

भारतीय गैर न्यायिक

भारत INDIA

रु. 500

FIVE HUNDRED
RUPEES

पाँच सौ रुपये

Rs. 500



INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA

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BW 994399

20 APR 2023

करारनामा / Agreement

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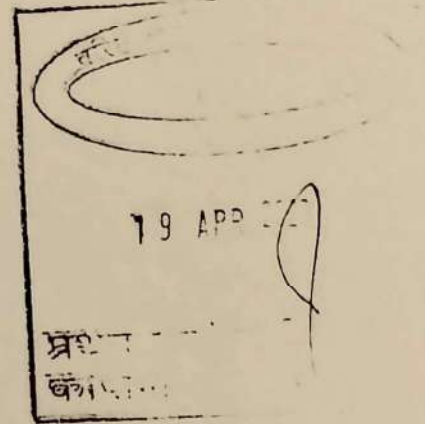
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MEMORANDUM OF UNDERSTANDING

This MEMORANDUM OF UNDERSTANDING is made on this 21st APRIL, 2023 between VSI having its office at Manjari (Bk.), Tal. Haveli, Dist. Pune, Maharashtra, Pin: 412307 and GPS Renewables Pvt. Ltd., having its office at "2nd Floor, Prestige Pinnacle, 7th Block Kormangala, Bangalore 560034, India" which expression shall unless repugnant to the context or meaning thereof shall mean and include its successor and assigns.

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S. S. S.
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



S. S. S.
Sambhaji Kadupatil -
Director General

This Memorandum of Understanding (MoU) defines the role and responsibilities of the participating agencies, monitoring and other matters related to the project entitled "**Process Development for an Economical & Sustainable Lignocellulosic Based Ethanol Production**".

Department of Alcohol Technology and Biofuels, VSI, Pune, aims to develop a cost effective process through either biological or combination of chemical/physicochemical-Biological pretreatment of lignocellulosic biomass for ethanol production. Also, optimized parameters for alkali pretreatment with bagasse developed at VSI will be taken into consideration as the control treatment with this study. Finally, an ethanol production process will be developed using an effective pretreatment wherein biological processes will be part of the process.

GPS Renewables Pvt. Ltd. is principally agreed and has given consent via email dated 09/02/2023 for initiation of project. The copy of email from **GPS Renewables Pvt. Ltd.** is attached herewith as **Annexure-I and Project Proposal from VSI** attached herewith as **Annexure II**

Responsibilities of GPS Renewables Pvt. Ltd.:

- GPS Renewables Pvt. Ltd. will provide funds to the extent of **Rs.138.39 Lakhs** as per the schedule II.
- GPS Renewables Pvt. Ltd. will provide biomass (rice straw and bamboo) from time to time for proper execution of the project.
- GPSR will procure microbial culture if necessary
- GPS Renewables Pvt. Ltd. will provide enzymes for saccharification of pretreated biomass time to time for proper execution of the project.
- GPS Renewables Pvt. Ltd. will provide all project related traveling (including air travel), lodging and boarding expenses of VSI staff, if occurred under the project.
- GPS Renewables Pvt. Ltd. will maintain confidentiality of the results obtained through project and intellectual property.
- GPS Renewables Pvt. Ltd. (and its subsidiaries) will be using the results for its own process development / scale up of process as a whole (physical pretreatment, Biological pretreatment, saccharification and fermentation) or in part with other known or newly developed processes.

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Principal
Vasantdada Sugar Institute
Manjarl (Bk.) Tal. Haveli,
Dist. Pune - 412 307
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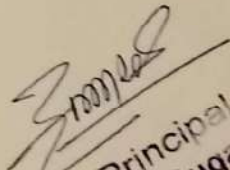
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Sambhaji Kadupatil
Director General
Vasantdada Sugar Institute
Manjarl (Bk.) 412 307

Responsibilities of VSI:

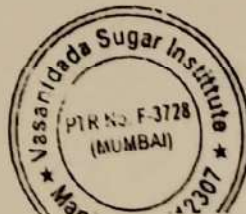
- VSI will conduct all the experimental and analytical work in the proposed research project.
- VSI will procure microbial culture required for process development from Indian sources.
- Optimization of all the process parameters for production of ethanol will be conducted by VSI on flask and bench scale.
- VSI will provide analytical, microbiological, fermentation, distillation facilities available at the institute for conducting trials.
- VSI will provide material balance of the process developed through the project.
- VSI will prepare reports and presentations quarterly based on studies conducted.
- VSI will train GPS manpower on the developed process at their premises at a mutually acceptable schedule, duration and charges.

Duration of Project

- Duration of the project shall be 2.5 years from the date of release of the first installment by GPS Renewables Pvt. Ltd.
- Schedule of work has to be followed as defined in the table below in Schedule I


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Havelli,
Dist. Pune - 412 307

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Sambhaji Kadupatil
Director General
Vasantdada Sugar Institute
Manjari (Bk.) 412 307
Dist. Pune (India)

Schedule I

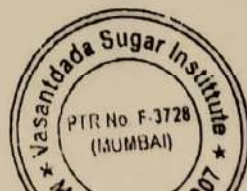
Work Title	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Collection of lignocellulosic biomass and its characterization	■									
Collection & screening of microbial strains for biological pretreatment	■	■								
Optimization of different parameters (Solid loading, stirring conditions & time) for biological pretreatment			■	■	■	■				
Screening & optimization of different parameters (Solid loading, temperature, enzyme loading & time) for enzyme hydrolysis			■	■	■	■	■	■		
Comparison of chemical (SCB) & biological (Rice straw & bamboo) pretreatment using optimum parameters								■	■	
Characterization of unhydrolyzed & hydrolyzed biomass (three biomass)			■	■	■	■	■	■	■	
Screening of microbes & fermentation of C5 & C6 sugars to ethanol separately & simultaneously								■	■	
Fermenter scale study for ethanol production					■	■	■	■	■	
Characterization of Spent wash										■
Report preparation (Quarterly)										■

	Rice straw	Bamboo	SCB	Report
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Rights of Ownership/Technology Transfer and Utilization

- The know-how generated from the project will be the joint property of VSI, Pune and GPS Renewables Pvt. Ltd.
- VSI and GPS shall share the benefits from IPRs generated in following manner

S No.	Scenario	VSI % on IP Cost paid	GPS % on IP Cost paid
1	GPS and its subsidiaries owned projects, where GPS is doing the EPC	25	75
2	Projects Bagged by GPS where GPS is doing EPC	25	75
3	For projects bagged by VSI, GPS shall do the EPC (GPS shall have ROFR)	50	50
4	Projects bagged by VSI, where GPS has used ROFR (and not doing EPC), licensing IP for one project only to third party	75	25
5	Technology License Contract Bagged by GPS for a third party where GPS is not doing EPC.	50	50



Sambhaji Kadupatil
Sambhaji Kadupatil
 Director General

[Signature]
 Principal
 Vasantdada Sugar Institute
 Manjeri (Bk.), Tal. Haveli
 Dist. Pune - 412 001

- IP Cost shall be limited to the technology fee component of any contract.
- Technology cost may vary on case to case basis based on the project size
- VSI shall provide continuous support to GPS for further technology development as per mutually agreed terms and conditions decided after completion of project.

It shall be the responsibility of VSI & GPS Renewables Pvt. Ltd. to take necessary action for protection of the intellectual property arising out of the project through proper instruments, such as, patents, copyrights, etc.

However, Periodic data sharing and review can be done as below

Monthly - Presentation by VSI and 1 pager brief Report.

Quarterly - Detailed Project progress report by VSI

- At the end of first year and completion of the work till selection of physio-bio pretreatment for further optimisation of the selected pretreatment , GPS and VSI will have a critical review meeting and decision on the next steps of the project will be taken either to continue in the same process, change philosophy or stop the project at this stage based on the experiment results against the expected output Or the results of experiment are not found suitable for commercial scale implementation.

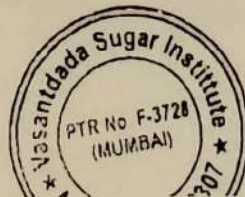
Right to terminate the agreement

- Both the parties shall have the right to terminate the agreement with prior notice of one month if either of them fails to provide the services successfully as mentioned in the agreement, or violates any of the clause mentioned in the MOU, or ill use of the technology.
- Both parties shall have the right to terminate the agreement in case the Evaluation under the clause herein above does not reach an accord.

Dispute Settlement and Arbitration

- In case of any dispute or difference of opinion or interpretation of the MOU arising out of the activities performed under the provisions of this contract or related document not amicably resolved completely by mutual discussion or consultation between the parties within thirty days (30), the entire matter shall be referred to the Administrative Mechanism for Resolution for settlement of commercial disputes.
- Notwithstanding anything contained in above para, in case of any dispute or difference of opinion falling under the exception to the ambit of Administrative Mechanism the party to this contract/agreement/MOU with mutual consent may take recourse of any

[Signature]
Principal
Vasantdada Sugar Institute
Manjari (P.), Tal. Haveli
Dist. Pune 412 307
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[Signature]
Sambhajli Kadapatil
Director General

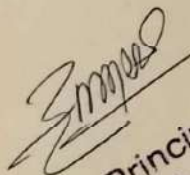
alternative dispute settlement mechanism including arbitration for settlement of such disputes as per applicable law and procedure.

Jurisdiction

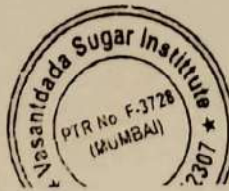
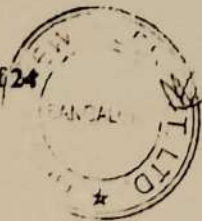
- Any dispute arising out of the implementation or interpretation of any provisions of this MOU shall be subject to the exclusive jurisdiction of Pune court.
- Force Majeure clause, neither party shall be held responsible for non-fulfilment of their respective obligations under the agreement due to the exigency of one or more of the unforeseen events such as but not limited to Acts of God, war, flood, earthquake, strike, lockouts, epidemics, riots, civil commotion etc. provided on the occurrence and cessation of any such events, the party affected thereby shall give a notice in writing to other party within one month of such occurrence or cessation. If the force-majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.
- This MoU shall take effect upon signing by both Parties and shall remain in effect for a period of two and half (2.5) years from that date unless earlier terminated. The MoU may be renewed at the end of this period by mutual written agreement by both the Parties.

Schedule II

Due Date	Amount in INR (Including GST)
1st Month of Signing	2767800
7th Month of Signing	2767800
13th Month of Signing	2767800
19th Month of Signing	2767800
Submission of Final report	2767800


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

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Sambhaji Kadupatil
Director General
Vasantdada Sugar Institute

For GPS Renewables Pvt. Ltd.



(Director)

Witness

1. Sankar Pathak
2. J. A. Gore

For VSI

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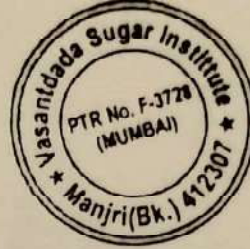
(Director General, VSI)

Sambhaji Kadupati
Director General

Witness

Vasantdada Sugar Institute
Manjari (Bk.) 412 307

1. Dr. V. S. Korde
2. S. C. Gurusu



[Handwritten signature]
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

Annexure 1

From: **Bankalp Pathak** <bankalp@gpsrenewables.com>
Date: Thu, 9 Feb 2023 at 16:40
Subject: GPS- BM2ETH-VSI - Project Proposal for Biomass to Ethanol project
To: Kakasaheb Konde <kakasaheb.konde@gpsrenewables.com>
Cc: Dr Ranade <DRANADE@GPSRENEWABLES.COM> ; Gomati Ravi <gomatiravi@gpsrenewables.com> ; Janardan Gore <janardangore@gpsrenewables.com> ; Sreekrishna Sankar <sreekrishna@gpsrenewables.com>

Dear Sir

I am writing in reference to the project proposal received from VSI - "PROJECT PROPOSAL ON PROCESS DEVELOPMENT FOR AN ECONOMICAL & SUSTAINABLE LIGNOCELLULOSIC BASED ETHANOL PRODUCTION on 25th Jan 2023" we would like to confirm that we in principle agree with the research proposal and would like to take it forward as a Research Project with the following changes to be incorporated in the agreement

1. Periodic review - Fourth night - raw data - Monthly - Presentation by VSI and Quarterly - Detailed Project progress report

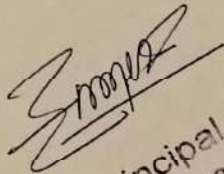
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2. At the end of first year and completion of the work till saccharification, we will have a critical review meeting and decision on the next steps of the project will be taken either to continue in the same process, change philosophy or stop the project at this stage based on saccharification output against the expected output

Please share the Draft Agreement for Bioethanol Project for taking the project forward and with the target to close on signing by the end of the W4 - Feb 2023

Thanking you in advance and with regards

Sankalp
AVP Design and R&D
GPS Renewables, Bangalore, India
M: 98456 78901 | E: bankalp@gpsrenewables.com
LinkedIn profile: <https://www.linkedin.com/in/bankalp-pathak>


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



PROJECT PROPOSAL
ON
PROCESS DEVELOPMENT FOR AN ECONOMICAL &
SUSTAINABLE LIGNOCELLULOSIC BASED ETHANOL
PRODUCTION

Submitted

To

GPS Renewables Pvt. Ltd.

No.30/2, Opp RKS Ready Mix Concrete

Hulimangala, Jigani Hobli, Anekal Taluk

Bengaluru – 560105, India

Submitted

By

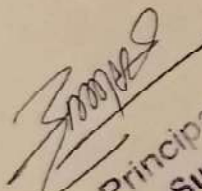


Department of Alcohol Technology & Biofuels

Vasantdada Sugar Institute, Manjari (Bk),

Pune- 412307

JANUARY-2023


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412307

