

# CENTRAL POWER RESEARCH INSTITUTE ELECTRICAL APPLIANCES TECHNOLOGY DIVISION



## One – day workshop on “Battery and Battery Energy Storage System-Present and Future”



On  
16<sup>th</sup> February 2024 Friday

Organized By  
Electrical Appliances Technology Division  
Central Power Research Institute  
(Govt. of India Society, Ministry of Power)  
Prof. Sir. C.V. Raman Road, Post Box No. 8066  
Sadashivanagar Post Office,  
Bengaluru – 560 080

## About the Workshop

The accelerating growth of Electric Vehicle and renewable energy market is indication of batteries as one of the disruptive technology. Batteries are gaining popularity for renewable, portable, Drone and EV applications due to their numerous advantages such as high energy density, high coulombic efficiency, longer cycle life, low self-discharge, fast charging capacity, less polluting electrode material, and light weight. Lithium ion Batteries have a higher specific energy and specific power when compared to the conventional systems such as lead acid batteries and are therefore more reliable for driving an EV over wider operating range. However, safety is one of the major challenges that have to be considered in case of lithium ion batteries for broad range of applications. With several reported instances of lithium ion battery fires and explosions, it is essential to understand the performance and safety characteristics of these batteries since they pose a serious threat to human health and life if used in an improper manner.

Various testing protocols and standards have been developed to facilitate and regulate battery use in various applications. Manufacturing of lithium ion batteries which satisfy the performance and safety requirements in accordance to the standards and test protocols developed by these bodies ensures that the products are produced in accordance with government, regulatory, or industry requirements and compliance needs and also results in uniformity in the final product. These further results in ease of designing auxiliary components such as charging stations and sockets for EV battery charging irrespective of make of the batteries.

This one-day workshop on “Battery and Battery Energy Storage System-Present and Future” aims to serve as an introductory course on various critical aspects related to lithium ion batteries and other upcoming chemistry. The seminar will also brief on the different tests performed for validating the performance, safety and abuse characteristics of these batteries with an overview of national and international standards published concerning use of lithium ion batteries in EV and renewable energy storage.

## Topics to be covered

The programme aims to cover the following topics –

- **Types of Battery, Testing, Analysis and Evaluation**
- **Battery Energy Storage Systems-Developments in India**
- **BESS (Battery Energy Storage System)-Case Studies**
- **Demonstration of CPRI Battery Lab**

## Participants

The one day workshop aims to serve as an introductory session on the different aspects of lithium ion cells or battery packs. The seminar is directed towards representatives from battery manufacturers, students/researchers from university/colleges, engineers from power utilities, Research organizations, academic institutions, and manufacturers of Power Equipment, Operation & maintenance engineers and Consultants.

## Registration

Sl. No.	Institutions	Discount in fee (Rs.) per person + GST as applicable
1.	General Registration fee	Rs. 5,000/- ( No discount)
2.	Faculty Members of Educational Institutions	Rs. 3500/- (30% discount)
3.	Students of Educational institutions	Rs. 2500/- (50% discount)
4.	Group discount for private organizations for the nomination of a) Minimum 3 participants b) Minimum 4 or more participants	Rs. 4500/- (10% discount) Rs. 4000/- (20% discount)
5	State Govt/ Central Govt/ Public sector/ Power sector Utilities etc.	Rs. 3500/- (30% discount)
6	Exclusive Non-residential training programmes will be conducted for customer from Govt/ semi Govt/ Public sector / utilities/ academic institutions etc.	A minimum 10 number participants per batch will be charged at approved rates as above. Beyond 10 persons pro rata charges will be applicable.

**Registration form may be sent by email to**

**Mani Prabhaker**

Engineering Assistant

E-mail: [maniprabhaker@cpri.in](mailto:maniprabhaker@cpri.in)

Phone: 080-2207 2345

Mob: +91 6371282787

Electrical Appliances Technology Division

Central Power Research Institute

Prof. Sir.C.V. Raman Road, Sadashivanagar Post Office,

Post Box No. 8066, Bangalore 560 080 (India)

## Mode of Payment

Please make the payment through the link. [https://cpri.res.in/online-testing/pay\\_online](https://cpri.res.in/online-testing/pay_online) and update us. Do contact 080-22072262 in case of any clarifications.

## Faculty

The lecture will be provided by experienced in-house Faculty member and external experts who have through knowledge on Battery standards and testing.

## Travel and Accommodation

- Bangalore is well connected by Road, Rail and Air
- Participants have to make their own travel arrangements
- Guest house accommodation on twin share basis can be provided on chargeable basis subject to availability at CPRI.

### Venue:

CCAR Auditorium,  
Central Power Research Institute  
Prof. Sir. C V Raman Road,  
Sadashivanagar P O,  
Bangalore- 560 080

### Landmark:

CPRI is situated in between Mekhri Circle and Yeshwanthpur.  
Near Indian Institute of Science (commonly known as Tata Institute)

## CPRI'S PROFILE

Central Power Research Institute (CPRI) set up in 1960 by the Government of India, functions as a National organization for applied research in power sector and also serves as an Independent Laboratory for testing and certification of power equipment. CPRI provides consultancy services on various facets of power sector. CPRI has expertise in the area of Simulation, System Analysis and Testing and Diagnostics. CPRI laboratories have modern equipment needed for Power system simulation, Short circuit testing, Diagnostics of equipment, Materials engineering, Seismic qualification etc. The institute has made immense contribution to the advancement of research and development in power sector besides finding solution to various problems faced by power utilities and industries in areas of transmission and distribution.

CPRI is continually setting new standards in training and continuing education from basic theoretical information to practical hands-on electrical equipment training. CPRI courses have made substantial impact on the level of training and education to India's electricity utilities, manufacturing companies, transmission and distribution companies.

### Coordinator(s) Details

#### **R. K. Gajendra**

Engineering Officer Grade - 4

E-mail: [gajendra@cpri.in](mailto:gajendra@cpri.in)

Phone: 080-2207 2343

Mob: +91 9448519686

Electrical Appliances Technology Division

Central Power Research Institute

Prof. Sir.C.V. Raman Road,

Sadashivanagar Post Office,

Post Box No. 8066, Bangalore 560 080

(India)

#### **Dr. P. Chandrashekar**

Joint Director/HoD

E-mail: [pcs@cpri.in](mailto:pcs@cpri.in)

Phone: 080-2207 2340

Mob: +91 9739410204

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(India)