



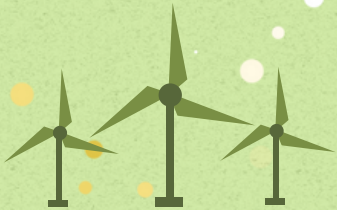
# IEEE YESIST'12

## 2024

# WE POWER

# TRACK

## Brochure



# IEEE YESIST 12



## WePOWER TRACK

### THEME

## “Clean and Affordable Energy”

- The World Bank has initiated the "South Asia Gender and Energy" (SAGE) program, which includes the establishment of the "Women in Power Sector Network in South Asia (WePOWER)". This initiative aims to champion women engineers and professionals in the energy and power sector, striving for a transformative shift in the perception of women in Science, Technology, Engineering, and Mathematics (STEM) education. WePOWER focuses on advancing women's roles in the power and energy sectors, fostering sustainable solutions for living
- IEEE YESIST12's WEPOWER Track focuses on the United Nation's Sustainable Development Goals and SAGE Program of World Bank. The World Bank's South Asia Gender and Energy (SAGE) program, spearheaded by our WePower Track, is breaking down barriers for female engineers and professionals in the energy sector since the inception. This impactful initiative aims to:
- **Champion women in STEM:** WePOWER fights for a transformative shift in how girls and women are perceived in science, technology, engineering, and mathematics (STEM) education.
- **Advance women's roles:** By fostering their participation in the power and energy sectors, WePOWER empowers women to contribute to and lead the development of sustainable solutions.

# IEEE YESIST 12



## WePOWER TRACK

- **Drive innovation for clean energy:** The Theme WePOWER TRACK: “Clean and Affordable Energy” specifically encourages women to contribute to a cleaner and more efficient approach to energy generation.
- **Transform STEM education for women:** WePOWER works towards significant changes in STEM education, ensuring women have the skills and opportunities to succeed in these fields.
- **Build a diverse and inclusive energy sector:** By supporting women's professional development and success, WePOWER fosters diversity and inclusivity in the power and energy engineering community.
- **Promote sustainable cities and communities:** The initiative champions environmentally friendly practices and supports the development of sustainable cities and communities.





THE WEPOWER TRACK INVITES ABSTRACTS OF PROJECTS (PROTOTYPE/ WORKING PROJECTS/ IDEAS/ SIMULATIONS) WHICH ARE FOCUSED ON THE THEME OF “CLEAN AND AFFORDABLE ENERGY”.

THE FOLLOWING ARE THE VARIOUS SUBCATEGORIES TO WHICH ABSTRACTS CAN BE SUBMITTED.

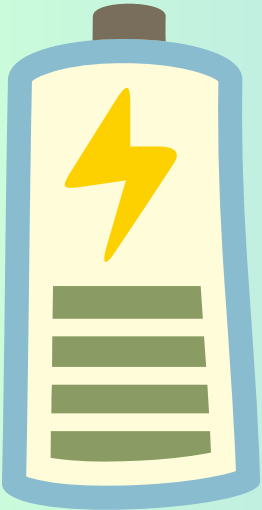
**LET'S  
SEE!!**

## 1.GREEN ENERGY CONSERVATION

This sector involves the production of electricity from renewable energy sources such as solar, wind, hydro, and biomass. It focuses on harnessing clean and sustainable sources of energy to reduce reliance on fossil fuels and mitigate climate change.



## 2.ENERGY STORAGE SOLUTIONS



Energy storage involves capturing and storing energy for later use. This sector focuses on developing technologies and systems to store excess energy generated from renewable sources and release it when needed, improving grid stability and reliability.

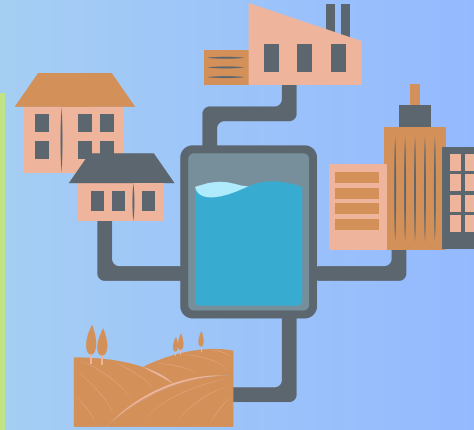
## 3.DEMAND SIDE MANAGEMENT INNOVATION

Demand side management involves strategies and technologies to influence consumer energy usage patterns. This sector focuses on empowering consumers to manage and reduce their energy consumption during peak periods, ultimately leading to more efficient energy usage and cost savings.



## 4.DC DISTRIBUTION SYSTEM

Direct current (DC) distribution systems are an alternative to traditional alternating current (AC) systems for transmitting and distributing electricity. This sector explores the advantages of DC distribution, including improved efficiency, reduced losses, and better integration with renewable energy sources.



## 5. E-MOBILITY SOLUTIONS

E-mobility refers to the transition from conventional internal combustion engine vehicles to electric vehicles (EVs). This sector focuses on developing EV technology, charging infrastructure, and associated services to support the widespread adoption of electric transportation and reduce emissions from the transportation sector.



## 6.SUSTAINABLE SOLUTIONS ACROSS INDUSTRIES

This sector encompasses a wide range of industries and focuses on implementing sustainable practices to reduce environmental impact and promote long-term viability. It includes initiatives such as waste reduction, resource conservation, and eco-friendly manufacturing processes.

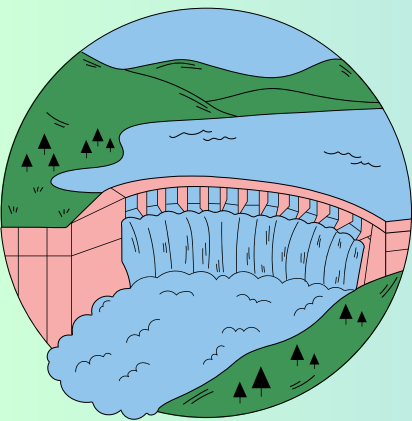


## 7.RENEWABLE ENERGY INTEGRATION

Renewable energy integration involves incorporating renewable energy sources into existing energy systems. This sector focuses on overcoming challenges related to intermittency and variability to ensure the reliable and efficient integration of renewable energy into the grid.



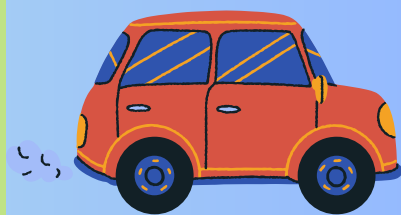
## 8.INNOVATIVE DEMAND SCHEDULING



Demand scheduling involves optimizing energy distribution and consumption based on real-time data and market conditions. This sector explores innovative technologies and strategies to balance supply and demand, reduce peak loads, and improve overall grid efficiency.

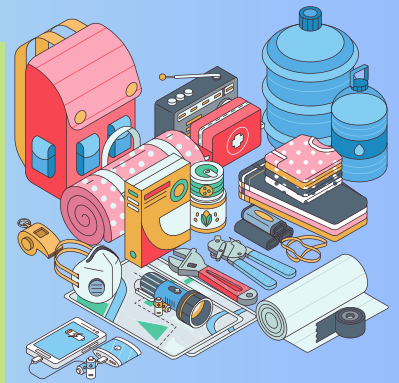
## 9.ELECTRIC VEHICLE INFRASTRUCTURE

Electric vehicle infrastructure includes charging stations, battery swapping facilities, and other infrastructure necessary to support electric vehicles. This sector focuses on expanding and improving EV charging infrastructure to encourage the widespread adoption of electric transportation.



## 10.DISASTER MANAGEMENT RESILIENCE

Disaster management resilience involves ensuring critical infrastructure and services remain operational during and after natural disasters and emergencies. This sector focuses on developing resilient power supply systems, communication networks, and emergency response plans to mitigate the impact of disasters.



## 11.GREEN STREET LIGHTING SOLUTIONS



Green street lighting involves replacing traditional street lighting with energy-efficient LED fixtures powered by renewable energy sources. This sector focuses on reducing energy consumption, lowering maintenance costs, and enhancing public safety through innovative street lighting solutions.

**“We invite you to dream big and think abstractly as we embark on this journey towards a more sustainable future. Together, let's shape a world where innovation and sustainability go hand in hand, creating opportunities for generations to come.”**

*The abstracts can be submitted in the following link*

*<https://portal.ieeyesist12.org/wp-direct> which is also mentioned in the website:*

## GUIDELINES FOR ACTIVE PARTICIPATION

**\*Maximum number of team members: 4. (At least one girl should be on the team.)**

**\*Team members may originate from various academic institutions, businesses, and nations. The team's registered members will be the only ones to receive certificates. The team registration should also include the names of the mentors.**

**\*Teams are locked when the abstract is submitted, and any additional changes to team members or mentors will not be accepted.**

**\*Research studies, idea proposals, working models (hardware), and simulation efforts are all accepted. However, a thorough literature review should firmly support the technical content. Innovativeness and a potential for good should characterize the proposed location.**

**\*Each Team is completely in charge of maintaining its own sense of unity and cooperation.**

**For any other updates visit**  
**<https://ieeeyesist12.org/tracks/wepower/>**

*For any Queries contact:*

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YESIST12, 2024**

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