



YEAR 2020 - 21



FACILITY OF LOW CARBON TECHNOLOGY DEPLOYMENT

Electrical Energy Storage

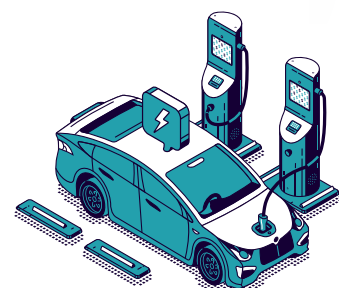
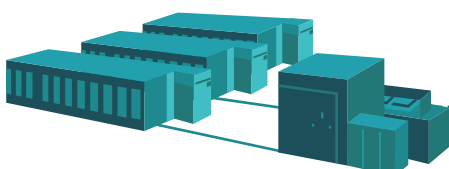


The United Nations Industrial Development Organization (UNIDO) promotes inclusive and sustainable industrial development to assist industries of both developing countries and economies in transition. In this prospect, UNIDO has launched a project called “**The Facility of Low Carbon Deployment**” (FLCTD) in 2016 with an objective to address technology gaps through use of energy efficiency technologies and support the deployment and scale-up.

Electrical Energy Storage has been added as one of the Technology Area for the Innovation Challenge considering these are emerging and evolving technology having potential to speed-up the transition towards low carbon future.

ABOUT UNIDO & FLCTD PROGRAM: >>

The United Nations Industrial Development Organization (UNIDO) promotes inclusive and sustainable industrial development (ISID) to assist industries of both developing countries and economies in transition. In 2016, UNIDO initiated a project called “**The Facility of Low Carbon Deployment**” with an objective to address technology gaps through use of energy efficiency technologies and support the deployment and scale-up. The project is being implemented in collaboration with the Bureau of Energy of Efficiency (BEE) and is supported by the Global Environment Facility (GEF). The main aim of FLCTD project to identify high-impact opportunities that have potential for energy saving as well as large-scale carbon emission reductions.



UNIDO has selected Customized Energy Solutions (India) as the Nodal Agency to support the Project Management Unit in Planning and Implementation of Innovation Challenge in Electrical Energy Storage. India Energy Storage Alliance (IESA) is a supporting partner for this Innovation Challenge. IESA is actively working in the space of Energy storage, Electric Vehicle, renewable integration, & microgrids since 2012 with 100+ members. IESA teamwork with various state utilities, Commercial-industrial consumers & national labs to accelerate deployment of energy storage projects & R&D initiatives. With maximum involvement with government bodies and private stakeholders on manufacturing & adoption, IESA has been working in driving and developing the Indian EV and Energy Storage ecosystem.

PROGRAM BACKGROUND :

FLCTD has completed 3 Annual Innovation Challenges since 2018 and has provided US \$1.2million funding support to 28 Winners to demonstrate and validate the innovation in actual field conditions.

On 30th October 2020, FLCTD launched the innovation challenge to identify Innovative **Electrical Energy Storage Solutions** and provide financial support to innovator/entrepreneur for its field validation. This year, Energy storage has been recognised as a key enabler in every aspect of modern grids including Generation, Transmission, Distribution and in urban mobility which involves the Electric Vehicles.



WHAT FLCTD PROJECT OFFERS ?



Financial support up to US \$50,000 for Demonstration & Validation in field conditions
B-testing



Technical Mentoring by CII-GBC and Subject Experts



De-risking of innovations before commercial launch



Industry Linkages



Financial Mentoring and Fund Raising Support

SUPPORT ON-GOING R&D EFFORTS AND SPEED-UP COMMERCIALIZATION



Electro chemical storage batteries



Super capacitors



Power conversion systems

TRL 9: Commercialization & post market studies
TRL 8: Pre Commercialization
TRL 7: Late stage validation
TRL 6: Early stage validation
TRL 5: Early stage validation
TRL 4: Proof of concept established
TRL 3: Proof of concept demonstrated
TRL 2: Proof of principle
TRL 1: Ideation stage

System test, launch & operations

System / Subsystem development

Technology demonstration

Technology development

Research to prove feasibility

Basic technology research

TRL 9

TRL 8

TRL 7

TRL 6

TRL 5

TRL 4

TRL 3

TRL 2

TRL 1

- ⚡ Customized Energy Solutions, India will play a vital role in spearheading this innovation call
- ⚡ Ensuring its outreach to suitable stakeholders in the ecosystem
- ⚡ Scrutinizing the applicants
- ⚡ Identifying the winners of the challenge

ELECTRICAL ENERGY STORAGE INNOVATIONS

Technologies covered

- 🔋 Electrochemical Batteries
- 🔋 Super Capacitors
- 🔋 Critical components for Electrical Energy Storage systems including Power Conversion Systems
- 🔋 Metal air, Hydrogen technologies etc.

Applications of innovative energy storage technologies including

- 🔋 Grid-connected and Behind the meter applications
- 🔋 Off-grid stationary applications
- 🔋 Battery Recycling
- 🔋 eMobility etc.

INCENTIVES TO PARTICIPATION :

1. Grant

Grant up to USD 50,000 for winning technology

2. Performance Verification

Performance Verification to establish the efficacy of innovative technology in working conditions.

3. Business Acceleration

Business Acceleration and Mentoring support from industry experts.

4. Recognition

Recognition from Bureau of Energy Efficiency, UNIDO and IESA.

WHO CAN APPLY?

- ⚡ Indian Technical Institutes Universities, Research Institutes etc.
- ⚡ Start-ups in collaboration with Industry/Academia/research institutes
- ⚡ Micro, Small & Medium Enterprises,
- ⚡ Industries
- ⚡ Public Sector Enterprises
- ⚡ Government Laboratories
- ⚡ Non-profit Organizations
- ⚡ Technologies funded under Department of Science and Technology (DST) and other government schemes, at pre-market phase (TRL 4-TRL 6) and ready for field demonstration

LAST DATE TO APPLY : 18th of December 2020 !!

For more information, visit:

🌐 <https://www.low-carbon-innovation.org/>

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