of Petroleum & Natural Gas)**

**Request for Selection (RFS) document  
for  
Selection of Project Developers  
for  
Demonstration Scale Advance Biofuel Projects  
under  
Pradhan Mantri JI-VAN Yojana Amendment, 2024**

**RFS No. CHT/PM JI-VAN/RFS/Demo/2025/05**

**Date: 07.04.2025**

**ISSUED BY**

Centre for High Technology  
OIDB Bhawan, Tower "A", 9<sup>th</sup> Floor,  
Plot No. 2, Sector-73, Noida – 201316  
Tel No. 0120 – 2593702/81

**DISCLAIMER:**

1. Though adequate care has been taken while preparing the RFS document, the Project Developers shall satisfy themselves that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Project Developer within **twenty (20) days from the date of notification of RFS/ Issue of the RFS documents**, it shall be considered that the RFS document is complete in all respects and has been received by the Bidder.
2. Centre for High Technology (CHT) reserves the right to modify, amend or supplement this RFS document.
3. While this RFS has been prepared in good faith, neither CHT nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFS, even if any loss or damage is caused by any act or omission on their part.

Place: Noida

Date: 07.04.2025

## INDEX

<b>S. N.</b>	<b>CONTENTS</b>	<b>PAGE NOS.</b>
<b>1</b>	<b>Introduction, Background &amp; Scheme Details</b>	<b>4 - 8</b>
<b>2</b>	<b>Definitions</b>	<b>9- 10</b>
<b>3</b>	<b>Bid Information and Instruction to Bidders</b>	<b>11 – 14</b>
<b>4</b>	<b>Annexure-1: Checklist to be shared by PD</b>	<b>15-17</b>

# **Section 1**

## **INTRODUCTION, BACKGROUND & SCHEME DETAILS**

## **Section 1**

### **Introduction, Background & Scheme Details**

#### **1.1 INTRODUCTION**

- 1.1.1. Centre for High Technology (CHT) was established as a dedicated technology cell of Ministry of Petroleum & Natural Gas (MOP&NG) in 1987 to assess futuristic requirements, acquire, develop and adopt technologies in the fields of refinery processes, petroleum products, work relating to modernization of technologies etc. CHT takes up programmes for performance evaluation, improvement, capability development, technical services etc. for Indian Refineries on a centralized basis. CHT is engaged in promoting indigenous technologies through sponsoring R&D projects and their commercialization in the downstream sector.
- 1.1.2. Government of India through Ministry of Petroleum & Natural Gas (MoP&NG), has notified “Pradhan Mantri Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran (JI-VAN) Yojana” vide Extraordinary Gazette of India no. 1037 dated 08.03.2019. The scheme has been amended vide notification dated 21.08.2024 for providing financial support to Advanced Biofuel Projects using non-food biomass and other Renewable feedstock. The validity of PM JI-VAN Yojana has been extended till FY 2028-29.
- 1.1.3. The amended scheme envisages setting up of about 12 Commercial scale and about 10 demonstration scale advanced biofuel projects.
- 1.1.4. For demonstration projects, the financial assistance will be up to Rs. 15 crore per Technology.
- 1.1.5. The total cost of the project includes cost of land, cost of total equipment and their erection including feedstock supply chain and handling, civil & mechanical work including plant building & sheds, cost of utilities, electrical & instrumentation controls, enabling assets (water & power intake), water and waste management system, pre-commissioning and commissioning charges, working capital, interest during construction and also charges of technology, royalty, charges towards PMC/EPCM services and charges of any special erection involved, besides any contingent expenses.
- 1.1.6. Scientific Advisory Committee (SAC) of Ministry of Petroleum & Natural Gas (MoP&NG) is designated as nodal body for appraising and recommending the eligible Project proposals under the Scheme.
- 1.1.7. For demonstration projects, the milestones against the FINANCIAL ASSISTANCE payment will be decided by SAC. The payment terms shall be decided by SAC on case to case basis.
- 1.1.8. Projects deemed fit for seeking financial assistance under the Scheme by SAC will be approved by Steering Committee of CHT under the chairmanship of Secretary, MoP&NG.
- 1.1.9. CHT is designated as Nodal Agency for implementation of the scheme and shall provide requisite Secretarial assistance to SAC for selecting eligible Project Developers under the Scheme.
- 1.1.10. This Request for Selection document (hereinafter called RFS for Demonstration scale projects) is in line with the guidelines notified in Gazette dated 08.03.2019 and amendment vide notification dated 21.08.2024 by MoP&NG.

- 1.1.11. CHT invites proposals for Selection of Project Developers for providing Financial Assistance to set up about 6 Demonstration scale advanced biofuels Projects based on non-food biomass feedstocks and other renewable feedstocks under Pradhan Mantri JI-VAN Yojana, Amendment, 2024.

## 1.2 BACKGROUND

- 1.2.1 Government of India has emphasized on achieving energy security of the country with a target of reducing import. This target is to be achieved by adopting a five-pronged strategy which includes, Increasing Domestic Production, Adopting Biofuels & Renewable, Energy Efficiency Norms, Improvement in Refinery Processes and Demand Substitution. This envisages a strategic role for biofuels in the Indian Energy basket. The growing concern about the import dependence for fuel requirement in tandem with environmental pollution issues have driven the need for biofuels that have superior environment benefits and are economically competitive with fossil fuel.
- 1.2.2 National Policy on Biofuels – 2018 and its amendment 2022 is aimed at accelerated promotion of Biofuels with indicative targets of achieving 20% blending of ethanol in Petrol by ESY 2025-26 and 5% blending of biodiesel in Diesel by 2030.

## 1.3 DETAILS OF THE SCHEME

- 1.3.1 State Govt. enterprises, Central Public Sector undertakings, Private Entities, Research institutions and academia etc. as defined under Section-3.2 shall be eligible for setting up projects under this scheme.
- 1.3.2 Project Developers (hereafter referred to as PDs) selected by CHT based on this RFS, shall set up Demonstration scale Advanced Biofuel projects (based on non-food biomass and other renewable feedstocks) in accordance with the provisions of this RFS document.
- 1.3.3 PDs shall have to submit necessary Detailed Project Report (DPR) along with Feedstock assessment, supply chain & logistics report duly vetted by a third-party consultant. The DPR should clearly indicate cost involved on various aspects like technology procurement, establishment of plant, Royalties, consultations and any other incidentals which will require any payment to outside agencies from India. Details in relation to proposed sales revenue generated from sale of Advanced biofuel & other by-products produced in the proposed Biorefinery shall also be clearly stated in the DPR.
- 1.3.4 Project proposals are expected to be based on integrated approach for end to end utilisation of feedstock for production of advanced biofuel and other value added products. Advanced Biofuel produced shall be meeting out the BIS standards as applicable. Technology demonstration by PD should be in fully integrated manner. However, it may not be necessary to install the entire plant in same premises. PD, in their application against RFS, shall submit the details of entire process including part of any existing/ adjoining facility that is proposed to demonstrate the process/ technology in integrated manner.
- 1.3.5 PDs shall submit Technology licensing Agreement with their proposed Technology provider. In case, the PD is the Technology licensor, the same shall not be required.

- 1.3.6 The proposed land for the project shall be available with PD before submitting its application to the RFS.
- 1.3.7 PDs shall have committed source for enzymes (If applicable).
- 1.3.8 PDs shall have undertaken trials of proposed Technology and proposed feedstock for the project. Results of such trials (including Mass and energy balance for the complete process) at various stages shall be shared at the time of RFS. PD shall share Pilot scale/ laboratory scale process data and experimental results.
- 1.3.9 The purpose of supporting Demonstration projects is to enthuse technology providers to display viability & performance of their novel technologies. Thus, any Demonstration project supported under the scheme shall also share the details of Operational performance with CHT, as & when required.
- 1.3.10 PDs to have entered into EPCM (Engineering, Procurement & Construction Management) Contract/ other execution mode as PMC & EPC/ OBE with reputed organization having proven track record. Preference will be accorded to applicants, whose EPCM/ PMC & EPC/OBE Contractor has established operations in India and, thereby, can optimize local sourcing.
- 1.3.11 The Demonstration Projects should be designed for inter-connection with the OMC depots. PDs shall ensure the connectivity of OMC depot before commissioning the project for efficient delivery of Advanced biofuel.
- 1.3.12 PD shall have entered into Three-year (with a renewable option of two years) contract for operation and maintenance from the vendor/technology supplier or by the PD itself.
- 1.3.13 PDs shall have entered into a three years (with a renewable option of two years) contract for supply of feedstock which can be revised as per the mutual consent of the feedstock supplier as well as Advanced Biofuel project developer.
- 1.3.14 PDs / Promoters may include working capital as part of the total project cost.
- 1.3.15 PDs shall submit the declaration at the time of RFS submission to enter into agreement with Oil Marketing Companies (OMCs) for offtake of Advanced biofuels produced under this project. If PD is an Oil Marketing Company (OMC), Advanced Biofuel Purchase Agreement (ABPA) shall not be required.
- 1.3.16 CHT shall maintain necessary guarantees and legal formalities for channelizing the financial assistance.
- 1.3.17 Project proposals submitted to CHT will be based on the prevailing market price of feedstock and advanced biofuel. Projects will also be eligible for policy provisions arising out in future.
- 1.3.18 Under the “Demonstration projects” head, only one (1) project per Technology will be supported under the scheme.
- 1.3.19 The project cannot be transferred or sold to a third party without consent of the MoPNG.
- 1.3.20 PDs and CHT shall enter into suitable Agreement creating a charge over the Project assets in favour of CHT and for ensuring the disbursement of financial assistance to credible PDs.
- 1.3.21 CHT shall have a pari passu charge over the Project assets in case of Projects being financed by other lending institutions/banks.

- 1.3.22 CHT may incorporate suitable provisions regarding arbitration and seat of arbitration in the agreement to be entered between CHT and selected PDs under the scheme.
- 1.3.23 In case the lending institution exercises its right to step in or take over the project, CHT will also have right to step in along with the lending institution.
- 1.3.24 PDs shall be liable for all IPR, licensing and foreign trade issues during the period of the project.
- 1.3.25 PDs shall also ensure that licensor of the technology has appropriate Freedom to operate (FTO).
- 1.3.26 PDs shall obtain all statutory approval before commissioning of plant.
- 1.3.27 PDs shall obtain Statutory clearance under National Biodiversity Act, if applicable
- 1.3.28 Decision of the SAC and Steering Committee with regard to selection of PDs eligible under the scheme shall be final & binding on all interested PDs.
- 1.3.29 Upon approval of financial assistance by the competent authority, the PD shall submit the financial closure of the project with-in 3 months. PD is further required to sign a MoA with CHT to ensure the timely completion of the project set up under the scheme and to safeguard interest of the Government.
- 1.3.30 PD shall inform any change in the project after submission of proposal against RFS and obtain consent of CHT.

## **Section 2**

# **DEFINITIONS**

## **Section 2**

Following terms used in the document will carry the meaning and interpretations as described below:

### **Definitions**

**Feedstock:** Non-food biomass feedstocks and other renewable feedstocks

**2G Bioethanol:** Ethanol produced from biomass and cellulosic materials such as bagasse, wood waste, agricultural & forestry residues, grasses etc. The produced ethanol should meet BIS standards IS 15464 (2004).

**Biomass** resources are the biodegradable and non-edible fraction of products, wastes and residues from agriculture, forestry and related industries as well as the biodegradable fraction of industrial and municipal wastes.

**Waste** is any substance or object which the holder discards or intends or is required to discard. Raw materials that have been intentionally modified to count as waste (by adding waste material to a material that was not waste) shall not be considered as qualifying under this Scheme.

**Advanced Biofuel:** Advanced Biofuel from non-food biomass feedstocks and other renewable feedstocks.

**Project Developer (PD)** means any Company, Consortium of Companies or a Joint Venture (JV)/ Special Purpose Vehicle (SPV) interested in seeking the financial assistance.

**Consortium:** Group of Companies that have collectively submitted their interest in availing the benefits under the scheme and agreed to manage the proposed project collectively.

**Lead partner of the PD:** In case PD is a JV/ SPV or Consortium, there shall be one lead member having at least 49% of the shareholding in the JV/SPV or consortium, which cannot be changed till 5 years from the Commercial Operation Date (COD) of the project.

**Project Commissioning:** Project is termed as commissioned when all equipment as per rated project capacity have been installed, the product of desired specifications is achieved from the process unit and Advanced Biofuel supplies to OMCs is commenced.

**SAC:** Scientific Advisory Committee (SAC) of Ministry of Petroleum & Natural Gas (MoP&NG)

**CHT:** Centre for High Technology, a body under the aegis of MoPNG

**Steering Committee:** Steering Committee of CHT under the chairmanship of Secretary, MoP&NG

## **Section 3**

# **BID INFORMATION AND INSTRUCTION TO BIDDERS**

### **Section 3**

#### 3.1 The Salient features of RFS are as follows:

RFS No.	<b>CHT/PM JI-VAN/RFS/Demo/2024/05</b>
Purpose	<b>Selection of Project Developer (PD) under PM JI-VAN Yojana for Demonstration scale Advanced biofuel Projects</b>
Inviting Authority	Name: Shekhar R Kulkarni Designation: Director Centre for High Technology OIDB Bhawan, Tower A, 9 <sup>th</sup> Floor, Plot No. 2, Sector – 73, Noida, Pin – 201301 Uttar Pradesh, India Phone No. +91 120 6909642 Email: kulkarni@cht.gov.in
Start date & time	<b>07.04.2025 10:00 hrs. IST</b>  RFS can be downloaded from CHT website <a href="http://www.cht.gov.in">www.cht.gov.in</a> & <a href="https://eprocure.gov.in/epublish/app">https://eprocure.gov.in/epublish/app</a>
Last Date & time of Submission	<b>06.06.2025 &amp; 17:00 hrs. IST</b>
Mode of submission	Proposals to be submitted in 2 sets of hard copies. In addition, Soft copy (CD, pen drive, email) to be submitted to RFS inviting authority on or before last date of submission.
CHT PAN Number	AAATC0412A
CHT GST Number	07AAATC0412A1ZR

PD shall indicate the full postal address, name of the contact person along with telephonic / tele-fax numbers and email address.

#### 3.2 **Technical Pre-Qualification Criteria**

##### 3.2.1 PDs or a partner of the Consortium, JV/SPV shall meet any one of the following criteria:

- a. Experience in Crude Oil Refining or any other industrial domain like Sugar, Food Processing, Paper, Steel, Textile, Cement for at least 2 years continuous operation;
- b. Experience in operating continuous process plants for Chemical or Petrochemical production/handling at least for 2 years after PGTR with minimum 20 KTA capacity;
- c. Experience in marketing of fossil fuels or Biofuel blended fossil fuels viz., MS, HSD or ATF for 2 years after date of incorporation under the Company Act;
- d. Experience of manufacturing/ marketing of Renewable fuels (Bioethanol, Biodiesel, Biomethanol, Bio-CNG, Drop-in fuels etc.) for 2 years after date of commissioning of manufacturing unit or incorporation of marketing company under the Factory Act;
- e. Experience in Production/handling of at least 0.1 million tonne per annum large quantities of waste biomass;

- f. Technology licensor having technology for converting feedstock into Advanced Biofuels;
  - g. A Central Govt. or State Govt. Department, PSU or a local civic body with a mandate of addressing environment pollution;
  - h. Public funded Research Institution & Educational Institution and Private Research Institution registered with DSIR;
  - i. Engineering consultants having capability of preparing BDEP for facilities associated with crude oil refining, petrochemicals and 1G/2G ethanol.
- 3.2.2 PD has to share pilot scale/laboratory scale process data and results with proposed feedstock for the proposed technology.
- 3.2.3 PD should have published patent application for the technology based on which demo unit is being proposed **and/or** Freedom to operate certificate to be provided through independent IP/legal agency.
- 3.2.4 PDs which have commenced mechanical erection of their projects before starting of this scheme will not be eligible to avail the benefits of the scheme. However, about 10 Advanced Biofuel Demo Projects (including approved projects) of Oil PSUs, as notified to MoP&NG, shall be eligible for availing the benefits of scheme, if required, in case the mechanical erection of the Project has been commenced but not completed.
- 3.2.5 “Bolt on” plants & “Brownfield projects” are eligible under the scheme.
- 3.2.6 Foreign investors proposing to set up Advanced biofuels Demo Project in India are also eligible for availing the benefits of the scheme. However, all statutory provisions related to foreign investment in such projects i.e., FDI limit etc. would be applicable.

“For foreign investor, policy framework on Foreign Direct Investment Consolidated FDI Policy (Effective from August 28, 2017) issued by Department of Industrial Policy and Promotion Ministry of Commerce and Industry, Government of India, or as updated/ amended from time to time shall apply”.

### 3.3 **Commercial Pre-Qualification Criteria**

- 3.3.1 For Demonstration projects; the annual advanced biofuel production capacity should be in the range of 3.75 – 11.25 Lakh Litre Per Year (Feedstock capacity- 5 TPD – 15 TPD).
- 3.3.2 Proposed Technology of the PD should have been demonstrated to convert feedstock into advanced biofuel at pilot/laboratory level. Three months (continuous or cumulative) Operational data of the proposed technology needs to be shared with SAC at the time of submission of proposal against this RFS. A team of experts may be entrusted by SAC for due diligence of the data generated from Pilot/Laboratory facility and the recommendation of the SAC shall be final.

### 3.4 **No-Go Condition**

The following categories of projects/promoters will be ineligible for financial support under the scheme:

- Declared willful defaulters, as per RBI norms
- Declared Non-cooperative borrowers, as per RBI norms
- Entities who have availed one time settlement (OTSS); are not eligible under the scheme.

**3.5 Process Flow Chart for Approval of financial assistance**

- 3.5.1 CHT shall issue RFS for selection of PD for providing FINANCIAL ASSISTANCE.
- 3.5.2 PDs shall submit their proposals including DPR & other documents as per RFS.
- 3.5.3 SAC shall appraise the proposals and recommend to Steering Committee.
- 3.5.4 Steering Committee shall accord approval of FINANCIAL ASSISTANCE
- 3.5.5 The PD shall report tie-up of Financing Arrangements for the total project cost within 3 months from the date of receipt of approval. The Validity of the approval will be 3 months from the date of its issuance.
- 3.5.6 CHT & PD shall execute Memorandum of Agreement (MoA).
- 3.5.7 FINANCIAL ASSISTANCE shall be disbursed as per milestones mentioned in MoA.

**3.6 Documents to be submitted by PD at the time of RFS**

- 3.6.1 Documents meeting Technical and Commercial Pre-Qualification Criteria
- 3.6.2 Detailed Project Report
- 3.6.3 Technology licensing Agreement with their proposed Technology provider. In case, the PD is the Technology licensor, the same shall not be required.
- 3.6.4 Document regarding land availability for the project.
- 3.6.5 Results of trials of proposed Technology and proposed feedstock for the project.
- 3.6.6 Feedstock supply agreement.
- 3.6.7 O&M agreement (Self-declaration, if PD itself is doing operation & maintenance).
- 3.6.8 Advanced Biofuel Purchase Agreements (ABPA) with Oil Marketing Companies (OMCs). If PD is an Oil Marketing Company (OMC), Advanced Biofuel Purchase Agreement (ABPA) shall not be required.
- 3.6.9 Checklist as per Annexure-1

**Please note that decision of the SAC and Steering Committee with regard to selection of PDs eligible under the scheme shall be final & binding on all interested PDs.**

Thanking you,

Yours faithfully,

**(Shekhar R Kulkarni)**  
**RFS Inviting Authority**  
**(For and on behalf of Centre for High Technology)**

**Annexure-1****Checklist to be filled by PD**

<b>Name of the PD</b>	
<b>Name of the Lead Partner</b>	
<b>Type of feedstock</b>	
<b>Type of Advanced Biofuel</b>	
<b>Feedstock Requirement (TPD/KLPD)</b>	
<b>Name of the Licensor</b>	
<b>Proposed Plant Location:</b>	
<b>Plant Capacity (Advanced Biofuel Production in KLPD/TPD)</b>	
<b>Operating days</b>	

RFS Clause No.	RFS Conditions	RFS Criteria	Conditions Fulfilled (OK/Not OK)	Remarks (Details along with reference to the document submitted)
3.2	<b>Technical Pre-qualification Criteria</b>			
3.2.1(a)	Whether PD has experience in Crude Oil Refining or any other industrial domain like Sugar, Food Processing, Paper, Steel, Textile, Cement for at least 2 years continuous operation?	Either of the conditions		
3.2.1(b)	Whether PD has experience in operating continuous process plants for Chemical or Petrochemical production/ handling at least for 2 years after PGTR with minimum 20 KTA capacity?			
3.2.1 (c)	Whether PD has experience in marketing of fossil fuels or Biofuel blended fossil fuels viz., MS, HSD or ATF for 2 years after date of incorporation under the Company Act?			
3.2.1 (d)	Whether PD has experience of manufacturing/ marketing of Renewable fuels (Bioethanol, Biodiesel, Bio methanol, Bio-CNG, Drop-in fuels etc.) for 2 years after date of commissioning of manufacturing unit or incorporation of marketing company under the Factory Act?			
3.2.1 (e)	Whether PD has experience in Production/handling of at least 0.1 million tonne per annum large quantities of waste biomass?			
3.2.1 (f)	Whether PD is Technology licensor having technology for converting feedstock into Advanced Biofuel?			

3.2.1 (g)	Whether PD is a Central Govt. or State Govt. Department, PSU or a local civic body with a mandate of addressing environment pollution?			
3.2.1 (h)	Whether PD is a public funded Research Institution & Educational Institution and Private Research Institution registered with DSIR			
3.2.1 (i)	Whether PD is an Engineering consultants having capability of preparing BDEP for facilities associated with crude oil refining, petrochemicals and 1G/2G ethanol			
3.2.2	PD to share pilot/laboratory scale process data and results with proposed feedstock for the proposed technology	Required		
3.2.3	PD should have published patent application for the technology based on which demo unit is being proposed <b>and/or</b> Freedom to operate certificate to be provided through independent IP/ legal agency.	Required		
3.2.4	Whether PDs has commenced mechanical erection of their projects before starting of this scheme?	No (Oil PSU exempted)		
3.2.5	Is "Bolt on" plant & "Brownfield project?"	Yes/No		
3.2.6	Project Cost of Bolt on facility, if applicable in Rs. Cr	Required		
	Project Cost of Brownfield project, if applicable in Rs. Cr.	Required		
	Is PD a Foreign investors?	Yes/No		
3.2.7	For foreign investor, policy framework on Foreign Direct Investment Consolidated FDI Policy (Effective from August 28, 2017) issued by Department of Industrial Policy and Promotion Ministry of Commerce and Industry Government of India, or as updated/ amended from time to time shall apply	Required		
3.3	<b>Commercial Pre-Qualification criteria</b>			
3.3.1	The annual advanced biofuel production capacity	Required		
3.3.2	Operational data of 3 Months (Cumulative or Continuous) duration of the proposed technology needs to be shared with SAC at the time of invitation to RFS for ascertaining the performance of Technology.	Required		
	No-Go conditions			
3.4	-Whether PD, a declared wilful defaulters, as per RBI norms?	NO		
	-Whether PD, a declared Non-cooperative borrowers, as per RBI norms?	NO		
	-Whether PD has availed one time settlement (OTSs)?	NO		
3.5	<b>Documents to be submitted by PD at the time of RFS</b>			
3.5.1	Whether Detailed Project Report submitted?	Required		
	Whether Technology License Agreement signed with their proposed Technology provider?	Required		
3.5.2	Is PD the Technology licensor?	Yes, then not required		

3.5.3	Document regarding land availability	Required		
3.5.4	Whether results of trials of proposed Technology for the project submitted?	Required		
	Proposed feedstock	Required		
3.5.5	Freedom to operate (FTO)	Required		
3.5.6	Agreement for O&M of plant (Declaration if PD himself is doing O&M)	Required		
3.5.7	Advanced biofuel Purchase Agreement (ABPA) with OMCs	Required		
3.5.8	Document regarding committed source of Enzymes (If applicable) etc.	Required		
3.5.9	Documentary proof for connectivity with OMC depot (Not required if PD is an OMC)	To indicate		
3.5.10	Additional safeguards ensured for technology implementation through the bilateral agreement between PD & Technology licensor	To indicate		