



Industry Academia Conclave on Energy Storage

November 30th, 2019 Prabha Bhawan, MNIT Jaipur



Ambitious targets for decarbonization of energy systems and growing need of industrialization & energy security is necessitating high renewable penetration in power sector. Role of energy storage becomes critical to mitigate the issues arising from variable and uncertain renewable generation. Along with this, Government initiatives, like FAME are encouraging transportation sector towards fast adoption of energy storage technologies. Development of energy storage is challenged by low availability of raw material and quality technology, leading to high costs. Technical innovations are also required for its integration with existing energy systems. New market mechanisms and consensus on policy & regulatory sides is yet to develop to provide appropriate short term and long term incentives. Thus, development of appropriate energy storage systems has become a key challenge for the country, and is drawing focus from all stakeholders. Challenges are being faced by the industry to realise the full potential of technologies, and academia needs to pitch in with its research to fulfill the same.

Considering the multi-faceted challenges in the development and integration of energy storage, significant innovations are happening. Industry is keen to invest in energy storage technologies, with appropriate solutions provided. However, optimal mapping of innovations and challenges is yet to happen. This Industry Academia Conclave on Energy Storage is planned to provide a platform to create industry-academia interactions in the form of focussed group discussions, to identify the key challenges and set forth the path for collaborations. Led by policymakers from the government, various think tanks, planners, industry leaders, researchers and academics would be joining in for the event to share their expertise, requirements and opportunities for active collaboration.



Call for Posters/Presentations

Materials & Systems

- Battery Technology
- Thermal Energy Storage
- Fuel Cells
- Flow Batteries
- Hydrogen storage
- Lead acid battery
- Thermal battery
- Compressed air energy storage
- Hybrid Energy Storage
- and many more.....*

Integration Technologies

- Optimal sizing and modelling of Energy Storage
- Energy Storage for electric mobility
- Security response infrastructure
- Multi-functional and multi-level coordination
- Design, concept and architecture
- Efficient and controllable power conversion systems
- Testing, monitoring and safety issues
- and many more.....*

Market and Policy Challenges

- Market design for grid ancillary services from storage
- Business models for storage
- Regulatory mechanisms for storage
- Standards for grid integration of energy storage
- Virtual Energy Storage Systems
- and many more.....*

Important dates:

Submission opens : October 20, 2019
Acceptance notification : November 10, 2019

For Registration visit: <https://forms.gle/wUak36Vsshkl6fU88>

Conclave Focus

- Emerging energy storage technologies
- Identifying technical challenges in development of energy storage technologies
- Providing a platform for academics and industry to share their challenges and opportunities
- Benchmarking research/performance of optimal technologies
- Identifying industry requirements on energy storage technologies
- Showcasing research capabilities of academic institutions in energy storage
- Identifying standardisation challenges in energy storage
- Identifying policy/regulatory challenges
- Identifying academic/training gaps in the manpower

Conclave Outcomes

- New mechanisms to mitigate technology barriers in development of energy storage technologies
- Establishment of academia-industry collaborations
- Identifying optimal/feasible energy storage technologies
- New research directions for industry applications
- Development of appropriate business models for viable energy storage technologies
- Formation of standards for energy storage technologies
- Guidelines for policy makers/regulators on deployment of energy storage
- Development of academic programs to enhance trained manpower in this sector

Technology Mission Division (Energy & Water), Department of Science & Technology, Government of India



Department of Science & Technology (DST) was established in May 1971, with the objective of promoting new areas of Science & Technology and to play the role of a nodal department for organising, coordinating and promoting S&T activities in the country. The Department has major responsibilities for specific projects and programmes relating to Science and Technology. The Department of Science & Technology plays a pivotal role in promotion of science & technology in the country with wide ranging activities from promoting high end basic research and development of cutting edge technologies on one hand to service the technological requirements of the common man through development of appropriate skills and technologies on the other.

Centre for Energy and Environment, MNIT Jaipur

Malaviya National Institute of Technology Jaipur (Deemed University) is a premier NIT, designated with the status of "Institute of National Importance" by MHRD. Its Centre for Energy and Environment (CEE) was established in 2012 to enable sustainable and cost effective innovations and develop facilities for multi-disciplinary research in the areas of renewable energy and environment. Apart from 11 faculty members working in all technology areas of energy and environment, the centre has over 25 research scholars. Currently, with ongoing projects worth over INR 5 crores from multiple national and international funding agencies, it has collaborations across the world, including US, UK, Germany, Austria, and the like, providing ample international engagements.

Centre has established 6 ultra-modern functional labs with state of art sophisticated instruments. Energy storage is a developing area of research at the centre, with a rich laboratory for research and development of multiple energy storage technologies.

