



केन्द्रीय विद्युत अनुसंधान संस्थान  
Central Power Research Institute



Indian  
Institute of  
Technology  
Mandi

# MEMORANDUM OF UNDERSTANDING

BETWEEN

Central Power Research Institute  
&

Indian Institute of Technology, Mandi

9<sup>th</sup> September 2023  
Bangalore



सत्यमेव जयते

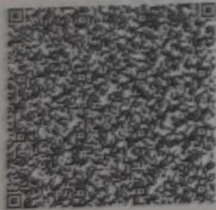
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**MEMORANDUM OF UNDERSTANDING BETWEEN CENTRAL POWER RESEARCH INSTITUTE (CPRI), BANGALORE AND INDIAN INSTITUTE OF TECHNOLOGY MANDI**

This MoU is entered into on this 9th day of September, 2023 between parties:

**CENTRAL POWER RESEARCH INSTITUTE** a Society under the **Societies Registration Act of 1960** (Karnataka Act No. 17 of 1960), having its Head Office at Sir C.V. Raman Road,

x.....*[Signature]*.....

x.....*[Signature]*.....

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Sadashivanagar, Bangalore – 560 080, represented by Director General, CPRI (hereinafter referred to as CPRI in short, which expression unless repugnant to the context mean and include their successors and assigns),

AND

Indian Institute of Technology having its office at Kamand, Mandi, Himachal Pradesh -175005, represented by Director, IIT Mandi (herein after referred to as in short IIT Mandi, which expression shall where the context so requires or admits, be deemed to include its successor and permitted assignees).

### PREAMBLE

WHEREAS CPRI has developed facilities and expertise over the years and has served as a premier Testing and Certification Authority for the testing of power systems apparatus besides being a nodal center for Applied Research in Electrical Power Engineering. CPRI has helped the Power Utilities in related product development and has offered Consultancy services in solving problems of the power sector, having expertise and domain knowledge in the areas of Electrical and Electronics Engineering - particularly, Power Engineering, Metallurgical Engineering, Mechanical Engineering and Materials Engineering, Waste Utilization, etc.

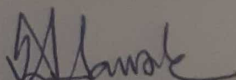
WHEREAS IIT Mandi, which is charged with the responsibility of generating technical manpower in different areas of engineering and technology, is also contributing to the rapidly growing scientific and technological knowledge and professional excellence in Science and Technology by undertaking industrial & applied research and consultancy.

NOW, THEREFORE, in consideration of the mutual promises made herein and of good and valuable consideration, the receipt and sufficiency of which both CPRI and IIT Mandi hereby acknowledge, CPRI and IIT Mandi, hereby agree to promote/ encourage academic and research cooperation on terms & conditions stipulated below:

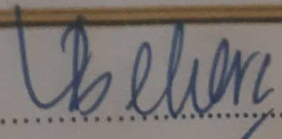
#### 1. Scope of the MoU

This MOU details the modalities and general conditions regarding collaboration between CPRI and IIT Mandi, for enhancing within the Country the capabilities, expertise, and

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competence without any prejudice to prevailing rules and regulations in CPRI and IIT Mandi, and without any disregard to any existing mechanisms evolved and approved by the competent authorities under Government of India. The scope of the MOU covers collaborative R&D, academic interaction leading to higher qualifications and other programs to benefit students and staff of both the organizations. The link involves collaboration between CPRI and IIT Mandi on research projects relevant to the power sector and academic interaction in the areas related to the power sector.

## 2. Objectives

The activities under the link will be as described below for collaboration which forms the schedule to this Memorandum of Understanding. The schedule may be amended by mutual agreement and such amendments will form part of this understanding.

### 2.1 Academic Program

#### 2.1.1 Recognition of CPRI as a Research Center of IIT Mandi

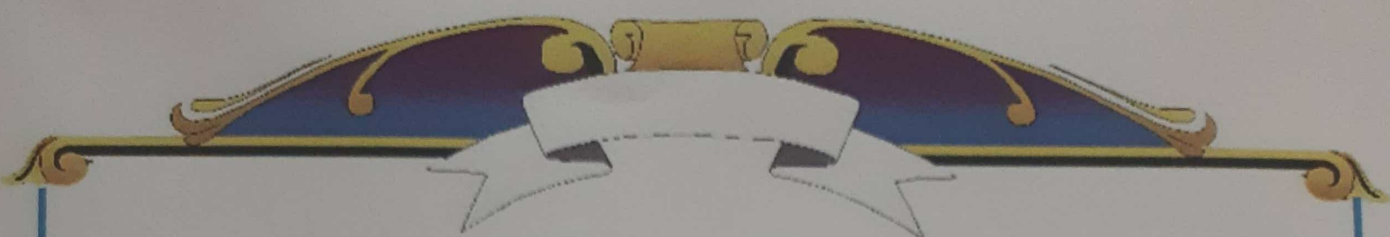
- (i) IIT Mandi will recognize CPRI as an accredited center for pursuing research leading to M.Tech. (Research)/ Ph.D. degree / M.Tech (Research)+PhD (Dual degree) in the subjects given under the Preamble.
- (ii) IIT Mandi will offer off campus Ph.D./M.Tech (Research) registrations for the candidates who are selected or sponsored by CPRI (i.e., Scientific/Engineering Officers of CPRI) and will be doing fulltime research in CPRI. IIT Mandi will award degree to such students on the successful completion of the academic and other requirements of both CPRI and IIT Mandi. The candidates selected/ sponsored by CPRI will be exempted from appearing in written test and mandatory attendance, if any, conducted by IIT Mandi for admission to M.Tech. (R)/Ph.D./ M.Tech (Research)+PhD (Dual degree) programme and may be selected for enrolment based on direct interview only.
- (iii) IIT Mandi will recognize and accredit CPRI scientists for guiding research leading to M.Tech. (Research)/ Ph.D. degree./ M.Tech (Research)+PhD (Dual degree) .
- (iv) The Board of Control/ Research Degree Committee shall recommend a Supervisor/Member from IIT Mandi for the students enrolled in the M. Tech (R) / Ph.D./ M.Tech (Research)+PhD (Dual degree) programme at IIT Mandi, through the Research Center at CPRI.
- (v) The students enrolled in the M. Tech(R) / PhD/ M.Tech (Research)+PhD (Dual degree) programme at IIT Mandi through the

Research Center at CPRI, will complete the course-work requirement by enrolling in courses approved by the Senate of IIT Mandi. The coursework may be completed either in "self-study" or online mode (where the student will study the course from approved text and reference books and other study materials if any). The evaluation of these courses and grading will be done by faculty members of IIT Mandi who are associated with the courses taken by the students. There would be no residential requirement at IIT Mandi for the students enrolled in off campus mode. The system of grade calculation, comprehensive examination, synopsis, thesis submission, etc. will be as per the existing Ordinance & Regulations for MTech (Research)/ Ph.D./ M.Tech (Research)+PhD (Dual degree) programmes of IIT Mandi.

- (vi) IIT Mandi will not charge any tuition fees from the off campus PhD/M.Tech (Research)/ M.Tech (Research)+PhD (Dual degree) students registered through the Research Center at CPRI. However, a token enrollment/registration fee and continuation fee along with thesis submission and convocation fee needs to be paid by the student. The details of these fee may be worked out separately on mutual agreement.
- (vii) The students enrolled for M. Tech (Research) / PhD/ M.Tech (Research)+PhD (Dual degree) course at IIT Mandi through the Research Center at CPRI will be provided a roll number and issued temporary identity card by IIT Mandi as per rules/ guidelines to provide unhindered access to their lab & other facilities.
- (viii) As per the availability, IIT Mandi shall arrange Hostel/ Guest House for students enrolled in the M. Tech(R) / PhD/ M.Tech (Research)+PhD (Dual degree) programme through the Research Center at CPRI, whenever they visit IIT Mandi Campus in connection with their studies.
- (ix) The rules & regulations governing the degrees of M. Tech (Research)/ Doctor of Philosophy (Ph.D.)/ M.Tech (Research)+PhD (Dual degree) of IIT Mandi will be followed for all enrollments done under the accredited Research Center.

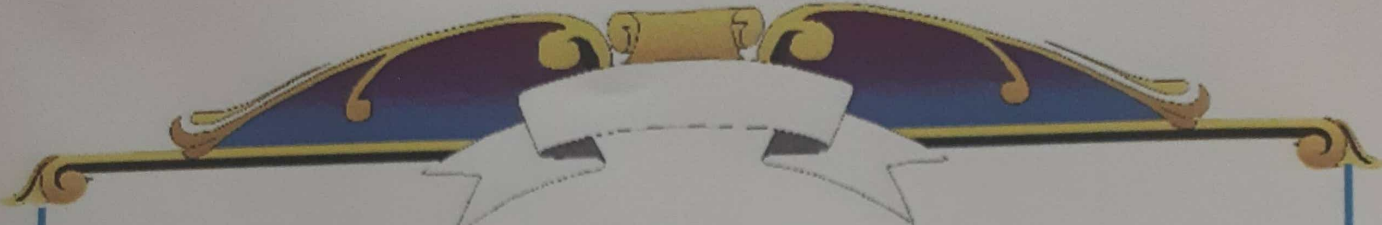
**2.1.2 Joint supervision of students:** Scientific/Engineering Officers of CPRI can jointly supervise Ph.D. / MS /M. Tech/ M.Tech. (Research) students with faculty members from IIT Mandi under the following terms:

- (i) Students from IIT Mandi may opt to work at CPRI for their Ph.D. / MS /M. Tech/ M.Tech. (Research) project, dissertation or thesis in areas related to the power sector.

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- (ii) Ph.D. / MS /M. Tech/ M.Tech. (Research) students enrolled with IIT Mandi would be able to carry out a part of their research work at CPRI.
  - (iii) The specific part of the Ph.D. / MS /M. Tech/ M.Tech. (Research) research work to be carried out at CPRI will be identified/recommended by the PG/Doctoral Committee at IIT Mandi as per requirement.
  - (iv) The Ph.D. / MS /M. Tech/ M.Tech. (Research) scholars working under the collaboration will have joint supervisors - the Supervisor will be a faculty member from IIT Mandi and the Scientific/ Engineering Officer of CPRI will be co-Supervisor for the students/ scholars.
  - (v) The topic/title of the thesis under the collaboration will be chosen in consultation with CPRI and should be within the scope of CPRI research activity and relevant to the Power Sector to the extent possible.
  - (vi) The selection and enrollment of the student will be carried out as per the selection guidelines and procedures of IIT Mandi.
  - (vii) The PG/Doctoral Committee should carry out periodic reviews of the research scholars at IIT Mandi and CPRI.
  - (viii) The students have to submit a brief report on the progress of work to CPRI on a quarterly basis.
  - (ix) The researcher pursuing Ph.D. / MS /M. Tech/ M.Tech. (Research) under this collaboration will be solely responsible for paying his/her tuition fee, etc. as per norms of IIT Mandi.
  - (x) As per the availability, CPRI shall arrange Hostel/ Guest House for the Ph.D. / MS /M. Tech/ M.Tech. (Research) students of IIT Mandi whenever they visit CPRI in connection with their studies.

### 2.3 Faculty Exchange:

- (i) The Supervisor from CPRI for the Ph.D. /M. Tech. (R) students can visit IIT Mandi and vice versa for a limited period as per requirement in connection with the research work. The expenditure incurred towards the visit by the staff/ faculty will be met either from the joint collaborative project(s)/ other funded project(s) under execution by the staff/faculty, if any or by the respective parent organization from the funds identified for such visits.

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- (ii) Both Institutions shall encourage lectures from staff/ faculty at the other Institution in the areas relevant to the power sector. Visiting lecturers from either Institution shall be paid TA/DA (as applicable) and honorarium for lectures delivered as per the prevalent rates of the host Institution.

#### 2.4 Research Collaboration

CPRI and IIT Mandi may jointly submit research projects for consideration under the "R&D schemes of MoP being implemented through CPRI". The projects will be evaluated as per the existing norms of the R&D scheme. If the project is approved for funding support, a separate MoU will be entered into between CPRI and IIT Mandi for the execution of the project.

#### 2.5 Knowledge Dissemination

- (i) **Joint Conferences/ Workshops:**
- a. Both Institutes agree to hold/conduct, whenever feasible, joint workshops/ conferences on topics related to the power sector.
  - b. Joint Workshop or Symposium would also be conducted by IIT Mandi and CPRI to disseminate the knowledge gained through the research findings from the joint collaborative R&D projects.
  - c. The matters related to the conduct of the joint conferences/ workshops will be discussed and agreed upon in writing by the appropriate responsible representation of both Institutes.
- (ii) Young scientific/engineering officers of CPRI may be allowed to participate in short-term courses (in the areas related to the power sector) offered by IIT Mandi from time to time, based on nomination from CPRI. The registration fees may be waived off for such participants.
- (iii) The information on technologies / products developed as part of the collaboration, will be made available on CPRI website (<http://www.cpri.in>) and IIT Mandi website (<http://www.iitmandi.ac.in>).

#### 2.6 Sharing of Facilities

- (i) The two Institutes agree to share the required R&D facilities to promote academic and research interaction.
- (ii) The two Institutes shall provide access to the library to staff/ faculty as per the prevailing rules and norms in the respective Institutes.

- (iii) Accommodation/ canteen facilities whenever available, will be provided to the staff/ faculty and research students by both the Institutes as per the respective rules and regulations of the Institutions.


### 2.7 Co-ordination Committee

- (i) Day-to-day implementation of this MoU will be coordinated by the "Research Advancement Committee"(RAC) at CPRI and respective school at IIT Mandi.
- (ii) Further, a Committee comprising of the following members will constitute the Co-ordination Committee to monitor and review all activities under the MoU between the two Institutes:
- Director IIT Mandi and/or his nominee(s),
  - Director General, CPRI and/or his nominee(s)
  - HoD of the concerned department(s) from both Institutions will be invited on a need basis.
- (iii) The Co-ordination Committee shall:
- Review the progress of the identified programmes periodically, based on the output outcome indicator of the MoU as per Annexure-I.
  - Consider the continuance/ extension of the MoU.

### 3. Patent and Technology Transfer Mechanism

- (i) Research findings shall be owned jointly by CPRI and IIT Mandi. Any publications, IPR etc. arising out of the joint research efforts shall be owned by both CPRI and IIT Mandi. The publications under the collaboration should be co-authored by the concerned staff of CPRI and Research Scholar and/or faculty of IIT Mandi. Prior intimation should be provided to CPRI regarding the submission of jointly authored technical manuscripts prepared under the collaboration.
- (ii) CPRI and IIT Mandi will jointly patent the product/Technology/process developed. The patents will be applied in the name of the Director General, CPRI or his nominee and Director, IIT Mandi and the patent rights will jointly vest with CPRI and IIT Mandi.
- (iii) The cost of patenting and annuity charges will be shared by CPRI and IIT Mandi on an equal basis.
- (iv) Technology transfer fees and Royalty shall be decided by mutual consent of CPRI and IIT Mandi after achieving key milestones.



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- (v) Transfer of technology to a third party shall be allowed with mutual consent between CPRI and IIT Mandi and all commercial benefits such as royalty shall be available to CPRI and IIT Mandi and will be equally shared.

#### 4. Confidentiality

- (i) CPRI and IIT Mandi shall undertake on their behalf and on behalf of their employees/ associates to maintain strict confidentiality and prevent disclosure thereof of all the information and data exchanged/generated pertaining to work under this MoU for any purpose other than this MoU. Each Party shall keep all Confidential Information provided by the other party strictly confidential and agree not to disclose any Confidential Information of the other Party to any third party without the prior written consent of the other, or to use any such confidential information for any purpose other than as contemplated by this Agreement. Each Party hereby agrees to keep any Confidential Information transmitted to it or obtained by it from the other Party relating to the processes employed by the Parties in this project strictly confidential and not to disclose the same or, any part thereof save to those of its employees, affiliates, representatives who require to know the same strictly on need to know basis. Each Party agrees to use all reasonable efforts/endeavors to ensure that any employees, affiliates or representatives to whom such disclosure is made shall keep such information confidential and shall not use the same for their own purposes or for the purposes of any third party or for any purpose other than provided for under this MOU.
- (ii) No party will disclose any investigation to the media/ any unauthorized person from each Institute in any form, whether electronic/ print without mutual consent and approval by Coordination Committee.

#### 5. Statutory Requirements

- (i) All activities under this MoU will be carried out in accordance with statutory provisions like Workmen's Compensation Act, Labour (Regulation and Abolition) Act, Contract Labour (Regulation and Abolition) Act, Employees Provident Act or any other related enactment passed by the Parliament or State Legislature and any rules/laws made there under by the either Central or respective state Governments.
- (ii) Since the collaboration is between CPRI and IIT Mandi, the terms of the MoU cannot be extended to any other organization/ cannot be clubbed with any other MoU of the IIT Mandi.

## 6. Force Majeure

None of the participating agencies / bodies shall be held responsible for non-fulfilment of their respective obligations under this contract due to the exigency of one or more of the force majeure events such as but not limited to Acts of God, war, natural calamities such as flood, earthquakes etc., and strike, lockout, epidemics, riots, civil commotion etc. provided on the occurrence of cessation of any such events, the party affected thereby shall give notice in writing to the other party within one month of such occurrence or cessation. If the force majeure conditions continue beyond six months, the signatories shall then mutually decide about the future course of action.

## 7. Validity of Agreement

The MoU comes under immediate force on the date of signing and is valid for 5 years (Five years), from the date of signing. Prior to the expiration date, the MoU may be reviewed for possible extension, if required and may be extended with mutual consent of the parties.

## 8. Amendments to the MoU

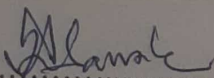
No amendment or modification of this MoU shall be valid unless the same is made in writing by all the parties or their authorized representatives and specifically stating the same to be an amendment of this MoU. The modifications / changes shall be effective from the date on which they are made / executed, unless otherwise agreed to.

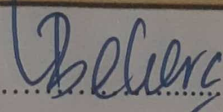
## 9. Settlement of Disputes and Arbitration

- (i) In the event of any dispute or any difference among the parties, such disputes or differences shall be resolved amicably by mutual consultation or through the good offices of the Director General, CPRI and IIT Mandi.
- (ii) In the event of any dispute between the parties to this Memorandum of Understanding, it will be resolved as per the Indian Arbitration and Conciliation Act 1996.
- (iii) The venue for arbitration shall be Bangalore and the language of arbitration shall be English.

## 10. Jurisdiction

The courts at **Bangalore** shall have jurisdiction in all matters concerning this MoU including any matter arising out of the arbitration proceedings or any award made therein.

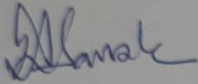
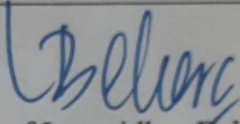
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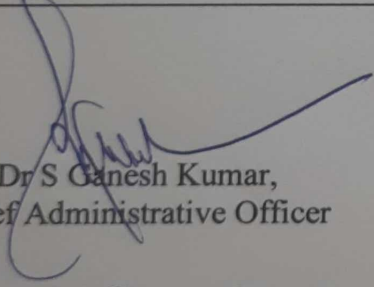
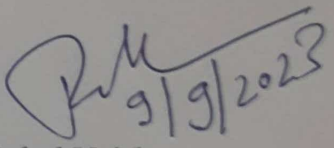
## 11. Indemnity

Each Party of this Agreement shall be responsible for its own acts and/or omissions and those of its Officers, employees and agents. The Parties shall fully indemnify and hold the other party harmless against the claims arising from the use of third party IPR in its respective work share.

IN WITNESS WHEREOF PARTIES HERETO HAVE ENTERED INTO THIS AGREEMENT EFFECTIVE AS THE DAY AND YEAR FIRST ABOVE WRITTEN.

For and on behalf of CPRI	For and on behalf of IIT Mandi
 Shri B A Sawale Director General बी.ए. सावले / B.A. SAWALE महानिदेशक / Director General केन्द्रीय विद्युत अनुसंधान संस्थान Central Power Research Institute पो. बा. सं. 8066 / सदशिवनगर डाक घर P.B. No. 8066 / Sadashivanagar Post Office बेंगलूरु / Bengaluru - 560 080	 Prof Laxmidhar Behera, Director  Director IIT Mandi (H.P.) Pin - 175075

Witness:

 Dr S Ganesh Kumar, Chief Administrative Officer  मुख्य प्रशासनिक अधिकारी Chief Administrative Officer केन्द्रीय विद्युत अनुसंधान संस्थान Central Power Research Institute पो. बा. सं. 8066, बेंगलूरु - 560 080 P.B. No. 8066, Bengaluru-560 080	 Prof Rahul Vaish Professor  Professor IIT Mandi-175075 (H.P.)
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Annexure I

OUTPUT			OUTCOME		
Output	Indicator(s)	Target	Outcome	Indicator(s)	Target
Collaborative Research and Development	No. of Students under CPRI collaboration		Scientific Know-how	No. of Publications in Peer-reviewed Journals	
	No. of collaborative research undertaken			No. of Patents Filed	
				No. of Technology Transfer Initiated	