



MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING (MoU) BETWEEN CENTRAL POWER RESEARCH INSTITUTE (CPRI), BANGALORE and “Siddaganga Institute of Technology” for the project on “Development of High Temperature Low Sag NanoComposite Core” under RSOP scheme of MoP, Government of India.

This MoU regarding the Research Scheme on Power for R and D in Indian Power sector, titled **“Development of High Temperature Low Sag NanoComposite Core”** (herein after referred to as the “Project”) is made for execution of the project on this **01st(Day) of January, 2016 Year** between parties,

Central Power Research Institute (coordinating organization on behalf of Ministry of Power, Government of India), a Society under the **Societies Registration Act of 1960**, having its office at Bangalore (hereinafter referred to as CPRI which expression shall where the context so requires or admits, be deemed to include its successors and permitted assignees)

And

Siddaganga Institute of Technology, having its office at, **Tumkur-572103**

(herein after referred to as in short, the **Project Implementing Institution** which expression shall where the context so requires or admits, be deemed to include its successor and permitted assignees).

It is agreed by and between the parties that the project would be executed jointly within the following Objectives, scope, deliverables and the responsibilities of each of the implementing agencies

1. DEFINITIONS

- a RSOP means Research Scheme on Power
- b „Project Implementing Organization shall mean **“Siddaganga Institute of Technology”** responsible for implementing the project **“Development of High Temperature Low Sag NanoComposite Core”** as per the approved project proposal

c	„Funding Organization“ shall mean MoP supporting the project financially.
d	„Project“ means RSOP Project “Development of High Temperature Low Sag NanoComposite Core”
e	„Coordinating Organization“ means CPRI, coordinating various activities of the project with project implementing organization and funding organizations on behalf of Ministry of Power, Government of India.
f	Expert Committee (EC) on Research Scheme on Power will be hereinafter called EC-RSOP. Director General, CPRI is the Chairman of EC-RSOP Committee and Head, R&D management Division, CPRI is the convener. EC-RSOP is constituted by Director General CPRI. EC-RSOP shall review the progress of the project.
g	„Parties“ refer to the organizations participating in the project namely CPRI and Siddaganga Institute of Technology

2. Objectives and Scope of the Research project

The main objective of the proposed work is Development and Characterization of High Temperature Low Sag Nano Composite Core (NCC) to achieve:

- High strength
- Low coefficient of thermal expansion (CTE)
- Low creep
- Low corrosion rate
- Increased ampacity
- Efficiency, capacity and reliability of the [electrical transmission and distribution power grid](#) and
- Durability in existing right-of-ways.

3. FINANCIAL OUTLAY OF THE PROJECT

3.1 This project is funded by MoP under RSOP scheme. The total approved financial outlay of the project as per approved proposal is **Rs Amount.28,00000/-**

3.2 The head wise break-up of the total project cost is given in approved project proposal, which is part of this document shown under **Annexure - I**.

4. PROJECT SCHEDULE

4.1 The project shall be completed in **two years six months** with the major milestones and the expected time schedule for the same as given in the Project schedule and other details as per approved project proposal in **Annexure - I**.

5. MODE OF FINANCING

5.1 The approved cost of the project is **Rs twenty eight lakhs** The project cost will be funded by MoP through the coordinating agency namely CPRI.

5.2 In case the project gets completed in less than the approved cost of **Rs Amount** Lakhs, the unutilized amount shall be refunded to CPRI.



6. RELEASE OF FUNDS

6.1 Release of 1st installment of funds shall be arranged by CPRI after signing of MOU and after due confirmation of the commitment to Project schedule

6.2 Release of subsequent installment of funds by CPRI will be subject to satisfactory progress of the project. This is also subject to complete utilization of funds released earlier.

7. ROLE AND RESPONSIBILITIES OF PROJECT COORDINATING ORGANIZATION - CPRI

7.1 CPRI will monitor and steer the project for its successful completion.

7.2 CPRI shall maintain a separate account for the funds released by MoP for execution of this project.

7.3 CPRI shall nominate one nodal officer for this project. The nodal officer shall work with Head, R & D Management Division of CPRI. He/she shall have detailed knowledge regarding technical and implementation status and issues being resolved in this project.

7.4 CPRI would release the funds to **(Director/Principal), Siddaganga Institute of Technology** for execution of the project depending upon the financial, technical and physical progress of the project and recommendations of the nodal officer.

7.5 CPRI will ensure that the funds released will be utilized by **(Dr.Rashmi)** Principal investigator (PI) or **(G.S.Shivashankar)** Co investigator (CI), **Siddaganga Institute of Technology** only for the purpose of the project for which it is released.

7.6 CPRI would be free to use the equipment's / facilities; softwares procured / developed for any scientific work or technology development/ demonstration purpose on their own or can request **(Director/Principal), Siddaganga Institute of Technology** for use of this infrastructure by any other organization/agency or manufacturer for scientific technology development / demonstration purpose.

7.7 CPRI will facilitate to get necessary approvals from Central Government under section 35 of IT act towards expenditure incurred on scientific research, wherever applicable.

7.8 Head R&D Management Division shall be the contact person for all matters concerning the project.



8. ROLE AND RESPONSIBILITIES OF PROJECT IMPLEMENTING ORGANIZATION: Siddaganga Institute of Technology

8.1 PROJECT IMPLEMENTING ORGANIZATION (PIO) shall make arrangements for proper operation and maintenance of equipment's procured under the project. PIO shall acknowledge procurement of equipments under this project by a „TRUST RECEIPT which is given in Annexure - II, to this document.

8.2 PIO shall ensure that the funds released are utilized only for the purpose of the Project.

8.3 PIO shall provide free access to CPRI officers and EC-RSOP members and their representatives to all facilities/assets and records relating to the project located at their works.

8.4 PIO shall meet the expenditure towards local hospitality, travel expenses, local transport of EC-RSOP members / CPRI officials / its representatives, from the funds provided by CPRI for this project, when the review meetings are held at **Siddaganga Institute of Technology** or at **CPRI, Bangalore**.

9. PROGRESS REVIEW & QUARTERLY PROGRESS REPORTS (QPR)

9.1 Nodal Officer from CPRI will be responsible for monitoring the progress of the project.

9.2 Monthly progress of the project shall be furnished as per Annexure - III.

9.3 It is the responsibility of Principal Investigator and Co Principal Investigator to furnish the progress (Technical and Financial) of the project for each quarter with in a month after completion of the quarter. For the purpose of furnishing quarterly reports, the 1st quarter starts in April of every financial year. The Quarterly progress Reports (QPR) are to be furnished in the prescribed formats (Forms 3 & 4) for reporting technical and financial progress.

10. Monitoring of RSOP

10.1 Technical and financial progress of RSOP projects are monitored and coordinated by the R&D Management Division of CPRI.

10.2 Progress of the projects are reviewed by the CPRI Nodal Officers/officers of R&D Management Division at respective investigating organizations



10.3 Based on the recommendations of CPRI nodal officers and satisfactory Progress of Project, Head, R&D Management Division shall recommend release of funds.

11. Review of RSOP by EC-RSOP

11.1 Ministry of Power (MoP) will constitute the EC-RSOP. DG CPRI will be the chairman of EC-RSOP and Head of R&D Management Division will be the convener of EC-RSOP

11.2 EC-RSOP shall review and steer the implementation of RSOP projects for successful completion of the project.

11.3 The EC-RSOP will meet at least once in six months to review the progress of project.

12. FUND UTILIZATION CERTIFICATE (UC)

12.1 Before the release of subsequent grant, Principal Investigator shall submit the Fund Utilization Certificate for the released amount at the end of each financial year and also an interim UC with any intermediate request for release of fund.

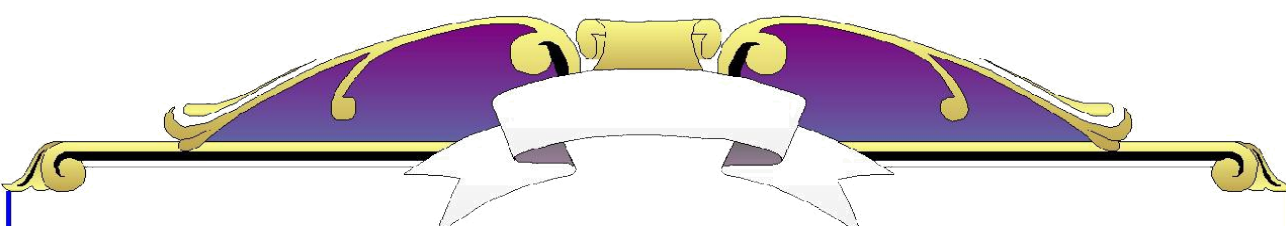
12.2 Satisfactory technical progress and submission of progress reports and utilization Certificates (Forms 3, 4 and 6) are pre-requisites for release of next installment for the project.

12.3 All Utilization Certificates indicating the financial statements shall be audited and certified by “Accounts” Officer of the Institution or by authorized “Auditors” or “Head of Accounts”.

12.4 The Accounts duly audited by external auditors of the Institute shall be forwarded to CPRI at the end of each financial year.

13. PROJECT COMPLETION & TECHICAL REPORT

13.1 The Project implementing Institution shall make a presentation to the EC-RSOP once the project is completed. Prior to this, CPRI will scrutinize and analyze the final results of the project and give a report to the Expert Committee. The abstract of the completion report shall be submitted in Form 5



13.2 The EC-RSOP finally declares that the project is completed with the deliverables as stipulated in the original project proposal. The Principal investigator shall submit **four copies of Technical report along with a soft copy in CD** (preferably in MS word format) to CPRI within one month of the completion of the project (Form No. 7). The Principal investigator shall also furnish the Feedback (form 9) and project evaluation (form 10) along with Technical Report.

14. MANDATORY OBLIGATIONS

14.1 It is obligatory on the part of **Siddaganga Institute of Technology** to ensure free access to EC-RSOP members, Review Committee Members / CPRI officials / its representatives to all facilities/assets and records relating to the project located at their works.

9. All research publications based on this project shall be made jointly in the names of the scientists / investigators / innovators of **Siddaganga Institute of Technology**


14.2 and **CPRI** members making scientific contributions to research project. Copy of technical papers published has to be forwarded to **CPRI** along with QPR.

14.3 The project investigators **Dr.Rashmi(PI), Dr.G.S.Shivashankar(CI)** shall duly acknowledge CPRI for funding this project in all publications, reports, publicity, presentations materials etc.

14.4 None of the parties including EC-RSOP members shall transfer technology or information on technology to any third party without the consent of **CPRI** and the project investigators **Dr.Rashmi(PI), Dr.G.S.Shivashankar(CI)**.

14.5 The project investigators **Dr.Rashmi(PI), Dr.G.S.Shivashankar(CI)** shall furnish all deliverables of the project such as full documentation pertaining to development, design, detailed specification of all components and material manufacturing process, sourcing of material, test results etc. to CPRI.

14.6 **PI** and **CI** shall furnish all details of documents/test reports etc. as required for registration of patent.



14.7 The assets acquired / created wholly or substantially by **PIO** out of Government grants except those declared as obsolete and unserviceable or condemned in accordance with the procedure laid down in the G.F.R. shall not be disposed off encumbered or utilized for the another purpose/project, without obtaining the prior approval of the authority which sanctioned the grants. In case of winding up or dissolution of the organization all the assets acquired to that effect out of the grants-in-aid by the Ministry should be returned forthwith to the Government of India.

14.8 The Utilization Certificate in respect of utilization of grants for the purpose/object for which it was sanctioned should be furnished by **Siddaganga Institute of Technology** with an audited statement of accounts, within twelve months of the closure of the financial year. The utilization certificate should also disclose whether the specified, quantified and qualitative targets that should have been reached against the amount utilized, were in fact reached, and if not the reasons thereof. They should contain an output based performance assessment.

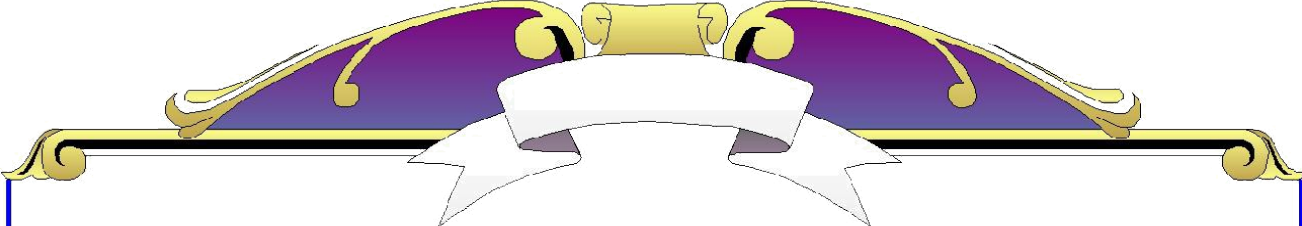
14.9 **Siddaganga Institute of Technology** shall be required to maintain subsidiary accounts of the Government grant and furnish to the Accounts Officer a set of audited statement of accounts after utilization of the grants-in-aid or whenever called for.

14.10 The annual report and audited accounts of **Siddaganga Institute of Technology** will have to be submitted to the Ministry in Hindi & English in required quantities by the grantee to be laid on the table of the both Houses of Parliament within 9 months of the close of the succeeding financial year of the grantee if the non-recurring grant is Rs.50 lakhs and above as one assistance.

14.11 The accounts of the grants are open to check and shall be audited by the Comptroller and Auditor General of India in accordance with the provisions laid down in Section 14 of the Comptroller and Auditor General, Ministry of Power whenever the institution is called upon to do so.

14.12 **PI** and **CI** are required to submit performance-cum-achievement reports within a period of one month after the end of the financial year.

14.13 No expenditure over and above the sanctioned grant shall be incurred by the **Siddaganga Institute of Technology** without obtaining the prior approval of the Ministry of Power. Further in no case the expenditure on any scheme should exceed the sanction cost of the respective scheme and monthly targets of expenditure.



14.14 The grants-in-aid should not be a source of profit. If after examination of the Audited Accounts, Ministry comes to the conclusion that the grants-in-aid have been source of profit, then **Siddaganga Institute of Technology** shall forthwith refund the amount of grants-in-aid to Government of India.

14.15 **PI** and **CI** may keep all the economy instructions in view while incurring the expenditure. The organization shall not incur any expenditure on those items, the purchase of which items have been banned.

14.16 In the event of **Siddaganga Institute of Technology** failing to comply with the conditions or committing breach of the conditions, **Siddaganga Institute of Technology** shall be jointly and severally liable to refund to the President of India the whole or a part of the grant with interest.

14.17 Penal interest is chargeable if the **Siddaganga Institute of Technology** fails to furnish progress report/audited statement of Accounts/Audited Utilization certificate etc. within the specified period after release of grants in the event of short closure of the project due to non technical reasons.

14.18 In the event of short of closure of the project **Siddaganga Institute of Technology** will be liable for refund of the entire amount released. In this regard the decision of the EC-RSOP will be binding on **Siddaganga Institute of Technology**

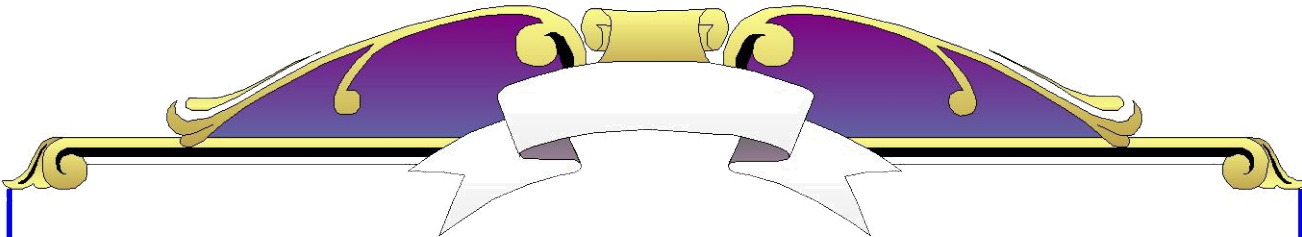
15. PROJECT REORIENTATION

15.1 The scope and the work/activities of the project can be re-orientated without deviating from broad objective and scope of the approved project, based on the recommendations of nodal officer and approval of EC-RSOP

16. COST AND TIME OVER-RUN

16.1 **PI** and **CI** shall inform **CPRI** in advance about the technical problems encountered in implementation of project. However, efforts should be made to complete the project within the stipulated duration. Request for extension of project duration will not be considered.

16.2 It shall be the responsibility of **PI** to implement and complete the project within the approved outlay. Any additional expenditure for completion of project, above the sanctioned amount will be borne by **PIO**.



16.3 In the event of any technical problems beyond the control of **PI** and **CI** in completing the project the same shall be discussed with nodal officer and subsequently taken up with EC-RSOP.

17. KNOWLEDGE DISSEMINATION

17.1 The information on technologies / products developed as part of RSOP scheme is currently available on CPRI website (<http://www.cpri.in>). Work shop or Symposium would be conducted by the investigating agency to disseminate the knowledge gained by the research findings.

18. PROJECT COMPLETION REPORT

18.1 **PI and CI** shall submit draft project report within two months from the date of actual completion of technical work to CPRI. After necessary modifications, based on suggestions from review experts, the final report shall be submitted by **PI and CI** within one month.

18.2 **PI and CI** shall forward four copies of the final report to CPRI. The report shall include complete technology parameters, so that the document can serve as Technology Transfer Document.

18.3 The Project shall be deemed to be completed when the Expert Committee certifies to the effect in writing and is accepted by Chairman EC-RSOP.

19. PATENT AND TECHNOLOGY TRANSFER MECHANISM

19.1 Patents shall be jointly applied in the name of individuals identified by CPRI and the Institute / Organization. The patents rights will jointly vest with CPRI and **Siddaganga Institute of Technology**

19.2 Technology transfer fees and Royalty shall be decided by mutual consent of CPRI and **Siddaganga Institute of Technology** after achieving key milestones.

19.3 Transfer of technology to a third party shall be allowed with mutual consent between CPRI and **Siddaganga Institute of Technology** and all commercial benefits such as royalty shall be available to CPRI and **Siddaganga Institute of Technology** will be equally shared.



20. CONFIDENTIALITY

20.1 During the tenure of the MoU and thereafter for 2 years or the validity of patent whichever is longer, **CPRI, Siddaganga Institute of Technology** and **EC-RSOP** members shall undertake on their behalf and 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.

21. STATUTORY REQUIREMENTS

21.1 All aspects of this Research and Development work will be carried out in accordance with statutory provisions like Workmens 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.

21.2 This MoU shall not be used as a general MoU between **CPRI** and **Siddaganga Institute of Technology** since this MoU is specific only to implementation of the approved RSOP scheme for the project on **“Development of High Temperature Low Sag NanoComposite Core”**

21.3 Since the project is sanctioned to **Siddaganga Institute of Technology**, **it shall not be transferred to any other Institution.** Transfer of project money within the Institution or with other Institutions under the same Management is not permitted under any circumstances.

21.4 If the force majeure conditions continue beyond six months, the signatories shall then mutually decide about the future course of action.

22. FORCE MAJEURE

22.1 None of the participating agencies / bodies shall be held responsible for non-fulfillment 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 a notice in writing to the other party within one month of such occurrence or cessation.



23. VALIDITY OF AGREEMENT

23.1 The **MoU** comes under immediate force on the date of signing and is valid for 5 (Five years) years, from the date of completion of project or **till grant of patent rights**, whichever is later. It may, if required, be extended with mutual consent of the parties.

24. AMENDMENTS TO THE MoU

24.1 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.

25. RESOLUTION OF DISPUTES

25.1 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.

26. JURISDICTION

26.1 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.



Annexure - I

(1) Copy of the Approved Project Proposal: ENCLOSED

(2) Faculty working in this project:

- **Dr.RASHMI, Associate Professor, Dept. of Electrical & Electronics Engineering, Siddaganga Institute of Technology, Tumkur-572103**
- **Dr.G.S.Shiva Shankar, Professor, Dept. of Mechanical Engineering, Siddaganga Institute of Technology, Tumkur-572103**

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 Name of the Institute
(Dr J. Sundara Rajan) Joint Director, R & D Management Division, Central Power Research Institute Bangalore 560 080	(Principal)
For and on behalf of CPRI	For and on behalf of Name of the Institute
(Chief Administrator Officer) Admin - I, R & D Management Division, Central Power Research Institute, Bangalore 560 080	

TRUST RECEIPT

1. In the matter of MoU dated **01** of January, **2016** between **Central Power Research Institute (CPRI)**, Department of name, **Tumkur-572103**, regarding the Project on **“Development of High Temperature Low Sag NanoComposite Core”**.
2. The plant, Machinery and Equipment though purchased in the name of **Siddaganga Institute of Technology** with the funds provided by CPRI, for the subject project, will be in Trust with **Siddaganga Institute of Technology** during the implementation of the project and thereafter till they are useful for the purpose stated in the above MoU.
3. The Plant and Machinery and equipment will not be transferred or disposed of by us without the prior written approval of CPRI, and would remain with **Siddaganga Institute of Technology**
4. IN WITNESS THERE OF **Siddaganga Institute of Technology** has executed these presents on **01** of January, **2016**

Signed by

Sl.No	Name	Occupation & Address	Signature
1			

For and on behalf of the **Siddaganga Institute of Technology** in the presence of Witnesses:

Sl.No	Name	Occupation & Address	Signature
1			

By Speed Post
Telefax: 080-23600942



केन्द्रीय विद्युत अनुसंधान संस्थान

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय)

प्रो सर सी. वी. रामन रोड़, सदाशिवनगर डाक घर, पो. बा. सं. 8066, बेंगलूर - 560 080

CENTRAL POWER RESEARCH INSTITUTE

(A Govt of India Society under Min. of Power)

Prof. Sir C.V. Raman Road, Sadashivanagar P.O., P.B. No. 8066, Bangalore - 560 080, India

वेबसाइट/website : <http://www.cpri.in>

अनुसंधान एवं विकास प्रबंधन प्रभाग

R & D Management Division

सीपीआरआई/आर&डी/आरएसओपी/ एमहेयू/२०१६

दिनांक /Date: 23.03.2016.

CPRI/R&D/RSOP/MoU/2016

Dr. Rashmi
Associate Professor
Dept. of Electrical & Electronics Engineering
Siddaganga Institute of Technology
Tumkur - 572103

Dear Madam,

विषय / Sub: New RSOP project proposal titled "Development of High Temperature Low Sag Nano Composite Core" approved during 12th plan period – Signing of MoU

We wish to inform you that MoU has been approved and the final copy of the MoU will be sent to you within a week for further needful. On receipt of signed MoU, 1st instalment of Rs. 19.60 Lakhs will be released. Kindly forward the bank details for direct transfer of 1st instalment of grant.

Thanking you,

Yours faithfully,

(Dr J Sundara Rajan)

Joint Director (R&D)

डॉ जे सुन्दरा राजन (संयुक्त निदेशक) आर & डी