REPORT ON INDUSTRIAL VISIT TO NETRA AND RENEWABLE ENERGY INDIA EXPO 2025

October 30th & 31st

SANRAKSHAN SOCIETY,
DEPARTMENT OF SUSTAINABLE ENERGY ENGINEERING, IIT KANPUR

1. Introduction

An industrial and expo visit was organized by the **Sanrakshan Society, Department of Sustainable Energy Engineering, IIT Kanpur**, for postgraduate students to gain practical exposure to modern energy systems and cutting-edge renewable energy technologies. The visit took place on **October 30th and 31st, 2025**, with a total of **35 students** from Y-24 and Y-25 batches, accompanied by staff members.

The visit included two primary destinations:

1. **NETRA (Noida)** – The Research and Development center of NTPC Limited
2. **Renewable Energy India (REI) Expo 2025 (Greater Noida)** – Asia's largest exhibition of renewable energy technologies

This visit provided students with invaluable insights into the latest advancements in renewable energy, energy storage systems, green hydrogen technologies, and sustainable power generation. The experience bridged the gap between theoretical knowledge and practical implementation, exposing students to real-world applications of sustainable energy engineering principles.

2. Visit to NETRA, Noida (October 30th, 2025)

2.1 Overview of NETRA: NTPC's R&D Wing, NETRA (NTPC Energy Technology Research Alliance), is India's premier research and development center dedicated to innovation in clean energy, energy efficiency, emissions control, renewable integration, and advanced materials. Established in 2009, NETRA has positioned itself as a leading player in the global energy sector, recognizing the transformative potential of cutting-edge technology in improving services and efficiency.

NETRA maintains strategic collaborations with premier national institutes including top IITs, IISc, and CSIR. The center has also forged international partnerships with institutions such as NETL-USA, Curtin University-Australia, Newcastle University-Australia, VGB-Germany, DLR-Germany, and ISE-Germany.

Focus Areas of NETRA:

- Efficiency Improvement & Cost Reduction
- New & Renewable Energy Technologies
- Climate Change & Environmental Protection
- Water Conservation & Ash Utilization
- Carbon Capture and Utilization
- Waste Management & Waste-to-Energy Solutions
- Advanced Scientific Services (NDE, Metallurgy, Failure Analysis, Oil/Water Chemistry, CFD)

2.2 Technical Sessions and Facility Demonstrations

During the visit, NETRA officials, particularly Mr. S Shaswattam (Executive Director), Mr. Ravi (AGM-NETRA), Mr. Vishal Mittal (Founder, Delectrik Systems Pvt Ltd) and the technical team provided detailed description and guided tours of various demonstration facilities:

2.2.1 Ground Mounted Solar PV Plant (4 MWp/3.3 MW)

Students observed the layout and operation of a large-scale solar photovoltaic installation integrated with advanced inverter technology and performance-monitoring systems. The facility showcases:

- **Capacity:** 4 MWp solar generation capacity with 3.3 MW AC output
- **Technology:** Grid-connected ground-mounted solar PV system
- **Integration:** Smart controller for load and source prioritization
- **Grid Independence:** System designed to maximize renewable generation with minimal or zero grid intake

Officials explained critical design considerations including:

- Solar module arrangement and string configuration
- Inverter control strategies for optimal generation efficiency
- Performance monitoring and data analytics systems
- Integration with battery storage and microgrid operations

2.2.2 Battery Energy Storage System (BESS) – 1 MWh

Type: Lithium-ion NMC (Nickel Manganese Cobalt) based storage
Capacity: 1 MWh, designed for emergency backup and solar generation smoothing
Functionality:

- Enables load support during non-solar hours
- Enhances renewable energy utilization through energy storage
- Provides grid stability and power quality improvements
- Integrated with the AC microgrid system (4 MWp solar + 1 MWh Li-NMC battery)

The battery storage system demonstrates how energy storage technologies can address the intermittency challenges of renewable energy sources, ensuring continuous power supply and grid reliability.

2.2.3 Green Hydrogen Generation Systems

NETRA has implemented multiple electrolyzer technologies for green hydrogen production, representing India's commitment to hydrogen as a clean energy carrier:

A. Proton Exchange Membrane (PEM) Electrolyzers

- **Capacity:** Two stacks of 180 kW each (Total: 360 kW)
- **Manufacturer:** H2E in collaboration with Ohmium and Spirare Energy
- **Integration:** Coupled with solar PV for green hydrogen production
- **Application:** Produces hydrogen during solar hours for storage and fuel cell operation

The PEM electrolyzer system showcases dynamic operation capabilities, efficiently ramping up and down to optimize renewable energy utilization. The green hydrogen produced enables fuel cell operation to provide continuous power to essential loads at NETRA even when the grid or solar PV is unavailable.

B. Solid Oxide Electrolyzer (High-Temperature Steam Electrolyzer)

- **Technology:** Solid oxide-based high-temperature steam electrolysis
- **Application:** Research on advanced hydrogen production techniques
- **Advantage:** Higher efficiency through waste heat utilization

NTPC has implemented pilot projects using 240 kW Solid Oxide Electrolyzer technology at various locations, demonstrating India's commitment to exploring diverse hydrogen generation pathways.

C. Anion Exchange Membrane (AEM) Electrolyzer

- **Location:** Pilot plant commissioned at NTPC Dadri on November 7, 2023
- **Purpose:** Gaining experience across all four major electrolyzer technologies (Alkaline, PEM, Solid Oxide, and AEM)
- **R&D Focus:** Impact of water quality, design life, ramp-up/down times, and seawater electrolysis capabilities

Focus on Saline and Low-Grade Water Electrolysis:

With the growing emphasis on green hydrogen production and the scarcity of clean water, NETRA is researching the use of low-grade and saline water in electrolyzers. Since saline water is abundantly available, replacing ultra-pure water can result in considerable cost savings and enhanced sustainability.

2.2.4 Green Hydrogen Microgrid System

NETRA has developed an innovative **Solar-Hydrogen-based microgrid system** designed for round-the-clock power supply:

System Components:

- Solar PV power generation
- Electrolyzer for hydrogen production during solar hours
- High-pressure hydrogen storage
- Fuel cell system (25 kWh net AC power)
- Smart grid integration with load management

Key Features:

- Provides 24/7 continuous power using green hydrogen as energy storage medium
- Demonstrates integration of renewable energy with hydrogen storage
- Showcases capability to meet mixed active and reactive loads
- Enables comparison between battery storage and hydrogen storage systems

The solar-hydrogen microgrid at NETRA serves as a demonstration project for India's first green hydrogen-based energy storage system, paving the way for deployment in remote and strategic locations, including high-altitude military installations.

2.2.5 Vanadium Redox Flow Battery (VRFB) – India's First MWh-Scale Installation

One of the highlights of the visit was India's largest and first MWh-scale **Vanadium Redox Flow Battery (VRFB) system with a capacity of 3 MWh**. The VRFB project at NETRA exemplifies India's **Atmanirbhar Bharat (Self-Reliant India)** initiative:

- 100% indigenous technology development
- Reduced dependence on imported materials
- Technology transfer and skill development
- Creating export opportunities for Indian manufacturers

Project Details:

- **Capacity:** 3 MWh (600 kW power / 3000 kWh energy)

- **Technology Developer:** Delectrik Systems Private Limited (CEO: Dr. Vishal Mittal, PhD IIT Delhi)
- **EPC Partner:** Rays Power Infra
- **Installation Status:** Commissioned in November 2025 at NETRA, Greater Noida

Market Potential:
According to industry reports, India's vanadium redox flow battery market, valued at USD 70 million, is projected to grow at 12% annually, driven by rising demand for long-duration energy storage for integrating renewables. India's domestic stationary battery energy storage system (BESS) requirement is projected to reach **411 GWh by 2031-32**, highlighting the vast growth potential for energy storage in the country.
Students had the opportunity to observe the VRFB installation and understand its operational principles, making this visit particularly timely and significant given the national importance of this project.

2.2.6 Municipal Solid Waste to Green Hydrogen Plant
NETRA is pioneering an innovative approach to green hydrogen production using **plasma oxy gasification of municipal solid waste (MSW) and agricultural waste**:
Project Specifications:
- **Capacity:** 1 tonne per day (TPD) green hydrogen production
- **Feedstock Processing:** 25 tonnes of MSW/agricultural waste per day
- **Technology:** Plasma-assisted oxy gasification producing high-quality synthesis gas
- **Hydrogen Purity:** Greater than 99.9% using gas membrane and pressure swing adsorption

This cutting-edge technology demonstrates NTPC's commitment to achieving energy transition goals while adopting sustainable circular economy models.

2.2.7 Seawater to Green Hydrogen Project
NETRA is developing a **1 TPD seawater-to-green hydrogen plant** at NTPC Simhadri near Visakhapatnam, Andhra Pradesh:
Innovation:
- Low-carbon desalination plant utilizing waste heat from thermal power plant flue gas
- Converts seawater into hydrogen-grade water efficiently and sustainably
- Addresses freshwater scarcity challenges in coastal regions

This project exemplifies NTPC's innovative approach to integrating renewable energy with existing thermal infrastructure for maximum resource efficiency.

2.2.8 NETRA Microgrid Overview
The NETRA microgrid represents a comprehensive demonstration of integrated renewable energy systems:
Microgrid Components:
- 4 MWp Solar PV Plant
- 1 MWh Lithium-NMC Battery Storage
- 3 MWh Vanadium Redox Flow Battery
- Green Hydrogen Production and Fuel Cell Systems
- Smart Controller for Load and Source Prioritization

- Integration with MSW Gasification and Other Renewable Sources

Operational Strategy:

- Maximize renewable generation with minimum or zero grid intake
- Prioritize different sources (PV, Battery, Hydrogen, DG, MSW) for electrical system stability
- Achieve full energy autonomy for the NETRA campus

The microgrid serves as a living laboratory for testing and validating multiple renewable energy technologies in an integrated environment, providing invaluable data for scaling these solutions nationwide.

2.3 Learning Outcomes from NETRA Visit

The visit to NETRA provided students with comprehensive exposure to:

1. **Large-scale Solar PV Systems:** Understanding design, installation, and integration of multi-MW solar installations
2. **Energy Storage Technologies:** Comparative analysis of lithium-ion batteries and vanadium redox flow batteries
3. **Green Hydrogen Ecosystem:** Complete value chain from production (multiple electrolyzer technologies) to storage and utilization
4. **Microgrid Integration:** Smart grid technologies and energy management systems
5. **Waste-to-Energy:** Innovative approaches to circular economy and sustainable waste management
6. **Research Methodologies:** Understanding how industry-driven R&D addresses real-world energy challenges
7. **Technology Translation:** Pathways from laboratory research to commercial deployment

Students gained insights into NTPC's ambitious renewable energy targets of achieving **60 GW of renewable energy capacity by 2032** and its commitment to **Net Zero emissions**.

3. Visit to Renewable Energy India (REI) Expo 2025, Greater Noida (October 31st, 2025)

3.1 Overview of REI Expo 2025: After the NETRA visit, the team proceeded to the **Renewable Energy India (REI) Expo 2025** held at **India Expo Mart, Greater Noida**, on the morning of October 31st, 2025. The expo ran from **October 30th to November 1st, 2025**.

REI Expo 2025 – Key Highlights:

- **Scale:** Asia's largest clean energy exhibition and conference
- **Attendance:** Over 55,000+ professionals from across the renewable energy sector
- **Exhibitors:** 1,000+ leading brands and 700+ exhibitors
- **Exhibition Space:** 14 innovation-packed halls, including 10 dedicated to solar and bio-energy
- **Organizer:** Informa Markets, Waree
- **Focus Areas:** Solar PV, Bio-energy, Energy Storage, Battery Solutions, Green Hydrogen, E-mobility, Wind Energy

The REI Expo 2025 served as India's most influential platform for showcasing breakthroughs in solar energy, green technology, and sustainable infrastructure, bringing together policymakers, innovators, investors, and industry leaders from around the globe.

3.2 Exhibition Areas and Technology Showcase

The exhibition featured diverse segments covering the entire renewable energy value chain:

3.2.1 Solar Energy Technologies

High-Efficiency Solar PV Modules:

- Bifacial solar modules with enhanced energy capture
- Perovskite solar cell technologies
- Flexible solar laminates for diverse applications
- Advanced TOPCon and HJT (Heterojunction) technologies

Notable Solar Exhibitors:

- **Adani Solar** – Leading Indian solar manufacturer
- **Rayzon Solar** – Showcasing 3.5 GW solar cell line under development and 19,800 MT/year aluminum frame manufacturing capacity
- **Polycab India** – Launched new Solar Kits at REI 2025, featuring high-efficiency grid-tie inverters, solar cables, and complete installation packages
- **Dhaah Solar** – India's #1 Solar Component Brand
- Various international manufacturers showcasing latest module technologies

Students explored innovations in solar module design, including lightweight and recyclable materials, higher efficiency cells, and improved durability under harsh environmental conditions.

3.2.2 Energy Storage Systems

The expo featured extensive displays of battery energy storage solutions, reflecting the growing importance of storage in renewable energy integration:

Battery Technologies Showcased:

- **Lithium-ion Battery Systems:** For grid-scale and commercial applications
- **Flow Battery Systems:** Including vanadium and zinc-bromine technologies
- **Solid-State Batteries:** Next-generation battery technologies
- **Battery Management Systems (BMS):** Advanced monitoring and safety mechanisms

Key Exhibitors:

- Acelion Energy Storage Solutions Pvt. Ltd.
- Multiple domestic and international BESS manufacturers

Students gained insights into:

- Different battery chemistries and their applications
- Safety mechanisms and thermal management systems
- Integration with renewable energy systems
- Lifecycle analysis and sustainability considerations

3.2.3 Power Electronics and Inverters

Inverter Technologies:

- **Central Inverters:** For utility-scale solar installations
- **String Inverters:** For commercial and industrial applications
- **Hybrid Inverters:** Integrating solar, battery, and grid connections
- **Advanced MPPT Technologies:** Maximum Power Point Tracking for optimal efficiency
- **Grid Synchronization Features:** For stable grid integration

Students learned about:

- Latest inverter topologies used in hybrid renewable systems

3.3 Industry Interactions and Career Opportunities

A significant aspect of the REI Expo visit was the opportunity for students to interact with technical representatives from various companies:

Career Development Activities:

- Students explored placement and internship opportunities with exhibiting companies
- Networking with industry professionals and technical experts
- Understanding industry requirements and skill expectations
- Learning about emerging career paths in renewable energy sector

Industry Insights Gained:

- Manufacturing processes and quality control in solar and battery production
- Certification requirements and international standards (IEC, UL, BIS)
- Performance standards and testing methodologies
- Supply chain management in renewable energy sector
- Market trends and future technology directions

3.4 Sustainability Initiatives at REI Expo

Several exhibitors showcased their commitment to sustainability beyond their products:

Polycab's Tree Plantation Initiative:

- Partnership with Grow-Trees Organisation
- "Trees for Villagers" campaign in Fatehabad, Haryana
- Digital tree plantation with e-tree certificates for visitors
- Interactive photo zones promoting environmental awareness

Such initiatives demonstrated how companies are integrating environmental responsibility into their business practices and engaging stakeholders in sustainability efforts.

3.5 Key Takeaways from REI Expo 2025

Students gained comprehensive understanding of:

1. **Market Landscape:** Current state and future trends in renewable energy industry
2. **Technology Evolution:** Latest innovations in solar, storage, and hydrogen technologies
3. **Industry Ecosystem:** Interactions between manufacturers, developers, EPCs, utilities, and policymakers
4. **Career Pathways:** Diverse opportunities in renewable energy sector
5. **Global Competitiveness:** India's position in global renewable energy market
6. **Sustainability Integration:** Holistic approach to clean energy beyond technology

The expo visit complemented the technical depth of the NETRA visit by providing broader market perspective and industry context, essential for understanding the commercialization and deployment of renewable energy technologies.

4. Overall Experience and Learning Outcomes

The two-day industrial visit to NETRA and REI Expo 2025 provided an exemplary learning experience for students of Sustainable Energy Engineering:

4.1 Technical Knowledge Enhancement

Theoretical to Practical Translation:

- Witnessed real-world implementation of concepts learned in classroom
- Understood engineering challenges and solutions in renewable energy systems

- Gained insights into system integration and optimization
- Learned about operational considerations and maintenance requirements

Technology Exposure:

- Multiple solar PV configurations and technologies
- Diverse energy storage solutions (Li-ion, VRFB)
- Various electrolyzer technologies (PEM, Solid Oxide, AEM, Alkaline)
- Microgrid integration and smart grid technologies
- Waste-to-energy and circular economy applications

4.2 Industry Perspective

Market Understanding:

- Current state of renewable energy industry in India
- Technology trends and future directions
- Manufacturing processes and quality standards
- Commercial viability and economic considerations
- Career opportunities and industry expectations

Stakeholder Interactions:

- Engagement with researchers and engineers at NETRA
- Discussions with industry representatives at REI Expo
- Understanding of policy frameworks and regulatory environment
- Insights into investment and financing mechanisms

4.3 Research Inspiration

The visit inspired students to consider research topics in:

- Advanced battery technologies and materials
- Green hydrogen production and utilization
- Solar PV efficiency improvements
- Energy management systems
- Integration of multiple renewable sources
- Waste-to-energy technologies
- Grid stability and power quality

5. Student Feedback and Reflections

The visit received overwhelmingly positive responses from participating students:

Key Highlights Mentioned:

- Exposure to India's first MWh-scale VRFB was a unique opportunity
- Understanding the complete hydrogen value chain was particularly valuable
- Practical insights into microgrid operations enhanced classroom learning
- Industry interactions at REI Expo provided career clarity
- Scale of renewable energy deployment at NTPC was inspiring
- Witnessing cutting-edge research at NETRA motivated further studies

Areas of Particular Interest:

- Energy storage technologies and comparative analysis
- Green hydrogen production technologies
- Microgrid design and optimization
- Integration challenges and solutions
- Economics of renewable energy projects

Students expressed keen interest in pursuing internships, projects, and careers in the renewable energy sector, demonstrating the visit's success in connecting academic learning with industry applications.

6. Relevance to Academic Curriculum

The industrial visit directly complemented the curriculum of the Department of Sustainable Energy Engineering, IIT Kanpur:

Course Connections:

- **Photovoltaic Technologies:** Direct observation of 4 MWp solar installation
- **Energy Storage Systems:** Hands-on exposure to Li-ion and VRFB technologies
- **Hydrogen Technologies:** Understanding complete hydrogen ecosystem
- **Power Electronics:** Inverter technologies and grid integration
- **Renewable Energy Integration:** Microgrid operations and management
- **Sustainable Energy Systems:** Comprehensive system-level understanding

The visit reinforced theoretical concepts with practical examples, enhancing student comprehension and retention of course material.

7. Future Implications and Recommendations

7.1 For Students

Recommended Follow-up Activities:

- Pursue research projects in energy storage or hydrogen technologies
- Seek internships with NTPC, renewable energy companies, or research institutions
- Develop skills in power electronics, control systems, and energy management
- Stay updated on policy developments and market trends
- Participate in renewable energy competitions and challenges

7.2 For Academic Institution

Suggestions for Enhanced Learning:

- Establish formal collaboration with NETRA for research projects
- Organize regular industry visits to renewable energy facilities
- Invite industry experts for guest lectures and workshops
- Develop case studies based on technologies witnessed during visit
- Create laboratory modules replicating demonstration systems seen at NETRA

7.3 For Industry-Academia Partnership

Strengthening Collaborations:

- Joint research projects on emerging technologies
- Student internship programs at NTPC facilities
- Collaborative PhD programs addressing industry challenges
- Technology demonstration projects at IIT Kanpur campus
- Knowledge exchange workshops and conferences

8. Acknowledgements

The Sanrakshan Society and the Department of Sustainable Energy Engineering, IIT Kanpur, extend sincere gratitude to:

- **Prof. Ashish Garg**, Head of the Department of Sustainable Energy Engineering, IIT Kanpur, coordinated institutional partnerships and ensured alignment of visit with academic curriculum.
- **Prof. Prabodh Bajpai,** Executive Committee member, Sanrakshan Society, IIT Kanpur organized the two-day industrial visit and managed all logistics with NETRA and REI Expo organizers.
- **Prof. Aakash Chand Rai –** DPGC, IIT Kanpur; provided academic guidance ensuring alignment of visit learning outcomes with postgraduate curriculum and energy systems standards.
- **Prof. Soumyabrata Roy** – DUGC, IIT Kanpur; contributed technical expertise in materials and energy processes, enhancing student engagement with advanced renewable energy technologies witnessed during the visit.
- **NETRA officials**, particularly Mr. Shaswattam (Executive Director), Mr. Ravi (AGM-NETRA) and the technical team, for their informative presentations, detailed facility demonstrations, and warm hospitality
- **Mr. Raghvendra Kumar** (Administrative), **Mr. Chandan Kumar** (Technical), and **Ms. Ayushi Singh** (Society Secretary) for coordinating logistics and ensuring smooth execution of the visit
- **All participating students** from Y-24 and Y-25 batches for their active engagement, insightful questions, and enthusiastic participation throughout the visit

Special appreciation is extended to NTPC Limited for its pioneering role in advancing renewable energy research and development in India.
This visit has reinforced the importance of industry-academia collaboration in advancing India's clean energy mission and has inspired students to contribute meaningfully to the nation's sustainable energy future.

9. Conclusion

The industrial visit to NETRA and Renewable Energy India Expo 2025 on October 30-31, 2025, organized by the Sanrakshan Society, Department of Sustainable Energy Engineering, IIT Kanpur, provided students with an exceptional opportunity to witness India's renewable energy revolution firsthand.
Key Achievements:
1. Comprehensive Technology Exposure: Students gained insights into cutting-edge technologies including India's first MWh-scale VRFB, multiple electrolyzer technologies, large-scale solar installations, and integrated microgrid systems.
2. Industry Context: The REI Expo 2025 visit provided market perspective, industry trends, and career opportunities, complementing the technical depth of the NETRA visit.
3. Research Inspiration: Exposure to ongoing R&D at NETRA motivated students to pursue research in sustainable energy technologies.
4. Professional Networking: Interactions with researchers, engineers, and industry representatives expanded students' professional networks.
5. National Context: Understanding India's ambitious renewable energy targets and the role of innovation in achieving them.
The visit demonstrated how India is leveraging indigenous innovation, international collaborations, and strategic investments to transform its energy landscape. Technologies like

vanadium redox flow batteries, green hydrogen systems, and integrated microgrids are no longer distant concepts but operational realities shaping India's energy future.

For students of Sustainable Energy Engineering, this experience bridged the gap between theoretical knowledge and practical implementation, providing invaluable insights that will guide their academic pursuits and professional careers. The visit reinforced the critical importance of continuous innovation, interdisciplinary collaboration, and commitment to sustainability in addressing global energy challenges.

10.Funding and Expenditure

This industrial visit was fully funded by the Society fund, with all major expenses covered under the following heads:

Date	Expense Description	Amount (₹)
30/31 OCT 2025	Bus Travel (including 5% GST)	71,400
30/31 OCT 2025	Accommodation (NETRA)	10,000
30 OCT 2025	Breakfast (Morning)	7,500
30/31 OCT 2025	NETRA Breakfast, Lunch, Dinner	20,790
31 OCT 2025	Dinner (Return)	10,200
31 OCT 2025	Expo Registration	12,000
	Total	119,890

All costs were met from the Society fund, ensuring full support for the visit.

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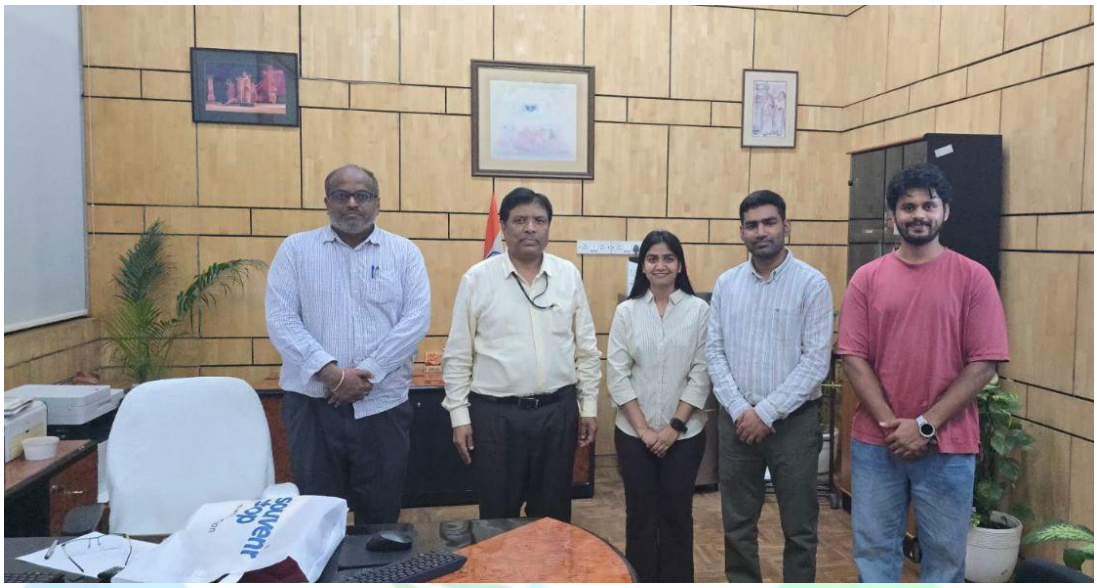
Appendix: Technical Specifications Summary
NETRA Facilities Visited:

Facility/System	Capacity/Specification	Technology/Type
Solar PV Plant	4 MWp / 3.3 MW AC	Ground-mounted, Grid-connected
Lithium-ion BESS	1 MWh	Li-NMC chemistry
Vanadium Redox Flow Battery	3 MWh (600 kW)	VRFB, 12-hour duration
PEM Electrolyzer	360 kW (2 × 180 kW)	Proton Exchange Membrane
Solid Oxide Electrolyzer	240 kW	High-temperature steam
Fuel Cell System	25-50 kW	Various technologies
MSW to H_2 Plant	1 TPD H_2 (25 TPD MSW)	Plasma oxy gasification
Seawater to H_2 Plant	1 TPD	Low-carbon desalination

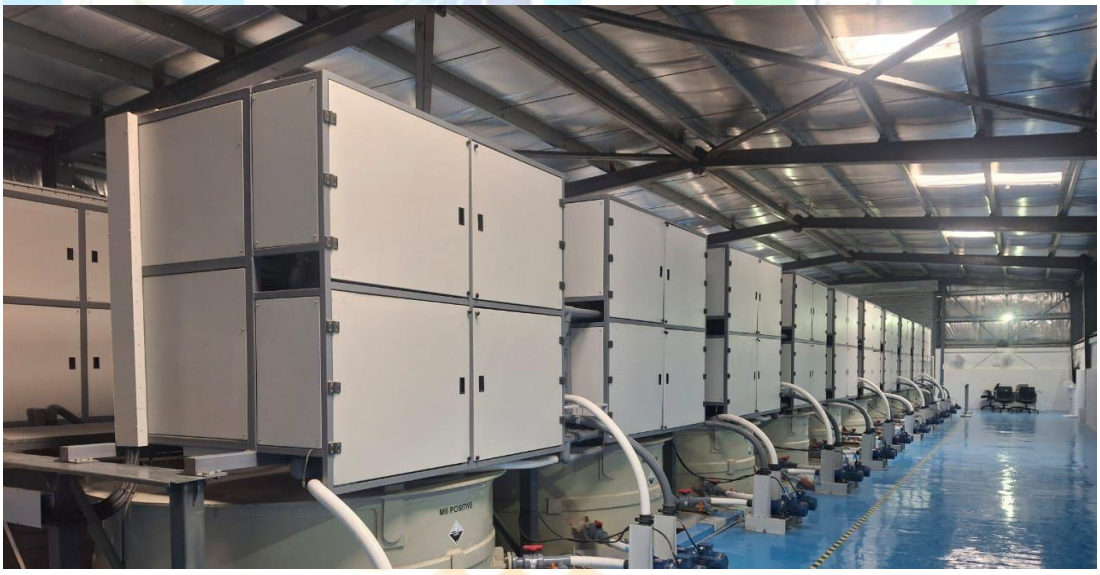
REI Expo 2025 Statistics:

- **Duration:** October 30 - November 1, 2025
- **Venue:** India Expo Mart, Greater Noida
- **Exhibitors:** 1,000+ brands, 700+ companies
- **Visitors:** 55,000+ professionals
- **Exhibition Halls:** 14 halls (10 for solar/bio-energy)
- **Conference Sessions:** 40+ technical sessions
- **Focus Areas:** Solar PV, Bio-energy, Energy Storage, Green Hydrogen, E-mobility

Photo Documentation

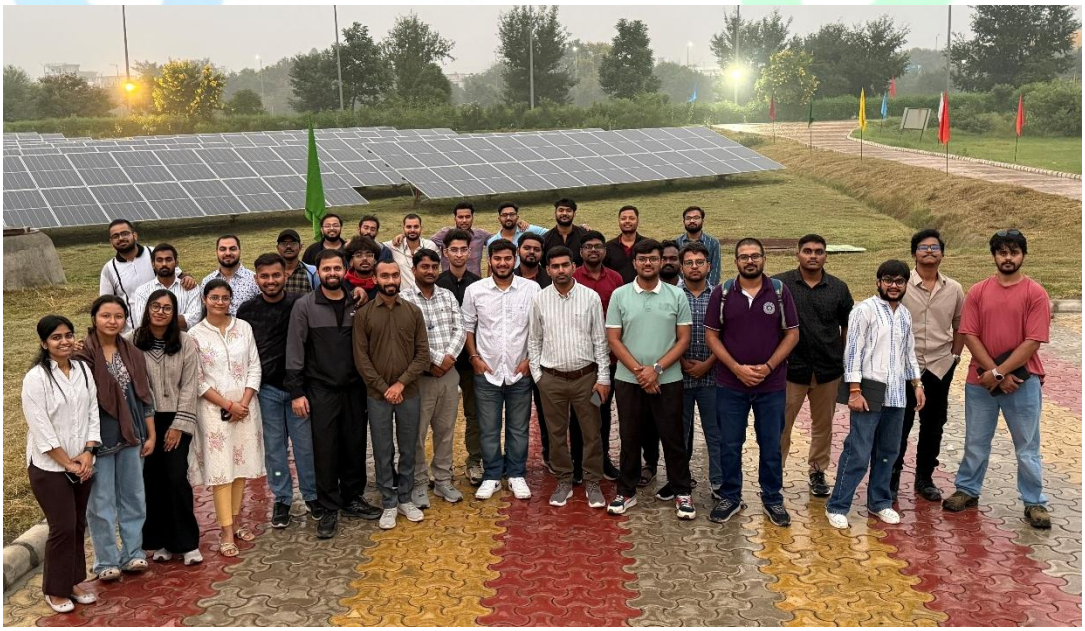


Administrative Meeting with Executive Director Mr. S Shaswattam



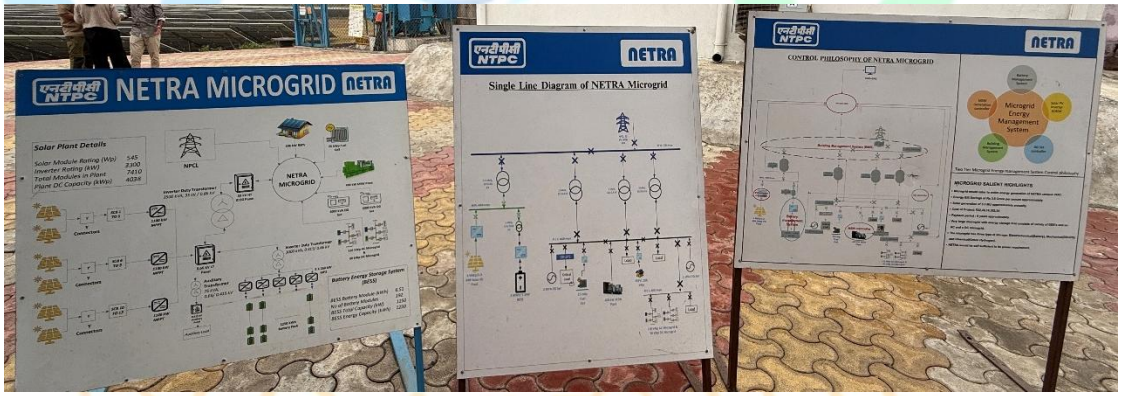
Vanadium Redox Flow Battery Installation

Group photograph of students and staff at NETRA facility with signage showing India's first MWh-scale VRFB



Group Photo at Solar Installation

Group photograph at REI Expo 2025, India Expo Mart, Greater Noida



Display boards at NETRA explaining microgrid technology

Sanrakshan Society Team
Department of Sustainable Energy Engineering
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