



PANKAJ BATRA
Member (Planning)

दूरभाष (का०)
TELEPHONE (O)
TELEFAX (O)

सदस्य

तथा पदेन अपर सचिव भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
सेवा भवन, रामाकृष्णा पुरम्

MEMBER

**& EX-OFFICIO ADDL. SECRETARY TO THE GOVERNMENT OF INDIA
CENTRAL ELECTRICITY AUTHORITY
SEWA BHAWAN, R.K. PURAM**

नई दिल्ली - 110066

NEW DELHI-110066

30th November, 2017

To All Concerned

The Central Electricity Authority(CEA) is organizing an **International R&D Conclave on "Emerging opportunities and challenges of R&D In Indian Power Sector"** during **15-16 February, 2018 at Vigyan Bhawan in New Delhi**, which would be inaugurated by **Shri R.K. Singh, Hon'ble Minister of State for Power and Renewable Energy**.

The Indian Power Sector is undergoing a rapid phase of growth and is looking to implement the latest technologies in the field. The Government of India has set an ambitious growth target of 175,000 MW of Renewable Energy capacity by the year 2022, comprising variable renewable generation of 100,000 MW of solar power and 60,000 MW of wind power. This would involve innovative thinking and technology to manage the large Indian Grid, from the point of view of Grid reliability and security. The CEA welcomes new and efficient technologies which would help achieve this objective.

Technical papers are, therefore, invited from around the world, for presentation in this Conference, and also to participate in the growth of the Indian Power Sector in the long run. A copy of the Brochure giving details of focus areas of research, is attached for ready reference. **The last date for receipt of these papers is 31st December, 2017.**

P. Batra
30/11/2017
(PANKAJ BATRA)

R & D in Indian Power Sector : An Overview

The most intrinsic and strategic component of infrastructure required for economic growth and welfare of a nation is power availability.

India's power sector is one of the most diversified in the world, where sources of power generation include conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power, as well as non-conventional sources such as wind, solar, agricultural and domestic waste, etc. To continuously evolve and improve efficiency in all these diverse fields, R&D is of paramount importance.



Under the aegis of MOP, CEA promotes R&D in power sector through schemes like NPP (National Perspective Plan), RSoP (Research Schemes on Power), IHRD (In-house R&D Scheme of CPRI) etc. while under Ministry of Human Resource Development, IMPRINT India and Uchhatar Avishkar Yojana (UAY) are promoted. The schemes are mainly collaborative in nature, which are intended to promote innovation through Industry Institute Cooperation on cutting edge technology. By sharing experience of implementation of these schemes during the Conclave, it is hoped to whet the appetite for more rigorous and efficient research in these areas.

Ministry of Power

The Ministry of Power is responsible for evolving general policy in all matters concerning energy conservation and energy efficiency pertaining to the Power Sector.

In the last few years, India has turned power surplus from chronic power shortage and there has been record capacity addition in conventional power, solar and wind power and transmission lines. India's targets under the Paris Agreement are focused on clean energy expansion, with a goal of 175 gigawatts of installed renewable energy by 2022.



Central Electricity Authority

Central Electricity Authority (CEA) is a Statutory body constituted under the erstwhile Electricity Supply Act 1948 and continued in the Electricity Act 2003.

CEA, the technical arm of MOP, advises the government on policy matters and formulates plans for the development of electricity systems. One of the functions of CEA, as per Section 73(k) of Electricity Act 2003, is to "promote research in matters affecting the generation, transmission, distribution and trading of electricity".

Address :

Sewa Bhawan,
R.K Puram-I,
New Delhi- 110066
www.cea.nic.in

Conclave Coordinator :

Smt. Seema Saxena,
Chief Engineer, R&D Division
Email: ce-rndcea@nic.in
Ph. 9810531680



Government of India
Ministry of Power

International R&D Conclave

15th-16th, February 2018
Vigyan Bhawan, Rajpath Area
Central Secretariat, New Delhi 110001

Emerging Opportunities and Challenges of R&D in Indian Power



Organized By:



CENTRAL ELECTRICITY AUTHORITY

R & D Conclave : The Agenda

The R&D Conclave 2018 aspires to bring all the stake holders onto a common platform to direct focus in the area of research in the power sector and to create a platform for dissemination of knowledge on the field of R&D, research projects already carried out and under implementation under various schemes and to stimulate innovation so that new thrust areas can be identified and deliberation on commercialization aspects of the research projects undertaken. The conclave will have a snowballing effect on promotion of research in the power sector in the whole country.



Submission of Research Papers

Email- id : ce-rndcea@nic.in

Last Date : 31st December,2017

For More Information visit : www.cea.nic.in

Major Areas for Research Paper/Discussions

(i) **THERMAL:** Flue Gas Desulphurization, Indian and imported coals study, Fly Ash Utilization, Research on flexible operation, water scarcity problem and optimization of Thermal Power Plants.

(ii) **HYDRO:** Geological Surprises in Hydro Power Plants, Use of GIS/GPS, Competitive bidding and risk coverage, Runner coating, Silt forecasting and deposition in reservoirs, Numerical Flow Simulation using Computational Fluid Dynamics (CFD) tools.

(iii) **RENEWABLE:** Solar PV and Wind forecasting technologies, Electric Mobility issues, Floating Solar PV and Building Integrated PV, Waste to Energy conversion, Safe disposal and recycling of solar panels, Determining efficient capacity mix and impact on power quality in renewable integration.



(iv) **TRANSMISSION:** Phasor measurement Unit(PMU), State estimations and data analytics, Gas Insulated Lines(GIL) at 765kV, Use of Robotics and Unmanned aerial vehicles, Cyber Security for Critical Energy Infrastructure, Condition monitoring techniques for Transmission Lines and substation equipment.



(v) **DISTRIBUTION:** Smart meters & smart grid integration, Integration of Micro grid, LEDs, Power Quality Studies, Evaluation of oil filled Distribution Transformer, Cyber Security Issues.

(vi) **GRID OPERATION:** Development of security and Protection system, Role of PPAs, Future grid operation and structure due to renewable integration, Load Shedding and forecasting models. System Protection Scheme.

(vii) **TRADING/MARKETING AND TARIFF:** Tariff models based on time-of-use, reliable and interruptible supply tariff, Open access issues, Tariff trends for solar and wind energy, NPA problems and PPA issues, Future Power Markets.

Guidelines for submitting the Research Papers

The research papers can be submitted by scholars, industrial experts and academia in accordance to the research conducted or being undertaken in their respective expert fields.

Abstract: The research paper should be strictly in accordance to research being undertaken to Improve the Indian power sector. The Abstract should contain the outline and the details of the research. The same should be accompanied by the CV and details of Head researcher. The full manuscript of the research should be mailed by 31.12.2017.

Contents: The research paper should be informing about a new innovation and should not be in any way promoting a commercial entity. The paper should be on research in the power sector, from which whole of the power sector stands to benefit. The research paper should be well illustrated and can be accompanied by a Power Point Presentation to be given at the Conclave.

Format:

The format of the research paper should have following items

- Title of Project
- Name of Head researcher
- Affiliation to Industry/Institution
- Headings and sub headings for the paper
- Illustrations with picture of the project if any.
- Paper should be in English language
- Font to be used should be Times New Roman with Font size set to 12 for the contents.
- Heading and sub heading should not have Font size greater than 14.

Duration: The researcher will be provided a time of maximum 12 minutes to present the paper

Contact details: Contact details of the researchers sending the research papers need to be mentioned properly for the department to get in touch with the researcher, when the paper has been shortlisted by a committee of experts to be presented in the R&D Conclave. (Email ID, Telephone No., Mobile Nos. should be properly mentioned)