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Innovation

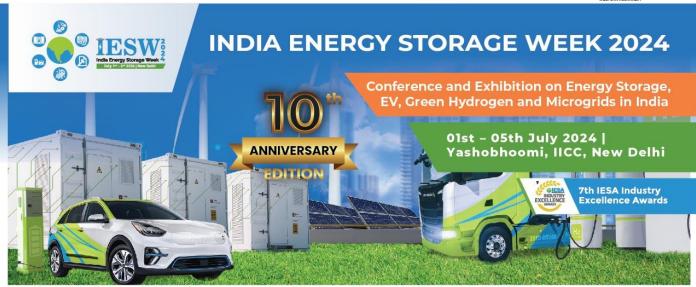






BUSINESS **FINLAND** 





#### **EXHIBITION (1ST-2ND JULY 2024)**

EV & EV Infra Expo

Manufacturing & **Supply Chain Pavilion** 

Green Hydrogen Expo

Start-Up Pavilion

**Recycling Pavilion** 

Stationary Storage Expo

**Innovation & Research Pavilion** 

Indigenous Battery **Cell Showcase** 

#### **CONFERENCE (1ST-4TH JULY 2024)**





02nd July Manufacturing & Supply chain



03rd July Stationary Energy Storage



04th July



05th July

India EV Infra Forum

India Recycling & Reuse Forum

India LDES Forum

#### **KEY HIGHLIGHTS**



Pre-Schedule B-B Meeing 1st-2nd July 2024









Future Energy Learning Centre (FELC) 1st-2nd July 2024



Women in Energy Roundtable, leadership talk & networking Dinner 2nd July 2024



LDS Round Table & Networking Dinner 3rd July 2024





Workshops by WRI, Shakti Foundation 1st - 4th July 2024





Date	Main Conference Hall Amaltas Hall - Conference Room (B1)	Seminar Hall EXPO Hall 1B	Roundtable Room EXPO Hall 1B
1 <sup>st</sup> July	India EV Day Conference (10:00 – 18:00 IST)	Future Energy Learning Centre (FELC) in association with ISA (11:00 – 13:00 IST)	
	16.00 131)	<b>3<sup>rd</sup> India Battery Safety</b> <b>Forum</b> in association with ULSE (14:00- 16:30 IST)	<b>CXO Roundtable</b> (17:00-18:30 IST)
	7th IESA Industry Excellence Av (Special address by Suresh Prail Gov of India)		
		Start-Up Pitch Session (11:00 - 13:00 IST)  Industry Workshop for EV Battery Supply Chain in association with Shakti Foundation (14:00 - 16:00 IST)  Tech Ignition Session (15:00 - 15:45 IST)  Investors Talk (15:45 - 16:30 IST)	
2 <sup>nd</sup> July	India Battery Manufacturing Day Conference (10:00 – 18:00 IST)		
		Future Energy Learning Centre (FELC) in association with ISA (16:00 – 17:30 IST)	Women in Energy Roundtable (16:30 - 18:00 IST)
	Women in Energy Felicitation, Leadership Talk and Networking Dinner, Supported by IGEF (18:30 IST onwards), Amaltas Hall, IICC	Founders Net	working Dinner ), Amaltas Hall, IICC
		Prototyping Centres	Iders Meeting on Rapid for Battery Innovation Kenar Hall (403), IICC
3 <sup>rd</sup> July	India Stationary Storage Day Conference (10:00 – 18:00 IST)	LDES Roundtable, Supported by LDES Cour (16:30- 18:00 IST), Kenar Hall (403), IICC Happy Hours & Networking Dinner for LDE Roundtable Participants (18:30 IST Onwards), Amaltas Hall, IICC	
4 <sup>th</sup> July	India Green Hydrogen Day Conference (10:00 – 18:00 IST)	National Dialogue on	Hydrogen Growth: Sub- Catalysing Change for Growth Hurdles
•	Knowledge Session on <b>Green Hydrogen Certification for Export to EU</b> (12:15 - 13:15 IST) by IGEF-SO	(co-organiz	ed with <i>WRI</i> ) Kenar Hall (403), IICC





5<sup>th</sup> July

**Tech Tours** (On registration and approval)

Track 1: BSES Rajdhani + LohumTrack 2: BSES Yamuna + ICAT

### India EV Day (1st July 2024) Conference Program

	ndia Ev	Day (1 <sup>st</sup> July 2024	4) Conference Program
Time (HRSIST)	Session	Topic	Speakers
09:00 –	10.00	Registra	ition
10:00 – 11.05	Inauguration Session	<ul> <li>India's Roadmap for Vehicle Electrification</li> <li>Key Central and State government policies</li> <li>Current Status of EV manufacturing and future potential</li> <li>Ways to increase EV adoption.</li> <li>Export opportunities and key bottlenecks to address.</li> </ul>	<ul> <li>Shri Sunil Barthwal, Secretary, Ministry of Commerce, and Industry</li> <li>HE Mr Philip Green OAM, Australia's High Commissioner to India</li> <li>HE May-Elin- Steiner, Ambassador of Norway to India</li> <li>Dr. Hanif Qureshi, Additional Secretary, Ministry of Heavy Industries</li> <li>Sudhendu J Sinha, Adviser (Infrastructure Connectivity &amp; E-Mobility), NITI Aayog</li> <li>Vishal Kapoor, CEO, Energy Efficiency Services Limited (EESL)</li> <li>Vikram Gulati, Country Head &amp; Executive V.P. (Corporate Affairs &amp; Governance) Toyota Kirloskar Motor</li> <li>Rubin Pather, Chief Operating Officer, Reliance Jio-BP</li> <li>Swadesh Srivastava, Head, Emerging Mobility Business Unit, Hero MotoCorp</li> <li>Stephen Fernands, President, Customized Energy Solutions</li> <li>Dr. Rahul Walawalkar, President &amp; MD, CES India &amp; President, IESA</li> </ul>
11:05		Key Announcemen	t MOU- Product Launches
-11.15 11:15 - 11.45		Networking Tea and E	xpo Visit
11:45 – 13.00	Panel discussion	<ul> <li>Growth Story of India's Electric Vehicles</li> <li>Journey of the Indian Electric 2W, 3W industry</li> <li>Electric Cars – yet to see mass adoptions In India</li> <li>Hybrids – the immediate way for decarbonization</li> <li>Key challenges and opportunities</li> <li>Investment in EV Start-ups</li> <li>Entrant of Global EV makers in the Indian market</li> </ul>	<ul> <li>Moderator: Debi Prasad Dash, Executive Director, IESA</li> <li>Vikram Gulati, Country Head &amp; Executive V.P. (Corporate Affairs &amp; Governance) Toyota Kirloskar Motor</li> <li>Suman Mishra, Managing Director &amp; CEO, Mahindra Last Mile Mobility</li> <li>Haresh Bhere, Chief Technology Officer, Jio-BP Mobility Ltd</li> <li>Christine Vincent, Venture Principal, Shell Ventures</li> <li>Vijay Kedia, Long-Term Investor, Kedia Securities*</li> <li>Sri Purisai, Founder &amp; Managing Director, Chakra Growth Capital</li> <li>Shekhar Mishra, Senior General Manager-EMBU, Hero MotoCorp</li> </ul>
13:00 – 14:00		Networking Luncl	· · · · · · · · · · · · · · · · · · ·





14:00 – 15:00	Panel discussion	<ul> <li>EV Infrastructure – the need of the hour</li> <li>Charging Infra – Key enabler for electric 4W and buses in India</li> <li>Key challenges in the Growth of EV charging in India</li> <li>Govt policies to support charging infra-adoptions.</li> <li>Key learning from current installations</li> </ul>	<ul> <li>Moderator: Gurusharan Dhillon, Director, Electric Mobility, IESA &amp; CES</li> <li>Awadhesh Jha, Executive Director, GLIDA</li> <li>Vikas Almadi, Chairman and Managing Director, VNT</li> <li>Inge André Espedal, Chief Executive Officer, Sagavolt</li> <li>Jagjit Singh, Director of BD, APAC and Global Markets, EVOS Energy Pty</li> <li>Anshuman Divyanshu, Chief Executive Officer - EVSE Division, Exicom</li> <li>Varun Shahani, General Manager-Head Energy Infrastructure, Hero MotoCorp</li> </ul>
15:00 – 15:15	Tech Session	Lift Off – Soaring beyond Intercalation – The future is here	John Wood, Chief Executive Officer, Gelion
15:15 – 16:00	Tech Session	EV Powertrain & EV Components Manufacturing - Opportunity for a Decade.  Indigenous Powertrain development & manufacturing  Capturing the opportunities Advanced Materials for EV Powertrain  Battery Packs developments and key learnings  Battery Management System (BMS)	<ul> <li>Moderator: Dr. Rahul Walawalkar,         President &amp; MD, CES India &amp; President,         India Energy Storage Alliance</li> <li>Sharan Aiyappa, OEM Director - Sales &amp;         Marketing, MacDermid</li> <li>Sebastian Weyermann, Sr. Business         Development Manager-CMD, Thermofisher         Scientific</li> <li>Vikas Aggarwal, Managing Director, Ipower         Batteries</li> <li>Rajiv Kumar Singh, R&amp;D Lead- Platform,         Hero MotoCorp</li> <li>Vinay Solanki, Business Head, Nash Tech         Labs.</li> </ul>
16:00- 16:25		Networking Tea and E	xpo Visit
16:25- 16:30	IEEE Address	Need for Climate Change and Sustainability	Dr Saifur Rahman, Past President, IEEE
16:30 16:45	Tech Session	Automotive Testing and Validation	S Ramanathan, Managing Director,     Automotive Test Systems
16:45 – 17:45	Plenary Session	Panel Discussion: Way Forward to Accelerate Electric Mobility, Manufacturing, R&D and Safe Adoption in India via Innovation  Export-Import opportunities  Global Partnerships and tech transfer  R&D and Innovation in Battery and Electric Mobility  New Battery Technologies  Driving Innovation for Next-Gen EV with the Power of Virtualization  Vehicle to Grid	<ul> <li>Moderator: Anjan Merkap, Engagement Manager, Customized Energy Solutions</li> <li>Venkat Rajaraman, CEO, Cygni Energy</li> <li>Sandeep Gambhir, CEO, Vertelo</li> <li>Mukesh Dadhich, Head-Business Development, Sustainability &amp; Clean Technology, BSES Yamuna</li> <li>Utkarsh Mishra, Global Innovation Portfolio Lead, Hero MotoCorp</li> <li>Dr Barry Pearce, Strategic Key Accounts Manager- Clean Energy, Thermofisher Scientific</li> <li>Dr. Desikan Sundararajan, India MD, Equinor</li> <li>Ankit Adhiya, Sr. Manager, Application Engineering, Ansys India</li> </ul>





17:45 – 18:00

### **Summary of the Day and Vote of Thanks**

### **India Battery Day Conference (2<sup>nd</sup> July 2024)**

Time	Session	Topic	Speakers	
(HRS IST)	36331011	ТОРІС	Speakers	
09:00 –	09:00 – 10.00 Registration			
10:00 – 11.15	Inauguration Session	India's roadmap for Advanced battery manufacturing  Government policies to support the manufacturing of batteries (ACC-PLI, Niche PLI, Stationary storage PLI etc.)  Key challenges and bottleneck  Global Partnerships in Manufacturing  Battery Supply chain, raw materials and recycling	<ul> <li>V.L Kantha Rao, Secretary, Ministry of Mines</li> <li>Rajesh Agrawal, Additional Secretary, Ministry of Commerce</li> <li>Vijay Mittal, Joint Secretary, DHI, Ministry of Heavy Industries</li> <li>Dr R A Mashelkar, Former Director General, Council of Scientific and Industrial Research (CSIR)</li> <li>Vijayanand Samudrala, President, Amara Raja Batteries Ltd.</li> <li>Raj Surendran, CEO, Tianqi Lithium Australia Energy Limited</li> <li>Sadashiv Samantaray, CEO, KABIL</li> <li>Vikram Handa, MD, Epsilon Carbon</li> <li>Debi Prasad Dash, Executive Director, IESA</li> <li>Rajat Verma, Founder and CEO, LOHUM</li> <li>Rakesh Malhotra, Founder, Livguard Energy</li> <li>Dr. Rahul Walawalkar, President &amp; MD, CES India &amp; President, IESA</li> <li>Mr. Hiren Pravin Shah, Executive Director &amp; CEO, Replus Engitech</li> </ul>	
11:15 - 11:45		Networking Tea and	l Expo Visit	
11:45 – 12:45	Panel discussion	Battery Cell Manufacturing, Upcoming Giga Factories and Other Advanced Battery Manufacturing  Lithium Cell Manufacturing landscape in India and key challenges  Upcoming Giga factories in India  Other Advanced Battery tech (VRB, Sodium Ion and Solid-state batteries) manufacturing in India	<ul> <li>Moderator: Dr. Rahul Walawalkar,         President &amp; MD, CES India &amp; President,         IESA</li> <li>Niranjan C., Chief Operating Officer,         Amara Raja Batteries Ltd.</li> <li>Anil Kumar, Chief Operating Officer, Nash         Energy</li> <li>Vishal Chaturvedi, Business Head - Ola         Cell, Ola Electric</li> <li>Avishek Kumar, Co-Founder and CEO at         VFlowTech</li> <li>Sriram Ramanoudjame, Director,         Strategic Marketing, Blue Solutions</li> <li>Anant Misra, Vice President - EV         Business, Livguard Energy</li> <li>Arvind Kakru, VP – Industrial Automation,         Schneider Electric</li> <li>Oda Marie Ellefsen, Technical Sales         Manager, Morrow</li> </ul>	
12:45 – 13:00	Tech Session	Battery manufacturing quality assessment and failure analysis solutions	Victoria Pope, Global Sales Development Manager, Clean Energy, Thermo Fisher Scientific	





13:00 – 1	14:00	Networking Lunch	and Expo Visit
14.00- 15.00	Panel discussion	Battery Component Manufacturing & Manufacturing Process  • Why India Should focus on Graphite.  • Upcoming Anode and cathode manufacturing  • Electrolyte, Separator, Adhesive, Binders  • Global opportunities  • Manufacturing process  • Automation	<ul> <li>Moderator: Debi Prasad Dash, Executive Director, IESA</li> <li>Akash Saraf, Manufacturing and Supply Chain Consultant, Customized Energy Solutions</li> <li>Sunit Kapur, Chief Executive Officer, Epsilon Advanced Materials</li> <li>Puneet Thakur, Head of Invest In and Innovation Collaboration, Business Finland</li> <li>Kirti Varma, Co-Founder and COO, ALTMIN</li> <li>Harin Kanani, MD, Neogen Chemical</li> </ul>
15.00- 16.00	Panel Discussion (Supported by Western Australia)	Optimizing Battery Supply Chains: Raw Materials Availability and Global Partnership (Western Australia)	<ul> <li>Kunal Daga, Founder &amp; Director, Molsynth</li> <li>Session Chair: Dr. Veena Kumari Dermal, Joint Secretary, Ministry of Mines</li> <li>Session Co-Chair: Nashid Chowdhury, WA Trade &amp; Investment Commissioner, Government of Western Australia</li> <li>Moderator: Rohit Laumas, Mining &amp; Supply Chain Consultant, CES</li> <li>Raj Surendran, CEO, Tianqi Lithium Australia Energy Limited</li> <li>Debashish Nanda, Director, Business Development, Coal India Ltd *</li> <li>Thomas Cherian, Managing Director, Essel Mining *</li> <li>Dr. K. Balasubramanian, Principal Investigator and Director, NFTDC, Hyderabad</li> </ul>
16:00 – 16:30		Networking Tea and I	Expo Visit
16:30 - 16:45		Recent Innovations in Analytical Technologies for Battery Manufacturing and Quality Control	Dr Kyle D'Silva, Director, Clean Energy, Analytical Instruments Group, Thermofisher Scientific
16:45 – 17:45	Plenary Session	Battery Recycling (Key government policies market dynamics, BWMR and EPR guidelines for Recycling, refurbishment and Second Life)  Global Recycling Market  Key challenges and opportunities  Import-export scenario  Battery waste collections, Black mass production  Recycling technologies to get metal salts  Battery Second life	<ul> <li>Moderator: Bhupesh Verma, Manager, Market Research, CES &amp; IESA</li> <li>Dr. Sandip Chatterjee, Sr. Director, Ministry of Electronics and Information Technology (MEITY)*</li> <li>V P Yadav, Scientist E &amp; DH, Central Pollution Control Board</li> <li>Pratyush Sinha, VP- Special Projects, Lohum</li> <li>Deepak Mohapatra, Senior Officer – Business and Market Development, Alliance for Rural Electrification (ARE)</li> <li>ALN Rao, Consultant-circularity &amp; Sustainability in E-waste, Battery, Plastic and Critical Minerals</li> <li>Dr Debaraj Mishra, Managing Director, Sangeel India Recycling</li> </ul>



18:00



17:45 –

### Day Summary of the Day and Vote of Thanks

### India Stationary Energy Storage Day (3rd July 2024)

In	India Stationary Energy Storage Day (3 <sup>rd</sup> July 2024)				
Time (HRs IST)	Session	Topic	Speakers		
09:00 –1	0.00	Registrat	ion		
10:00 - 11:15	Inauguration Session	Energy Storage for 500 GW Renewable, Grid Modernization, and Decarbonization of the C&I Sector  • Key central & state government policies • Industry adoptions • Role of energy storage in the electricity value chain • BESS systems for Indian Grid • Other form of Energy storage beyond batteries	<ul> <li>Bhupinder Singh Bhalla, Secretary, Ministry of New &amp; Renewable Energy</li> <li>Ghanshyam Prasad, Chairperson, CEA, Ministry of Power</li> <li>Jishnu Barua, Chairperson, Central Electricity Regulatory Commission</li> <li>Gauri Singh, Deputy Director-General, International Renewable Energy Agency (IRENA)</li> <li>Gagan Bihari Swain, Director (F&amp;CA). GRIDCO, Odisha</li> <li>Dinesh Jagdale, Joint Secretary, Ministry of New and Renewable Energy</li> <li>R P Gupta, Chairman &amp; MD, Solar Energy Corporation of India (SECI)</li> <li>Rajnath Ram, Adviser (Energy), NITI Aayog</li> <li>Hemanth Pandey, Chief Engineer, Ministry of Power*</li> <li>David Pearce, General Manager, Sales &amp; Distribution, Kardinia Energy</li> <li>Thomas Coughlin, President, IEEE</li> <li>Akash Kaushik, Co-Founder, Good Enough Energy</li> <li>Dr. Rahul Walawalkar, President &amp; MD, CES India &amp; President, IESA</li> </ul>		
11:15 - 11:30		Networking Te	a		
11:30 – 12:30	Panel discussion	<ul> <li>Energy Storage Tender and Projects in India</li> <li>Key Learnings from developed BESS projects in India</li> <li>Upcoming Tenders and projects</li> <li>Understanding the key bottlenecks in Project development</li> <li>Learning from the global projects</li> </ul>	<ul> <li>Moderator: Harsh Thacker, Director, Emerging Tech, Customized Energy Solutions</li> <li>Satish Talmale, Chief Operating Officer, Indigrid</li> <li>Rupam Raja, Chief Commercial Officer, Fluence</li> <li>Adam Bloom, CEO, Edina</li> <li>Sai Charan Kuppili, Technical Director, South &amp; Central Asia, Jinko Solar</li> <li>Sunil Sharma, Commercial Executive, BSES Yamuna Power</li> <li>Naveen Nagpal, Asst. Vice President (Renewables, BESS &amp; new initiatives), BSES Rajdhani</li> <li>SECI/ NTPC/ GUVNL*</li> </ul>		
12:30 – 13.00	Tech Session	BESS Technology, System Design and Development	Akash Kaushik, Co-Founder, Good Enough Energy		





			<ul> <li>Rajendra Narkhede, Senior Vice President, Gexcon</li> </ul>
13:00 – 14:00		Networking Lu	
14:00 – 15.00	Panel discussion	Energy storage for decarbonization of the Commercial & Industrial Sector  • Energy Storage for decarbonization of the C&I sector  • BESS for Telecom and data center and Railway  • Learning from the current installation  • Key Challenges in project development  • Capex vs. Opex of such projects	<ul> <li>Session Chair: J K Jethani, Scientist F, MNRE</li> <li>Moderator: Netra Walawalkar, VP, India Markets, Customized Energy Solutions</li> <li>Kenneth Bodahl, CEO, Pixii AS</li> <li>A.K. Shukla, Founder and MD, Sanvaru</li> <li>Dr Manne Venkateswarlu, CTO, Khushmanda Power Ltd</li> <li>Rukshan Sheriff, CEO, Eco33 Pte</li> <li>Ankur Arora, Head of Sales (Critical Power) - India &amp; SAARC, Exicom</li> <li>Suhas Sutar, Vice President, ESS Business, Replus Engitech</li> </ul>
15.00- 16.00	Panel discussion	<ul> <li>Long Duration Energy Storage Technologies for India</li> <li>Key LDES Technologies and it's future</li> <li>Understanding the key changes</li> <li>Need for government framework.</li> <li>Setting up the target for LDES deployment</li> </ul>	<ul> <li>Session Chair: Kuldeep Rana, Scientist / Director, MNRE</li> <li>Moderator: Nehal Divekar, Director-Emerging Technologies, Customized Energy Solutions</li> <li>Saurabh Kumar, Vice President- India, GEAPP</li> <li>Julia Souder, CEO, LDES Council</li> <li>Saurav Mitra, Director, Market Development, Energy Storage Business, Sumitomo SHI FW</li> <li>William Tope, CEO, LiNa Energy</li> <li>Paul Smith, Senior VP- Global Sales, Energy Dome</li> <li>Mukesh Kolhe, Advisor, Green Gravity</li> </ul>
16:00 – 16:30		Networking Tea	mancen remie, havisen, ereem eranny
16.30- 16.45	Special Session	Learning from Global BESS Projects	Inder Bhambra, Chief Business Officer - India Region, Envision Energy
16:45 – 17:45	Plenary Session	Addressing the Challenges in Rapid Energy Storage Deployment  VGF scheme for 4000 MWh Energy Storage Projects  Energy Storage for Peak shifting, RE-RTC, FDRE Key financing challenges Modernizing the electricity grid Central govt. policy framework & state level support	Session Chair: Rajesh Kumar, Chief Engineer, Energy Storage Systems, CEA, Ministry of Power Co-Chair: Sushanta Chatterjee, Chief - Regulatory Affairs, CERC Moderator: Vinayak Walimbe, VP- Emerging Technologies, Customized Energy Solutions • Peter Mockel, Principal Industry Specialist, IFC • Mr. Pinaki Bhattacharyya, Founder, MD and CEO, Ampln Energy • Aditya Agrawal, Head of Battery Business, Waaree Energy • Professor Scott Hamilton, Senior Advisor, Smart Energy Council





		•	Wilhelm Von Butselaar, VP-APAC Growth, Fluence Artur Zawadski, CEO, Sunrise CSP Jørgen Festervoll, CEO, Heimdall Power
17:45 – 18:00		Summary of the Day an	-
	India	Green Hydrogen	Day (4 <sup>th</sup> July 2024)
Time (Hrs. IST)	Session	Topic	Speakers
09:00 –10	.00	Registration	
10:00 – 11:00	Inauguration Session	India's Roadmap on Green Hydrogen R&D, Manufacturing & Deployment	<ul> <li>Mr. Sudeep Jain, Additional         Secretary, Ministry of New and         Renewable Energy</li> <li>Cristian Valdes Carter, Country         Director &amp; Commercial Counsellor -         India, Innovation Norway</li> <li>Rahul Ranjan, Senior Investment         Director, Australian Trade &amp;         Investment Commission</li> <li>Dr. Anita Gupta, Head of Scientific         Divisions (HOD), DST*</li> <li>Dr. Jeewan Prakash Gupta,         Managing Director, Greenstat         Hydrogen India Pvt. Ltd.</li> <li>Madhav Pai, CEO, WRI India</li> <li>Dr. Rahul Walawalkar, President &amp;         MD, CES India &amp; President, India         Energy Storage Alliance (IESA)</li> </ul>
11:00 – 11	:15	Networking Tea	
11:15 – 12:15	Tech Session	<ul> <li>Electrolyzer &amp; BOP Manufacturing Opportunities in India</li> <li>Opportunities for electrolysis BoP manufacturing</li> <li>Updates on the electrolyzers PLI</li> <li>Components and supply chain</li> <li>Technology updates</li> <li>Analytical Technologies for Hydrogen Value Chain</li> </ul>	<ul> <li>Moderator- Dr. Ajinkya Kamat, Sr. Manager, IESA &amp; Customized Energy Solutions</li> <li>Shekhar Kashalikar, Chief Executive Officer, John Cockerill Greenko Hydrogen Solutions</li> <li>Siddharth Mayur, Founder, Managing Director &amp; CEO, h2e Power Systems</li> <li>Naveen Goudar, Managing Director, MKS Atotech</li> <li>Daniel Fini, Director of Engineering, Cavendish Renewables Tech</li> <li>Hitender Grover, Director CAD MSD, India &amp; South Asia, Thermofisher Scientific</li> </ul>
12:15 – 13:30	Panel Discussion	Knowledge Session on <b>Green Hydrogen Certification for Export to EU</b> (Supported by IGEF- SO)	Opening Remarks and Presentation on the Study and Recommendations for the Development of Internationally Compatible Green Hydrogen Standards in India  Mr. Krishna Kaant Gupta, Energy Advisor - Renewable Energy, GIZ





			Panel Discussion on "Green Hydrogen Certification for Export to EU"  Guest of Honor: Dr. Prasad Chaphekar, Deputy Secretary, Ministry of New & Renewable Energy Moderator: Dr. Deepak Yadav, Council on Energy, Environment and Water  Speakers:  Prof. Dr. Aravind Kumar Chandiran, Department of Chemical Engineering, IIT Madras  Tapas Kapadia, CEO, RWE Supply & Trading Rimali Batra, Partner, DSK Legal
13:30 – 14	:30	Networki	ng Lunch
14:30 – 14:45	Policy Session	Hydrogen Valley Innovation Clusters in India to Drive R&D, Manufacturing, & Pilots	DST, Govt. of India
14:45 – 15:00	Tech Session	Hydrogen Regulations, Codes, Standards, & Safety	<ul> <li>Dr. R. Venugopal, Ex-Joint Chief Controller of Explosives, PESO</li> </ul>
15:00 – 15:15	Tech Session	Green Hydrogen Storage and Transportation	<ul> <li>Yngve Schrøder Tufteland, International Sales Manager, UMOE Advanced Composites</li> </ul>
15:15 – 16:15	Panel Discussion	<ul> <li>Global Green Hydrogen Partnership for Growth</li> <li>Partnership for growth</li> <li>Export and import opportunities</li> <li>Optimizing Electrolyzer Performance with Cutting- Edge Catalysts</li> <li>Technology collaboration</li> </ul>	<ul> <li>Moderator: Debi Prasad Dash, Executive Director, IESA</li> <li>Nishaanth Balashanmugam, Country Manager–India, Green Hydrogen Organization (GH2)</li> <li>Surbhi Goyal, Senior Energy Specialist, World Bank</li> <li>Manish Sanghai, Sr. Director, Laboratory Products, Asia Pacific Japan, Thermofisher Scientific</li> </ul>
16:15 – 17:30	Plenary Session	Key Application Areas for Green Hydrogen in the Industrial and Mobility Sector  Refining Specialty Chemicals Fertilizers Mobility Steel Sector	<ul> <li>Moderator- Dr Deepak Kundalkar,         Manager - Green Hydrogen Initiatives,         Customized Energy Solutions         </li> <li>Dr. Vishnu Budama, CEO, Pune         Hydrogen Valley         </li> <li>Aravind Kumar Chandiran,         Associate Professor, Department of         Chemical Engineering, IIT Madras         </li> <li>Dr. Vijay Bhooshan Kumar, Senior         Manager at Advanced Engineering,</li></ul>
17:30 – 18	:00	Network	
17:45 – 18			Day and Vote of Thanks





### **3rd India Battery Safety Forum**

### 1st July 2024, Seminar Hall, 1B, IICC, New Delhi

Opening Panel	14:00 – 14:30 IST	<ul> <li>Rajeev Sharma, DDG Standardization-I, Bureau of Indian Standards, Bureau of Indian Standards (BIS)*</li> <li>Ujjwala Karle, Deputy Director (Technology Group), ARAI</li> <li>V. Manjunath, Regional Standards Manager, South Asia &amp; Sub-Saharan Africa, UL Standards &amp; Engagement Inc (ULSE)</li> <li>Dr. Rahul Walawalkar, MD, CES India &amp; President, IESA</li> <li>Dr. Kuldeep Rana - Scientist/ Director, Ministry of New and Renewable Energy (MNRE)</li> <li>Rajnesh Singh - Director - Ministry of Heavy Industries*</li> <li>Dr. Suresh Babu Muttana, Scientist E / Director, Department of Science and Technology (DST)</li> </ul>
Current BIS Standards for ESS and Batteries	14:30- 14:45 IST	<ul> <li>Neeraj Kushwaha, Scientist C and Member secretary, ETD 52, Bureau of Indian Standards (BIS)</li> </ul>
Battery Cell level and BESS level safety	14:45- 15:00 IST	<ul> <li>V. Manjunath, Regional Standards Manager, South Asia &amp; Sub-Saharan Africa, UL Standards &amp; Engagement Inc (ULSE)</li> </ul>
EV Battery safety	15:00- 15:15 IST	Dr. Madhusudan Joshi, Head of Technology & Business, International Centre for Automotive Technology (ICAT)
Power Electronics/     EVs/FC impedance     Measurement/Motor     testing/Battery     testing     Advanced     Analytical Solutions     for Testing Energy     Storage Devices	15:15- 15:45 IST	<ul> <li>Utsav Sharma, Manager (R&amp;D) - HIOKI India Pvt Ltd</li> <li>Rajwar Chandra, Product Specialist, Agilent Technologies India Pvt. Ltd</li> </ul>
Fire detection/ Suppression System	15:45- 16:00 IST	Fire advisor, DG, fire services, MHA*
Vote of Thanks & Summary of the Day	16:00- 16:10 IST	Debi Prasad Dash, Executive Director, IESA

<sup>❖ 3&</sup>lt;sup>rd</sup> India Battery Safety Forum is open to all registered delegates





# Workshop on Battery Circularity in India: Policy, Regulations & Implementation Strategies (Organised by WRI India)

### 2<sup>nd</sup> July 2024, Roundtable Room, 1B, IICC, New Delhi

WRI India invites you to a workshop on 'Battery Circularity in India: Policy, Regulations & Implementation Strategies'. The workshop will facilitate a discussion on the existing policies and regulations governing battery circularity in India and gather insights from industry and experts, on policy and regulatory gaps as well as the status of, and challenges in, implementation of systems and processes for battery circularity. Participants will further brainstorm potential solutions and enabling strategies for creating an efficient and circular economy for li-ion batteries in the country.

The workshop on **Battery Circularity in India: Policy, Regulations & Implementation Strategies** will reflect on these challenges and explore potential solutions to promote battery circularity through the supply chain. Bringing together a wide range of industry stakeholders and subject experts, this workshop will provide a unique opportunity for participants to have a timely discussion on the status of battery circularity in India, the key opportunities and challenges facing the ecosystem, and the necessary next steps for optimizing the circularity of the fast-growing battery supply chain.

#### **AGENDA**

Time	Session	Details
11:00 – 11:05	Context Setting	Introduction to the Roundtable Discussion
11:05 – 11:15	Opening Remarks	<ul> <li>Role of battery circularity in making India a global LIB manufacturing hub</li> <li>Chaitanya Kanuri, Associate Director - Electric Mobility, Sustainable Cities &amp; Transport, WRI India</li> <li>Mr. Narayankumar Sreekumar, Associate Director - Electric Mobility, Shakti Sustainable Energy Foundation</li> </ul>
11:15 – 11:35	Research Presentation	Policy and regulatory gaps as well as proposed solutions for enabling battery circularity based on primary and secondary research.  • Mitradev Sahoo, Junior Program Associate, WRI India
11:35 – 12:50	Roundtable discussion	<ul> <li>Roundtable discussion anchored on the following themes:</li> <li>Status of battery circularity in India</li> <li>Challenges in implementing a circular battery supply chain in India and potential solutions.</li> <li>Current gaps and missing links in policy, regulations, standards framework, and potential solutions for enabling battery circularity in India.</li> </ul>
12:50 – 1:00	Concluding Session	Concluding session and launch of conference proceedings
1:00 PM onwards		Networking Lunch





### **IESW Start-Up Day**

### 2<sup>nd</sup> July 2024, 1B, IICC, New Delhi

11:00 -	Welcome Note & Introduction	Vinayak Walimbe, VP , Emerging Tech, CES
11:15 IST		
11:15 –	NEW ENERGY COMPANY	Jury Members:
13:00 IST	SHOWCASE	<ul> <li>Chandrashekhar Chincholkar, Director of Corporate Advisory, CES</li> </ul>
	Pitch Sessions by 7 start-ups	Christine Vincent, Venture Principal, Shell Ventures
	(8 mins to pitch and 7 mins of	John Wood, Founder, Noab Ventures
	Q& A)	Pratik Agarwal, Vice President, Singularity AMC LLP
		Rakesh Malhotra, Founder of SAR Group
		Saiesh Reddy, Managing Partner, Chakra Growth Capital
		Sandeep Tandon, National Project Manager, Low
		Carbon Technology Deployment Project, UNIDO
		Vijay Kedia, Long-Term Investor, Kedia Securities
		Vinayak Walimbe, Vice President & Emerging Tech, CES
		Biplab Hazowary, Manager- Innovation Strategy, Hero MotoCorp
13:00 -14:0	0 IST Networking Lui	nch & Expo Visit
14:00 -	FOUNDERS ROUNDTABLE	Moderated by: Chandrashekhar Chincholkar, Director
15:00 IST	Session Topic: Strategies for	of Corporate Advisory, CES
	building resilient startups.	Chairperson: Mr. Jeet Vijay, CEO, Meity Startup
	Points for discussion	Hub
	<ul> <li>Identifying sources of</li> </ul>	Co-Chair: Dr. Aravind Kumar Chandiran, Associate
	uncertainty & Building	Professor, IIT Madras
	resilience and adaptability	• Co – Chair: Faruk Kazi, PI & Coordinator, VJTI-TBI*
	Learning from failure and	Co-Chair: Dr. Mrityunjay Suar, Chairman, BCKIC
	iteration	Co-Chair: Rakesh Malhotra, Founder of SAR Group
	Customer retention and     continuous product evolution	Co-Chair: Dr Saishyam Narayanan, CEO, IPTIF
	<ul><li>continuous product evolution</li><li>Leveraging partnerships and</li></ul>	Co-Chair: Sandeep Tandon, National Project
	financial optimisation	Manager, FLCTD, UNIDO
	Overcoming scaling hurdles	
	Performance measurement	
	and sustainable growth	
	practices	
15:00 -	TECH IGNITION SESSION	Prasanna Deshpande, Application Engineering
15:45 IST	7 Habits of Highly Effective	Manager, MathWorks
	EV Startups	Himanshu Chattwal, Sr. Sales Manager, MathWorks
	Ansys Sustainability Solution	Vinay Sawant, Sr. Simulation Engineer, FEA at 3D
	for EV, Battery management,	Engineering Automation
	Green Energy and its	
15:45 -	storage	Pratik Agarwal, Vice President, Singularity AMC LLP
16:30 IST	INVESTMENT TALK	Christine Vincent, Venture Principal, Shell Ventures
		' '
16:30 -18:0	3	•
19:00 IST Onwards Networking Diner		





### **IESA-ISA** Future Mobility Learning Centre (FELC)

### 1<sup>st</sup>-2<sup>nd</sup> July 2024, Seminar Hall, 1B, IICC, New Delhi

	Day - 1, July 01, 2024				
SN	Timing	Topic	Speaker		
1	11:15 – 11:30	Opening Remark	Dr Mridula Bharadwaj, Capacity Building		
	IST		Specialist, International Solar Alliance (ISA)		
2	11:30 – 12:00	Advancements in Battery	Dr Raghvendra Gupta, Researcher,		
	IST	Technologies	IIT Delhi		
3	12:00 – 12:30	Solar + Storage: Need &	Dr Vikrant Sharma, Deputy Director, National		
	IST	Significance	Institute of Solar Energy (NISE)		
4	12:30 – 13:00	Overview of Green	Dr. Deepak Kundalkar, Manger – GH2		
	IST	Hydrogen	Initiative, Customized Energy Solutions (CES)		
	Day - 2, July 02, 2024				
5	14:00 – 14:30	E-mobility: Current and	Gurusharan Dhillon, Director of Electric		
	IST	Future Trends	Mobility, Customized Energy Solutions (CES)		
6	14:30 – 15:00	EV Charging Infrastructure	Tyag Dharmik, Founder, Cubenz Power Pvt Ltd		
	IST				
7	15:00 – 15:30	Microgrids: Status and	Rupesh Badkhal, Senior Program Associate,		
	IST	Deployment Concerns	Customized Energy Solutions (CES)		
8	15:30 – 15:45	Vote of thanks and	Anurag Jain, Training Coordinator IESA		
	IST	feedback	Academy		

FELC is open to all registered delegates, exhibitors, and Visitors





Director, Global Women's

### **Women in Energy Forum**

### 2<sup>nd</sup> July 2024, Seminar Hall, Exhibition Centre, IICC, New Delhi

Time	Session	Discussion Points	Speakers
16:30 - 18:00 IST (Seminar Hall, Exhibition centre)	Women in Energy Roundtable Discussion	Sustaining Women's Participation in the Workforce:  Recognizing barriers to women's sustained participation.  Creating inclusive workplaces to retain and advance women professionals.  Policy Measures for Ensuring Safety of Women Professionals at Work:  Evaluating current policies' efficacy in safeguarding women.  Proposing stronger policies and enforcement to combat harassment and ensure safety.  Skill Development:  Identifying skill gaps hindering women's career growth.  Implementing accessible skill development programs to empower women.  Improving Work-Life Balance and Men's Support:  Discussing the impact of work-life balance on women's careers.  Engaging men in promoting gender equality and supporting work-life balance initiatives.  Mentorship and Support Networks Within Your Organization	<ul> <li>Divya Sharma, Executive Director, Climate Group</li> <li>Mili Majumdar, Managing Director, GBCI &amp; Senior Vice President, Innovation and Research at U.S Green Building Council</li> <li>Preeti Malhotra, Co-Owner, Director, Great Place to Work, India</li> <li>Dr. Surekha Deshmukh, Senior Member, IEEE</li> <li>Nashid Chowdhury, Investment &amp; Trade Commissioner, Western Australia</li> <li>Aashraya Seth, Senior Adviso (Industry, Science and Resources), Australian High Commission</li> <li>Monika Rathi, Country Head, Veena Energy</li> </ul>
18:00 - 18:	30 IST	Tea break	
18:30 pm - 19:30 IST	Leadership Talk	<ul> <li>Sharing Success Stories of Role         Models in the Energy Sector</li> <li>Journey of the Leaders: Challenges         Faced and Lessons Learned in the         Energy Sector</li> <li>Empowering Future Generations:         Inspiring Young Women to Enter the         Energy Sector</li> </ul>	<ul> <li>Dr. Veena Kumari         Dermal, Joint Secretary,         Ministry of Mines, Gol</li> <li>Dhanya Rajeswaran, Country         Managing Director, Fluence         India</li> <li>Netra Walawalkar, Vice         President, CES India, IESA</li> <li>Gauri Singh, Deputy Director         General, IRENA</li> <li>Denise Eaton, Trade &amp;         Investment Commissioner         (Resources &amp; Energy),         Austrade</li> <li>Christine Lins, Executive</li> </ul>





			Network for the Energy Transition
19:30 - 20:00 IST		WE Felicitation ceremony	
20:00 IST onwards Ne		Networking Reception	

❖ Women in Energy Forum is open to all registered Women Participants





### Industry stakeholder consultation workshop: Indian EVs & Battery Gigafactories: Imperatives for a Robust Supply Chai

### Powered by CES || Seminar Hall, 1B, Expo Area || 2<sup>nd</sup> July 2024, IICC, New Delhi

India is on the path to a clean energy transition, targeting a 30% electric vehicle (EV) share in registered vehicles by 2030. This will require approximately 600-785 GWh of lithium-ion batteries (LIB) between 2022 and 2030, for EV batteries and battery energy storage systems (BESS) that are required to power this clean energy transition.

Presently, the EV market in the country in 2023 witnessed a penetration rate of 7% with EV battery demand of around 15 GWh in 2023. The EV market in India is expected to grow at a CAGR of 35% from 2023 to 2032 under the business-as-usual case. High demand for EVs and stationary storage has prompted the government to introduce the ACC PLI Scheme which aims to promote 50 GWh of domestic manufacturing of ACC batteries by 2025. With this Scheme, many existing battery players and new entrants have announced their plans to build giga factories in the country.

With the rise in EV adoption followed by an emphasis on manufacturing domestic gigafactories, it's crucial to check the status and address the associated challenges, especially regarding the materials required for manufacturing EV ACC batteries. For this, an enhanced understanding of the material requirements across the supply chain, from upstream to downstream, is indeed essential for all stakeholders involved.

Customized Energy Solutions (CES), along with its knowledge partner with Shakti Sustainable Energy Foundation, is conducting a comprehensive analysis of EVs & battery gigafactories in India, focusing on understanding India's 2032 and 2047 EV and ACC battery demand forecast and scenarios. Under this initiative, CES is delving into crucial aspects such as EV and battery market forecasts across different EV battery chemistries with a key objective of identifying gaps in the present battery supply chain and providing policy recommendations for increased localization and resilient battery supply chain in India.

As part of this initiative, CES is organizing an industrial stakeholder roundtable workshop during India Energy Storage Week (IESW) on 2<sup>nd</sup> July 2024 at the India International Convention and Expo Center (IICC), Dwarka, New Delhi. Your insights and suggestions would be invaluable in shaping this discourse.

We cordially invite you to share your expertise and perspectives at this event. Your participation will greatly enrich the discussions and contribute to the formulation of meaningful recommendations.

1:00 – 2:00 pm	Networking Lunch	
2:00 - 2:10 pm	Welcome and Introduction	Harsh Thacker, Customized Energy Solutions
2:20 – 2:30 pm	Context Setting Address	<ul> <li>Mr. Narayankumar Sreekumar, Associate Director (Electric Mobility), Shakti Sustainable Energy Foundation</li> </ul>
2:20 - 2:40 pm	Research Presentation EVs & Battery Gigafactories: Imperatives for a Robust Supply Chain in India	Monami Dey/ Parth Pandit, Customized Energy Solutions
2:40 - 3:00 pm	Brainstorming Session Working group formation and brainstorming into groups	Parth, Monami, Akshita, Harsh, Rohit, Bhupesh, Anjan
3:10 – 3:50 pm	Working Group Presentations Summary of discussions	Monami/ Akshita
3:50 - 4:00 pm	Concluding Session	
	Summarizing Discussions	Mr. Rishabh Sethi, Programme Manager (Electric Mobility), Shakti Sustainable Energy Foundation
	Vote of Thanks	Customized Energy Solutions





## Unlocking Battery Innovation: Stakeholder Meeting on Rapid Prototyping Centre

### Roundtable Discussion || 3<sup>rd</sup> July 2024, Kenar Hall (403), IICC, New Delhi

Modality: in-person only

Venue: Kenar Hall, Room 403, India International Convention Centre, Yashobhoomi, Delhi

This meeting will bring together stakeholders in government, R&D institutions, and companies across the battery value chain, with the goal of developing recommendations for DST on designing initiatives to establish dedicated R&D facilities with infrastructure for advancing Manufacturing Readiness Levels (MRLs) of new battery technologies from lab prototypes to industrial manufacturability. This is the 3<sup>rd</sup> & concluding Stakeholder Meeting in this series and is being organized by IESA.

#### Agenda:

14:00 – 14:15	Chief Guest: Dr. Anita Gupta, Head, CEST, DST* Special Guest: Manoj Kumar Upadhyay, NITI Aayog Special Guest: Dr. N. Kalaiselvi, Director General, CSIR* Special Chair: Dr. Vijay R, Director, ARCI Special Co-Chair: Dr. Satyanarayana, Director, IIT Tirupati Special Chair: Dr. Vijay R, Director, ARCI Patron Chair: Dr. Rahul Walawalkar, President, IESA		
14:15 – 14:30	Brief introductions of participants		
14:30 – 14:40	Background of Stakeholder Meeting Series, Suresh Babu, DST		
14:40 – 14:50	Recap of Meeting 1 (at National Chemical Laboratory) and Meeting 2 (at IIT Tirupati), IESA		
14:50 – 15:50	<ul> <li>Roundtable Discussion</li> <li>Moderator: Dr. Rahul Walawalkar, IESA</li> <li>Key Discussion Points (to follow from Meetings no. 1 &amp; 2): <ul> <li>Prioritization of technologies, infrastructure and service offerings by Rapid Prototyping Centres (RPCs)</li> <li>Governance, funding model, operational model for RPCs</li> <li>Phased approach to establish and grow RPCs.</li> <li>Best strategic locations for RPCs</li> <li>How to make RPCs accessible to supply chain SMEs and startups?</li> <li>Challenge of skilled workforce recruitment at RPCs</li> <li>Action plan to consolidate stakeholder recommendations for DST</li> </ul> </li> <li>Participants: <ul> <li>Government agencies, such as DST, NITI Aayog, MNRE, etc.</li> <li>Academic and research institutions</li> <li>Cell and battery manufacturers</li> <li>Materials, supply chain and equipment producer companies</li> <li>Startups</li> </ul> </li> </ul>		
15:50 – 16:00	Concluding remarks & way forward by Chief Guest, Special Guest, Patron Chair, Special Chair		





### **India LDES Forum**

### Supported by LDES Council || 3<sup>rd</sup> July 2024, Kenar Hall (403), IICC, New Delhi

In association with the LDES Council, IESA is organizing a dedicated India LDES Forum to advance the deployment of LDES technologies in the Indian energy storage market.

Structure of the India LDES Forum 2024

#### **Key Discussion Points**

- Global LDES technologies readiness and global landscape focused on the markets.
- Understanding the key changes in the growth of LDES deployment in India
- Overall costs for decarbonized buildouts, and planning tools for grid decarbonization through LDES technologies.
- Regulatory support is required for implementing LDES projects in India.
- Setting up the target for LDES deployment for India

MNRE\*
Vena Energy\*

- LDES technologies applications and implementation status
- Future implications and limitations

- Tataro III	inplications and inflications		
LDES Roundtable	Chair:		
	Julia Souder, CEO, LDES Council		
16:30- 18:00 IST	Co-Chair:		
	<ul> <li>Dr.Avishek Kumar, CEO, Vflowtech</li> </ul>		
	<ul> <li>Upma Koul, Sr. VP, Energy Storage Business, Sumitomo SHI FW</li> </ul>		
	Paul Smith, Sr. VP, Global Sales, Energy Dome		
	Key Panellist:		
	William Tope, Chief Executive Officer, LINA Energy		
	Mani Khurana, Sr. Energy Specialist, World Bank		
	<ul> <li>Yashwanth Mahadevan, VP - Sales, APAC, EOSE</li> </ul>		
	Shirish Deshmukh, AGM – Special Projects, Godrej-UEP		
	Prasad Joshi, Vice President, Greenko		
	Satish Talmale, COO, Indigrid		
	<ul> <li>Vishal Mittal, Founder, Delectrik Systems Private Limited</li> </ul>		
	<ul> <li>Vaibhav Dalvi, DGM, Sales Lead- South Asia, BASF</li> </ul>		
	<ul> <li>Dhanraj Biradar, GM, Reliance Industries Ltd.</li> </ul>		
	<ul> <li>Akash Kaushik, Founder &amp; Director, Good Enough Energy</li> </ul>		
	<ul> <li>Sunil Sharma, GM - Sustainability &amp; Cleantech, BSES Yamuna Power</li> </ul>		
	<ul> <li>Samarjeet Thakur, Head-BD, ONGC Tripura Power Company</li> </ul>		
	Amol Sanjore, Head- BESS, Sterling Wilson		
	<ul> <li>Abhishek Shukla, Associate Director – Market Growth, Fluence India</li> </ul>		
	Massimiliano Masperi, Senior Sales Engineer, Energy Dome		
	<ul> <li>Suvendu Lenka, Sr. GM, Reliance Industries Ltd.</li> </ul>		
	<ul> <li>Sreekanth C S, General Manager, Sales, APAC, EOSE</li> </ul>		
	Shankar Chelluri, Country Head - India, PR & Communications, Envision		
	<ul> <li>Inder Bhambra, Chief Business Officer – India Region, Envision</li> </ul>		
	Continum*		
	Cygni*		
	Replus Engitech*		
	BSES Rajdhani*		
	Envision Energy*		
	GRID India*		





	<ul> <li>EDINA*</li> <li>Ampin Energy Transition*</li> <li>O2 Power*</li> <li>SECI*</li> </ul>
	NTPC*
18:30 IST	Happy Hours & Networking Dinner for LDES Roundtable Participants
Onwards	





## IESA-ISA Future Energy Learning Centre (FELC) Agenda

	Day – 1, July	01, 2024		
10:45 – 11:00	Opening Remarks	<b>Dr Mridula Bharadwaj,</b> Capacity Building Specialist, International Solar Alliance (ISA)		
11:00 – 11:30	Advancements in Battery Technologies	<b>Dr Raghvendra Gupta,</b> Researcher, IIT Delhi		
11:30 – 12:00	Solar + Storage: Need & Significance	<b>Dr Vikrant Sharma,</b> Deputy Director, National Institute of Solar Energy (NISE)		
12:00 – 12:30	Overview of Green Hydrogen	<b>Deepak Kundalkar,</b> Manger – GH2 Initiative, Customized Energy Solutions (CES)		
12:30 – 13:00	India Energy Market - Green Open Access	Nikhil Chauganjkar, Senior Manager – India Markets, Customized Energy Solutions (CES)		
	Day – 2, July 02, 2024			
14:00 – 14:30	E-mobility: Current and Future Trends	Gurusharan Dhillon, Director eMobility, Customized Energy Solutions (CES)		
14:30 – 15:00	EV Charging Infrastructure	<b>Tyag Dharmik,</b> Founder, Cubenz Power Pvt Ltd		
15:00 – 15:30	Microgrids: Status and Deployment Concerns	Rupesh Badkhal, Senior Program Associate, Customized Energy Solutions (CES)		
15:00 – 15:30	Need of Centre of Excellence in Battery Engineering	Ravi Kumar, Director - COE, Battery Engineering, Atria University		





### Roundtable on Green Hydrogen Growth: Sub-National Dialogue on Catalysing Change for Addressing Growth Hurdles

#### Organized by WRI || Kenal Hall-403 || 4th July 2024, IICC, New Delhi

The Government of India is implementing the National Green Hydrogen Mission, aiming to position the country as a leading producer and exporter of green hydrogen globally. The mission sets an ambitious goal of producing of 5 million metric tons (MMT) annually by 2030. Under the Mission, the Government of India has introduced various incentives, policy mechanisms, and supportive frameworks to encourage green hydrogen production and electrolyser manufacturing. Following these initiatives, several Indian states including Maharashtra, Andhra Pradesh, Uttar Pradesh, Haryana, Punjab, Madhya Pradesh, Himachal Pradesh, West Bengal, Gujarat, Rajasthan, Odisha, Sikkim, Kerala, Tamil Nadu, and Karnataka have undertaken specific steps to facilitate green hydrogen. The states' approaches range from drafting dedicated hydrogen policies to budgetary allocations, and facilitating projects through respective renewable energy policies, and industrial policies.

These state-level initiatives include various incentives targeted at reducing the cost of renewable energy used to produce green hydrogen and green ammonia, as well as measures to develop a robust manufacturing ecosystem for electrolysers and other critical technologies. Accordingly, significant measures have been proposed in various state government policies to enable industry to ramp up green hydrogen production and exports. These include, incentives aimed at reducing the cost of renewable energy encompass various measures such as exemptions on electricity duty charges, cross-subsidy surcharges, additional subsidy surcharges, intrastate transmission charges, and wheeling charges. Additionally, these incentives extend to land allocation, entailing government land provision at subsidized rates, stamp duty exemptions, and exemptions from other local taxes. Further support is provided through assistance and incentives for innovation and research & development, GST reimbursement, employment subsidies, CAPEX subsidies for electrolyzer and equipment manufacturing facilities, subsidies for green hydrogen utilization across diverse applications, facilitation of water infrastructure development, single-window clearance, and transmission connectivity facilitation.

However, further challenges are anticipated as the industry moves towards implementation of projects. Industry stakeholders have highlighted the lack of domestic offtake, availability of land at suitable locations, access to renewable electricity, and availability of critical equipment and associated infrastructure as some of the crucial pieces. These challenges vary by state or region, requiring a tailored policy approach. It will accordingly necessitate close collaboration among industry stakeholders, research institutions, academia, and the relevant government bodies to identify and execute strategic actions.

This roundtable discussion will seek to facilitate the dialogue between government institutions and industry stakeholders, highlighting the key challenges in the implementation of hydrogen projects in the country, and deliberating how state-level policies could facilitate the process. The aim is to have an open and constructive discussion to identify specific bottlenecks and obstacles and suggest concrete steps that could mitigate them.

Time	Session	Details
11:00 – 11:05	Opening Remarks	Anuraag Nallapaneni, Program Manager – Hydrogen, WRI India
11:05 – 11:15	Context Setting	The necessity of a sub-national dialogue for growth of the hydrogen ecosystem in India  • Dipesh Pherwani, Associate Director – Energy Innovations and Tech, WRI India
11:15 – 11:35	Presentation	Presentation: WRI India





11:35 <b>–</b> 12:50	Roundtable discussion	Roundtable discussion anchored on the following themes:
		Developing Green Hydrogen Infrastructure and Market at the State Level      Developing Green Hydrogen Infrastructure and Market Accounts      Developing Green Hydrogen Infrastructure and Market Accounts      Developing Green Hydrogen Infrastructure and Market Accounts      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market at the State      Developing Green Hydrogen Infrastructure and Market Accounts      Developing Green Hydrogen Infrastructure and Market Green Hydrogen Infrastructure and Market Green Infrastructure and Market Infrastructure and Mar
		<ul> <li>Enabling Hydrogen Project Development and Market Growth through Collaboration</li> </ul>
12:50 – 1:00	Concluding Session	Discussion Summary
1:00 PM onwards		Networking Lunch





#### PARTNER COUNTRIES AND PAVILIONS



























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