

For Immediate release

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India Energy Storage Alliance (IESA) and Indian Electrical & Electronics Manufacturers' Association (IEEMA) to conduct 2nd Masterclass on advanced energy storage manufacturing in India

- 2nd MASTERCLASS on Advanced Energy Storage Technology, Applications and Manufacturing Process will be on 13th & 14th July 2018 in New Delhi after an overwhelming response received from the 1st Masterclass held in Mumbai in November 2017.
- Two days' workshop will take place in Delhi with renowned Industry experts.
- The workshop will provide participants a complete overview on latest technology trends, market opportunities as well as insights on IP acquisition and setting up of manufacturing for advanced energy storage and EV charging infra.

Pune, India: Energy storage technologies have huge potential to significantly contribute to the transformation of Indian electric grid towards a greener, resilient and reliable grid within next decade. Advanced energy storage technologies can play an important role in renewable integration, energy access, electric mobility and smart cities initiatives by the Indian Government.

India is anticipated to become one of the biggest markets for the adoption of energy storage technologies due to several drivers like the fastest growing economy, increasing share of renewables, transmission constraints, need for providing 24x7 quality power and electric mobility mission. According to the IESA estimates, India has potential to integrate over 300 GWh of energy storage during 2018-25.

India already has a huge market for conventional technologies like Lead Acid. Newer technologies like Li-ion have already witnessed acceptance in telecom towers, electric vehicles and large-scale solar integration projects. This extensive market has intrigued many foreign technology players as well as Indian companies to explore the sector. The Government is also creating policies like FAME India Initiative under NEMMP, draft energy storage Roadmap, National Smart Grid Mission (NSGM) and draft National Microgrid policy, Energy Storage staff paper by CERC, BIS Energy Storage Standards to boost India's energy storage market. Currently, MNRE is also creating National Energy Storage Mission (NESM) to catalyze the adoption of manufacturing in India.

India Energy Storage Alliance has set up a vision to make India a global hub for R&D and manufacturing of advanced energy storage technologies by 2022. To achieve this goal, IESA has also partnered with IEEMA to help Indian Electrical and Electronic Manufacturing companies to explore diversification into energy storage and EV ecosystem.

India is expected to attract investment in 2-4 Giga factories for advanced Li-ion batteries, attracting over \$3 Billion in investments in next 3 years. Already, over 1 GWh of annual assembling capacity is being set up for converting imported Li-ion cells into battery modules by various Indian companies. Apart from Li-ion, India will invest in manufacturing of other advanced energy storage technologies such as advanced lead acid, flow batteries, metal air batteries and fuel cells. Indian National labs like CECRI, CMET, ISRO,

and Vikram Sarabhai Space Centre (VSSC) are developing indigenous Li-ion and advanced energy storage technologies which can be commercialized by Indian industries.

India can't just rely on manufacturing to drive itself, and there are challenges across the industry. In this context IESA along with IEEMA is conducting 2nd MASTERCLASS on Energy Storage Technology, Applications & Manufacturing Process at Magnolia, India Habitat Centre, Lodhi Road, New Delhi on 13th & 14th July (Friday-Saturday) 2018 which covers-

- The fundamentals of Energy Storage Systems, Technologies and applications which also includes advanced manufacturing technologies like Li-Ion, Advanced Lead Acid, Zinc-air, Flow batteries, Sodium based batteries.
- A detailed overview of Lithium Ion cell manufacturing and pack assembling which can help companies to diversify/ enter into Advanced Energy Storage business.
- Apart from manufacturing of technologies, the experts will also provide guidance to enter manufacturing of Power Electronics, Battery Management system (BMS) Battery Equipment and raw material supply to the Indian energy storage system.
- The session will also cover recycling, safety, standards, patent acquisition, technology transfer, Joint Venture formation and global successful case studies.

The MASTERCLASS will counsel companies planning to enter the energy storage ecosystem; discuss strategy in storage manufacturing systems for both the global as well as the indigenous market. Existing manufacturers can expect advice and approach to grow their business to the next level. The class will highlight potential in the Indian market with pointers to the finer nuances of the industry, its key drivers and commonly faced roadblocks.

Dr. Rahul Walawalkar, Executive Director, India Energy Storage Alliance (IESA) says, *“Energy Storage technologies are seen as aiding technologies that can support Indian government’s stated missions such as national solar mission, national wind mission, the mission for energy access and national electric mobility mission. This transition is supported by the significant push for Giga factories for advanced energy storage technologies such as li-ion that is driving down the cost of energy storage at a leap even faster than the solar PV cost reductions witnessed in past decade.*

We anticipate that in 2018 at least two Li-ion cell manufacturing plants with the capacity of 1 GWh or more will start construction in India with anticipated completion for the end of 2019 or early 2020, bringing India on the global map of Giga Factories. This masterclass will educate the existing companies to expand their scope and get involved in storage.”

About India Energy Storage Alliance (IESA):

The India Energy Storage Alliance (IESA) was launched in 2012 to assess the market potential of Energy Storage Technologies in India, through an active dialogue and subsequent analysis among the various stakeholders to make the Indian industry and power sector aware of the tremendous need for Energy Storage in the very near future. IESA aims to make India a Global Hub for research and manufacturing of advanced energy storage technologies by 2020.

IESA website: <http://indiaesa.info/about-iesa>

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About Customized Energy Solutions

Established in 1998, Customized Energy Solutions is an energy advisory and service company that works closely with Clients to navigate the wholesale and retail electricity markets across the United States and globally. CES offers software solutions, back office operational support, and advisory and consulting services focused on asset optimization and energy market participation efficiency. CES is also a third-party asset manager of approximately 10,000MWs of renewable and conventional generation resources across all ISOs in the United States and Ontario, Canada. CES empowers clients to achieve their goals by helping them navigate the evolving energy markets, complex market rules, and new energy technologies entering the markets.