



# केन्द्रीय विद्युत अनुसंधान संस्थान

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय)

प्रो सर सी. वी. रामन रोड, 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>

No. CPRI/R&D/NPP&RSOP/2014

Date: 3<sup>rd</sup> September, 2014

Director,  
Indian Institute of Technology - Delhi,  
IIT-Delhi, Hauz Khas,  
New Delhi - 110 016.

विभाग : समन्वय विभाग
Dept.: COORD. SECTION
संद संख्या/Ref. No. 2014/ICDN.1172
दि. क/Date : 08/9/14

Dear Sir,

Sub: Invitation for Project Proposals under National Perspective Plan for R&D and Research Scheme on Power in Indian Power Sector

The Ministry of Power (MoP), Govt. of India, under its Plan Scheme "R&D Scheme of CPRI" under 12<sup>th</sup> Five Year Plan is promoting research and development for the benefit of Indian Power sector. R&D under National Perspective Plan is directed towards applied research with focus on development of new products / Process Development/Technology development/field implementation and adoption / absorption of new technologies in power. The scheme is being jointly managed by Central Electricity Authority (CEA) New Delhi and Central Power Research Institute, Bangalore, under the guidance of Standing Committee on R&D (SCRD). Standing Committee on R&D functions under the Chairmanship of Chairperson, CEA and has members drawn from leading organizations like CEA, CPRI, NTPC, NHPC, POWERGRID, THDC, SJVNL, DVC, BBMB and NEEPCO. Director General CPRI is the Member Convener for this committee. The mandate of this committee is to frame a perspective R&D plan for Indian Power Sector.

With this background, Research project proposals of "National importance", to be taken up during the 12<sup>th</sup> Five Year Plan, were identified in the Five Year Plan document. Under Research Scheme on Power (RSOP) and R&D under National Perspective Plan (NPP), project proposals are invited from single or consortium of organizations in any of the Scientific / Engineering areas under Power Sector. Projects on advanced prototypes, systems, processes and techniques are also encouraged.

During the years to come, Research & Development will need much more focus on technology development and it will be invariably in collaborative mode through private - public participation. This will open up opportunities for innovation, introduction of new technology / processes for ensuring efficient operational management of Indian Power system.

~~Dear Sir,~~

For suitable dissemination to all faculty through email.

AR

St. Bansal

10/9/14

10/9/14

The R&D could be in the form of improvement in design of individual plant components and may also result in evolution of cost effective processes, technologies or changes in existing technologies. R&D should take advantage of the recent advances in IT, electronics and communication to improve the control & instrumentation system, data acquisition system and monitoring of system performance parameters.

Part funding to the extent of 50% of the total project outlay will be supported from Ministry of Power (MoP), Govt. of India and the balance shall be contributed by the Project Implementing / Executing Organizations – in case of CPSU's, manufacturers and Utilities for R&D under National Perspective Plan. In case of leading Academic & Research Institutions, full funding of the project cost will be considered by Ministry of Power, Govt. of India. Project implementing / executing agency can also find Partners to support their project financially. All approved RSOP projects are fully funded by Ministry of Power, Govt. of India.

A copy of the advertisement which appeared in leading newspapers, inviting new project proposals under RSOP and R&D under National Perspective Plan is enclosed. It is requested that, project proposals may please be submitted under these two schemes to CPRI. For further details of the scheme, thrust areas etc., are available in website: [www.cpri.in](http://www.cpri.in).

With regards,

Yours sincerely,



(Dr.R.S.Shivakumara Aradhya)

Director

Encl : as above



**R&D UNDER NATIONAL PERSPECTIVE PLAN  
STANDING COMMITTEE ON R&D, MINISTRY OF POWER,  
GOVERNMENT OF INDIA**

**INVITATION FOR RESEARCH PROPOSAL**

The Ministry of Power (MoP), Government of India, under its Plan Scheme 'R&D Scheme of CPRI under 12th Five Year Plan' is promoting research and development for the benefit of Indian Power sector. R&D under National Perspective Plan is directed towards applied research with focus on development of new products / Process Development/ Technology development/field implementation and adoption / absorption of new technologies in power. The scheme is being jointly managed by Central Electricity Authority (CEA) New Delhi and Central Power Research Institute, Bangalore, under the guidance of Standing Committee on R&D (SCRD).

The R&D programme under NPP supports activities aimed at developing and integrating technologies to evolve systems both in the advanced and emerging areas and in traditional areas of Power Sector viz., Generation (Hydro and Thermal), Distributed Generation, Transmission, Distribution, Energy & Environment and end use of electricity. Under the programme, feasibility of fresh ideas / concepts is assessed for their potential conversion into useful technology / product. Applications of R&D for socio-economic benefits are consciously promoted under this programme. The details of the thrust areas identified are enumerated in the 12th Plan document on R&D, under Chapter 6, of Working Group on Power for 12th Plan, by Ministry of Power, Govt. of India. (Details are available on the website of CPRI).

**The specific objectives of this R&D programme for the Indian Power Sector are:**

- To develop and integrate technologies in identified areas
- To promote modern / advanced technologies for socio-economic problem solving
- To promote modernization of traditional technologies, tools and skills
- To facilitate enhancement of quality and performance of power systems
- To promote activities aimed at improving technology, materials, Processes and other appropriate activities as applicable to Power.

Priority will be given to the proposals having potential for generation of IPR / Patents.

Proposals are invited for collaborative R&D with the involvement of Industry / User partner from Manufacturers, Power Utilities, CPSUs and State PSUs, Academia and R&D Institutions etc. Proposals along with technical and financial particulars may be submitted in the prescribed format (available in the CPRI website) to:

Joint Director (R&D Management Division)  
Central Power Research Institute,  
Prof.Sir.C.V.Raman Road, Sadashivanagar  
P.B.No.8066, Bangalore - 560 080

Phone - 080-23604736  
Fax - 080-23600942  
E-mail: [sundar@cpri.in](mailto:sundar@cpri.in)

• For further Details of the scheme and application format kindly refer to website :- <http://www.cea.gov.in> & [www.cpri.in/r-a-d-schemes/research-scheme/XII](http://www.cpri.in/r-a-d-schemes/research-scheme/XII) plan.

• Last date for receipt of proposals is 20th of September, 2014

JD(R&D)

21-8-14  
The Hindu



## RESEARCH SCHEME ON POWER (RSOP)

### INVITATION FOR RESEARCH PROPOSAL

The Research Scheme on Power popularly known as RSoP was initiated by Ministry of Power, Government of India in 1961. The scheme is being administered by CPRI. The scheme basically aims to provide funds for carrying out need based research in power sector including solving of operational problems encountered by Indian power system. Project should be pertinent to the electric power sector. The projects are to be devised with the involvement of industries / utilities or ultimate beneficiary, except for the projects which will focus on exploring and validating new ideas. Research Station proposing the project should ensure that the key investigators indicated in the project proposal are available for the entire duration of the project. Project proposals are to be formulated after a thorough survey of literature in order to ensure that similar work is not undertaken elsewhere. Project should have substantial research content and element of innovation.

#### **The specific objectives of this R&D programme for the Indian Utilities are:**

- To develop and integrate technologies in identified areas
- To promote modern / advanced technologies
- To promote modernization of traditional technologies, tools and skills
- To facilitate enhancement of quality and performance of power systems
- To promote activities aimed at improving technology, materials, Processes and other appropriate activities as applicable to Power.

Priority will be given to the proposals having potential for generation of IPR / Patents.

Proposals are invited for R&D from Power Utilities, CPSUs and State PSUs, Academia and R&D Institutions etc. Proposals along with technical and financial particulars may be submitted in the prescribed format (available in the CPRI website) to:

**Joint Director - R&D Management Division  
Central Power Research Institute,  
Prof.Sir.C.V.Raman Road, Sadashivanagar  
P.B.No.8066, Bangalore - 560 080**

**Phone - 080-23604736  
Fax - 080-23600942  
E-mail: [sundar@cpri.in](mailto:sundar@cpri.in)**

- Further Details of the scheme and application format kindly refer to website :- <http://www.cea.gov.in> & [www.cpri.in/r-a-d-schemes/research-scheme/XII.plan](http://www.cpri.in/r-a-d-schemes/research-scheme/XII.plan).
- **Last date for receipt of proposals is 20th of September, 2014.**

BG-M BG

25.8.14

The Hindu

**Format for preparation of Research Project Proposals for R&D under  
National Perspective Plan (NPP)**

***(A) Executive Summary***

An Executive Summary of the Project detailing benefits, its importance and relevance to Indian Power Sector.

***(B) Project proposal***

Sl. No	Item Description
1	Statement of Proposal
2	Introduction/Background
3	Description of the proposal
4	Estimated cost of the proposal indicating year wise activity
5	Justification of the project
6	Methodology to be adopted
7	Details of collaboration: Furnish details of collaborators, their roles and responsibilities
8	Scheme of Implementation : Furnish details of laboratory studies/prototype development/field implementation/demonstration/pilot plant studies etc.
9	Time Frame: Target date of completion with time schedule of activities: Bar chart of activities for each quarter of the proposed duration
10	Financial implications of the proposal
11	Nature of the Scheme
12	Total outlay: Furnish details of financial support from the Institution and quantum of support required from MoP for executing the project.
13	Foreign Exchange Component
14	Details of Foreign Exchange component
15	Indian Rupee component
16	Details of Indian Rupee component
17	Facility-wise outlay with yearly phasing
18	Foreign Exchange Component
19	Indian Rupee component
20	Instruments / Equipment
21	Estimated cost of Instruments / Equipment
22	Details of civil works – Buildings any other construction works, their justification.
23	Basis for Estimates: (a) Basis for Equipment (b) Basis for civil works
24	Achievement / Returns/Deliverables Furnish details of IPR/Patens that are likely to accrue
25	Supplementary Information
26	Environmental Clearance
27	Attach CV of Project Investigator and project members, and furnish details of projects undertaken/completed along with achievements. Also enclose details of IPR/PATENTS and publications in peer reviewed journals
28	Please note that specifications of major equipment/software and budgetary offer shall form part of research project proposal.

**RESEARCH SCHEME ON POWER (RSOP)****Format for New Project Proposal for submission to CPRI, Bangalore**

1. Name of the Research Station and Address
2. Name of the Principal Investigator (PI) and Project team
3. Project Title
4. Objectives
5. Justification
6. Facilities required (*in terms of equipment's / accessories*)
7. Broad overview of technical programme
8. Bar chart of technical work on quarterly basis with major milestones to be achieved.
9. Estimated Cost of Project (*Rs Lakhs*)

## ❖ Expenditure break up:

SL No	Particulars	Year wise break up ( <i>Rs Lakhs</i> )		Total Cost ( <i>Rs Lakhs</i> )
		I year	II year	
1	Major Equipment's a. .... b. .... c. ....			
2	Software / Hardware			
3	Temporary man power (SRF/JRF/RA/PA/Consultancy)			
4	Consumables / Miscellaneous			
5	Travel / Contingencies			
6	Outsourcing of facilities			
7	Others ( <i>if any</i> )			
8	Institutional overheads			
Grand total				

## ❖ Expenditure plan:

Year	Recurring expenditure ( <i>Rs Lakhs</i> )	Non – Recurring expenditure ( <i>Rs Lakhs</i> )	Total ( <i>Rs Lakhs</i> )
I yr.			
II yr.			

Research Scheme on Power (RSOP)

R&amp;D Management Division

Central Power Research Institute

P B No.8066, Sadashivanagar (PO), Bangalore 560 080, INDIA.

Phone No: 080-2360 4736, Fax No: 080-2360 4736, Mob: +91-78299 01185

Email id: [sundar@cpri.in](mailto:sundar@cpri.in)

**RESEARCH SCHEME ON POWER (RSOP)**

Format for New Project Proposal for submission to CPRI, Bangalore

❖ Financial progress envisaged on Quarterly basis:

Quarters	Recurring expenditure (Rs Lakhs)	Non – Recurring expenditure (Rs Lakhs)	Total (Rs Lakhs)
I			
II			
III			
IV			
V			
VI			
VII			
VIII			

10. Project duration (*not to exceed 2 years*)

11. Details of End user / Partner for execution of project work / field implementation and nature of involvement of partner

12. Specific deliverables of the project in terms of

- i. *Knowledge gained*
- ii. *Research publications*
- iii. *Patents*
- iv. *Process and product development*
- v. *Contribution towards improvements in issues concerning System operation*
- vi. *Value addition*

13. Benefits / returns from the project work (*indicate likely benefits to Indian Power Sector / Indian Utility / Manufacturer / Society*)**Mandatory Enclosures:**

- Brief summary of work carried out by PI and team members in the last 5 years.
- Details of Publications in National / International Journals / Patents.
- Details of Research projects completed / ongoing of the PI (*if any*)

SL No	Project Title	Outlay (Rs Lakhs)	Sponsored (Scheme)	Project Outcome / Deliverables	Publications / Patents (numbers)
1					

- Brief CV / Bio data of PI and team members
- Complete address of PI for communication (*includes Mobile, Landline and Fax number, email id etc.*)

## RESEARCH SCHEME ON POWER (RSOP)

Format for New Project Proposal for submission to CPRI, Bangalore

- Details of Existing Lab / Analytical / Computational facilities.
- In case of Engineering Colleges, details of research center, facilities, PG courses, Doctoral program and number of PhD Scholars may be furnished.

### Note:

- A soft copy of the proposal in CD (in MS Word format) has to be enclosed along with the four hard copies of certified RSOP project proposal
- Once the project proposal is approved by ECRSOP, extension of project duration will not be entertained. Hence precaution should be taken to clearly state the project duration by considering all the factors of project implementation.

### Certificate

- A. This proposal has the approval of the Organization and all the existing facilities shall be made available for carrying out the studies on the proposed scheme
- B. That the research work proposed in the scheme does not in any way duplicate the research work already done or being carried out in the research station on the subject.
- C. That the project is not being partly or fully financed by grant from any other Organization / Government

Name and Signature of the Principal Investigator

Signature of the HOD / Head of the Institution / Organization  
(With seal)

Date: