



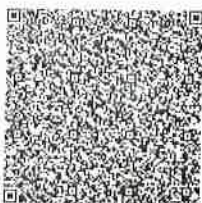
सत्यमेव जयते

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Account Reference : IMPACC (IV)/ dl725503/ DELHI/ DL-DLH
Unique Doc. Reference : SUBIN-DL72550309346234357736V
Purchased by : JAIPRAKASH POWER VENTURES LTD
Description of Document : Article 5 General Agreement
Property Description : Not Applicable
Consideration Price (Rs.) : 0
(Zero)
First Party : JAIPRAKASH POWER VENTURES LTD
Second Party : JAYPEE UNIVERSITIES
Stamp Duty Paid By : JAIPRAKASH POWER VENTURES LTD
Stamp Duty Amount(Rs.) : 100
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MEMORANDUM OF UNDERSTANDING BETWEEN JAIPRAKASH POWER VENTURES LTD. (JPVL) AND JAYPEE UNIVERSITIES (JUET, GUNA & JIIT, NOIDA)

This MOU entered into this 27th day of September, 2023 at New Delhi between Jaiprakash Power Ventures Limited (JPVL), having its Registered Office at Complex of Jaypee Nigrie Super Thermal Power Plant, Tehsil Sarai, Nigrie, Singrauli, 486669 (M.P.) (hereinafter called the "Employer", which expression shall unless repugnant to the

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[Signature]

subject or context include its administrators, successors and assigns), of the First Part and Jaypee Universities (JUET, Guna & JIIT, Noida) having their registered offices at Jaiprakash Sewa Sansthan , 63, Basant Lok, Vasant Vihar, New Delhi -57, and 63, Basant Lok, Vasant Vihar, New Delhi - 110057 (hereinafter called the "**Technical Professional Consultants**", which expression shall unless repugnant to the subject or context include its administrators, successors and assigns) of the Second Part AND,

WHEREAS the **Employer** had engaged the **Technical Professional Consultants** for providing technical and research expertise enabling in reducing the carbon foot print, efficiency improvement and in other specialized areas based on the requirements.

WHEREAS, the Coal based power plants of JPVL (Jaypee Nigrie Super Thermal Power Plant – 2 X 660 MW, Jaypee Bina Thermal Power Plant- 2 X 250 MW) are in operation for about 8 to 10 years and Hydro Plant (4 X 100 MW Vishnuprayag Hydro-Electric Plant [VPHEP]) is in operation for more than 17 years.

WHEREAS the **Employer** has selected the above Universities (JUET, Guna & JIIT, Noida), which are in existence for more than 20 years, as their **Technical Professional Consultants** based on the immense technical expertise available with them and having specialized laboratories for conducting advance technical studies for providing support in the above crucial areas of carbon foot print reduction, efficiency improvement, etc.

The Universities (JUET, Guna & JIIT, Noida) are having expertise in the following areas as listed below:

- | | |
|---|--|
| 1) Mechanical Engineering | 8) Information Technology |
| 2) Chemical Engineering | 9) Environmental science & Engineering |
| 3) Civil Engineering | 10) Physics and Material Science & Engineering |
| 4) Electronics & Communication Engineering | 11) Mathematics |
| 5) Electrical & Instrumentation Engineering | 12) Management |
| 6) Computer science & Engineering | |

WHEREAS, the **Employer** has on the above basis and on the faith and strength of the **Technical Professional Consultants** i.e. Jaypee Universities (JUET, Guna & JIIT, Noida) agreed to enter into this MOU, on the terms and conditions contained hereinafter:

NOW, THEREFORE, THIS MOU WITNESSETH AS FOLLOWS:

1. **Terms of MoU** : The term of this MoU is for 1 year i.e. from 1st October 2023 to 30th September 2024, which may be mutually extended on written acceptance from both the parties i.e. the **Employer** and the **Technical Professional Consultants**.
2. **Scope of Work** : **Technical Professional Consultants** would address the identified issues utilizing:
 - (a) Theoretical knowledge of Science and Engineering,
 - (b) Worldwide practices as they have evolved/ under development,
 - (c) Collective wisdom and application of knowledge to find optimum solution.
 - (d) Our own experience of operating power plants
3. **The Broad Areas which have been identified for Studies and Technical Support from the Technical Professional Consultants are:**
 - a. **Carbon Foot Print Reduction**
 - i. Cycle Efficiency Improvement
 - ii. Turbine Heat Rate and Boiler efficiency improvement
 - iii. Coal combustion optimization
 - iv. Optimization of cycle losses, etc.
 - v. Reduction in auxiliary power through various techniques
 - b. **Climate control methodology**
 - i. SO_x and NO_x reduction. FGD implementation for SO_x reduction taken up as per Ministry of Environment requirements (Govt. of India)



- ii. Ash utilization – Further improvements / Areas of usage etc., including utilization of bottom ash as aggregates and sand.
- iii. Study of pond ash of JPVL Coal Plants for its commercial usage
- iv. Zero effluents from Coal Power Plants – Improvements in the processes being employed

c. Reduction in cycle and non-cycle Water Consumption

d. Cost of Power reduction – specific areas and methodologies / technologies.

e. Study for conversion of sub-critical Technology, with respect to Bina (2x250 MW) Power Plant of JPVL to **Supercritical Technology** for efficiency improvement and with minimum capital cost expenditures.

f. Condition monitoring technologies to reduce downtime and improve reliability of critical equipment like Steam Turbines, Generators, Pumps, Fans, various Drives, etc.

g. Early Warning System at Vishnuprayag Hydro-power Plant

h. Study of structural integrity of Hydro and Thermal Plants

i. Any other area / problems as identified during the period of MoU by the Employer and also by the **Technical Professional Consultants**

4. Prices of Services

The Employer agree to pay a sum of Rs. 10.0 Crore (Rupees Ten Crore) for the entire Scope of Work. The payment will be made in 4 installments of Rs. 2.5 crore each.

5. Payment Terms:

- (i) Advance payment of Rs.2.5 crore on signing of the MoU
- (ii) Balance payment will be paid in 3 quarterly installments of Rs. 2.5 crore each on receipt and acceptance of the progress report for the previous quarter. The format of such progress report shall be mutually finalized.



6. **Timeline**: For each of the identified areas, timeline will be mutually worked out.
7. The Jaypee University will arrange all technical expertise required for providing all the necessary technical support to Jaypee Power Plants on the above identified areas, wherein the required research studies, special testing at their laboratories, etc would be carried out as part of the Scope.
In this regard any external expertise required from IIT Delhi, NIT, Bhopal, etc would also be included as part of the Scope of Work.
8. **Facilities** : The Boarding, Lodging and Transport for Universities expert team during their visit to the above mentioned Jaypee Plants will be provided free of cost.
9. All technical details with respect to the above identified power plants would also be provided as and when required.
10. During the process of study any requirement of coal, ash and other test samples as required will be provided free of cost.
11. **Drawings and Documents**: Any requirement from the power plant as agreed between the Employer and the Technical Professional Consultants, will be provided by the Employer, as and when required. However, these documents need to be kept confidential.
12. **Deliverables from Technical Professional Consultants** :
 - (i) Detailed test reports on the above identified areas in agreed formats
 - (ii) Implementation of technical recommendations including evaluation of the results / analysis as required.
 - (iii) Evaluation of improvements through performance tests and other measurable criteria, as mutually agreed upon.
13. **Force Majeure**: Neither Party shall be responsible for any delay or failure in performance of any part of this MoU resulting from any cause beyond the reasonable control of such Party, including acts of nature, acts of God, acts of civil or military authority, any law, order, regulation or ordinance of any government or legal body, embargoes, epidemics, war, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, work stoppages, power blackouts, or unusually severe weather. In such an event, the Party shall take reasonable efforts to resume performance as soon as practicable under the circumstances.



14. **Dispute Resolution:** The Parties shall try to resolve any dispute between them amicably by mutual discussion and negotiation, in case the parties are unable to resolve the dispute amicably within 60 days from the date of the notification of the dispute by the one party to the other party, the dispute shall be referred to arbitration of a sole arbitrator appointed by The Executive Chairman of JAL. The arbitration proceedings shall be conducted in accordance with the provision of Arbitration and Conciliation Act, 1996. The venue of the arbitration proceedings shall be conducted in English Language and venue would be mutually decided by The Parties.

15. **Applicability of Laws of The Land :** This MoU of business association shall be construed and interpreted in accordance with and governed by the Laws of the Union of India.

For Jaiprakash Power Ventures Ltd.

Signatories


(Suren Jain)

Managing Director & CEO
Jaiprakash Power Ventures Ltd.

DIN: 00011026



Signatories



Jaypee Universities

Prof. S.C. Saxena
Pro-chancellor
(JUET, Guna & JIIT, Noida)


1.


(J.A. Narayan Bhatti)


1.


(S. B. Pant)
A-11, JIIT, NOIDA

2.


(Madan G. Gupta)

2.


Radhe Shyam
A-10, sector 62
JIIT, Noida