Association of Energy Engineers | Kolkata Chapter

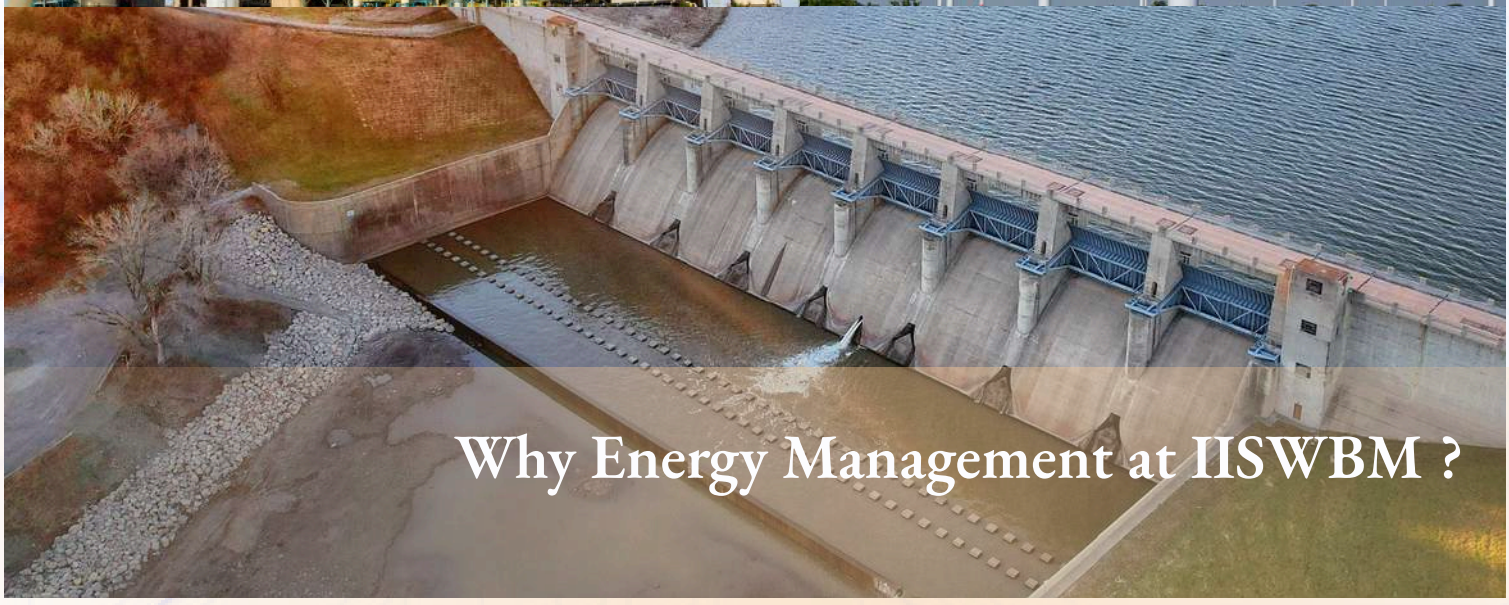
IISWBM

CWEEL Council on Women in Energy & Environmental Leadership

Energy Window

AEE KOLKATA STUDENT CHAPTER NEWSLETTER

V_NO:2025_05_21



Why Energy Management at IISWBM ?

Contents

IISWBM Campus

AEE – Association of Energy Engineers

AEE is a network of over 17,000 members that includes Energy Efficiency & Sustainability Experts and 32,000 certified individuals, in over 105 countries. Joining AEE connects you with a worldwide community, offering access to globally recognized certifications, cutting-edge training, and engaging events. Whether you aim to advance your career, expand your professional network, or contribute to climate goals or raise awareness among societies, AEE is with you every step of the way.

Association of Energy Engineers

Benefits you get at AEE

Become a member of our network, and help shape the future of energy. Having a plethora of benefits and activities for energy efficiency and sustainable development, it is more attractive, among various membership categories, to become a Life Member of AEE, as available at:
https://www.aeecenter.org/membership/
https://www.aeecenter.org/membership/join-categoriesdues/#intl-membership-rates
AEE membership fees for becoming a Life Member (recommended for your vast experience and expertise) information are available at: https://www.aeecenter.org/membership/join-categoriesdues/
Please note that India belongs to tier-IV countries. Lifetime membership pricing for Tier IV is $495. Just a one-time payment to AEE. Thus you may be able to attract nine more members to catch the magic number 10, i.e. the minimum professional members (not necessarily Life Members) required to initiate a new AEE Chapter. Annual Membership is USD 40 per annum is low but then you will have to keep track of their renewals every year to keep the Chapter live! Annual membership fees for the students and Retired Members is only USD 15! Securing membership online is simple and straightforward.

For more information contact:

Dr. Binoy K Choudhury,
Vice President, AEE Kolkata Chapter
Email: bkchoudhury@iiswbm.edu

Dr. Arindam Dutta,
Secretary, AEE Kolkata Chapter
Email: arindamd@iiswbm.edu

Prof. Piyali Sengupta
Treasurer, AEE Kolkata Chapter.
Lead Officer, CWEEL Kolkata Group
Email: piyali.sengupta@iiswbm.edu

IISWBM's Achievements in Energy Management and Sustainability

1. AEE Life Corporate Gold Member

The Indian Institute of Social Welfare and Business Management's status as a Corporate Gold Member of the Association of Energy Engineers (AEE) represents a significant commitment to energy management excellence. This membership:

Positions IISWBM as a leader in energy management education and research in India. Provides access to global best practices, resources, and networking opportunities through AEE's international platform. Elevates the institute's credibility in offering specialized energy management programs & Creates opportunities for faculty and students to participate in international conferences and certification programs. Demonstrates the institute's long-term commitment through the "Life" membership status Establishes formal leadership connections with the Director serving as Ex-Officio President of the Chapter, allowing IISWBM to influence regional energy policies and practices

2. Inspiring DVC to Become a Corporate Gold Life Member

IISWBM's influence extended to the Damodar Valley Corporation (DVC), resulting in several meaningful outcomes: Successfully persuaded a major public utility corporation to formalize its commitment to energy management through AEE membership. Facilitated knowledge transfer between academic and industrial sectors in energy management. It Helped re-establish international collaborations between DVC and the Tennessee Valley Authority (TVA) and created a pathway for implementing global best practices in energy management within Indian power utilities. It Strengthened the regional energy management ecosystem by connecting key stakeholders. Potentially influenced DVC's operational strategies toward more sustainable energy practices. It Demonstrated IISWBM's role as a catalyst for institutional partnerships in the energy sector

3. Establishing CWEEL Activities

The establishment of Centre for Women in Energy, Environment, and Leadership (CWEEL) activities represents IISWBM's commitment to gender diversity in the energy sector: Created a specialized platform addressing gender disparity in the traditionally male-dominated energy sector. Provided networking, mentorship, and professional development opportunities for women in energy. It Facilitated knowledge sharing among women professionals through dedicated forums and events. It Potentially increased female participation in energy management education and careers and aligned with global sustainability goals that emphasize inclusivity and diversity. It Contributed to policy discussions on gender-responsive approaches to energy management & Served as a model for other institutions looking to promote gender equity in technical fields

4. Guiding AEE Kolkata Student Chapter

IISWBM's guidance of the AEE Kolkata Student Chapter created far-reaching educational impact:
It Extended energy education beyond IISWBM's campus to 7 colleges including engineering colleges and other institutions and created a student-led movement to promote energy efficiency and management awareness and initiatives are being taken to visit more colleges in the future. It Provided practical leadership opportunities for students interested in energy careers. Built relationships between IISWBM and other educational institutions in the region & helped disseminate AEE's mission and vision to a broader audience of future professionals. It established a pipeline for developing the next generation of energy management experts. It Created opportunities for interdisciplinary collaboration between business management and engineering students.

5. Mentoring SSET Student Chapter

As a mentor to the SSET Student Chapter, IISWBM demonstrated its commitment to developing future energy leaders: Provided administrative guidance for critical organizational aspects like membership renewal and Shared best practices for chapter management and sustainability program development. It Created a support structure for students interested in energy management careers. Facilitated connections between SSET students and professional networks in the energy sector. It Helped ensure the chapter's long-term viability through ongoing mentorship & potentially assisted with event planning, guest lectures, and field visits related to energy management. Demonstrated IISWBM's commitment to energy education beyond its own institutional boundaries

6. Conducting Training:

The AEE Kolkata Chapter, hosted by the Indian Institute of Social Welfare and Business Management (IISWBM), holds the distinction of being the only accredited training partner of the Association of Energy Engineers (AEE), USA in India. Since 2017, IISWBM has been consistently organizing training programs for two of AEE's most recognized international certifications — Certified Energy Auditor (CEA) and Certified Energy Manager (CEM).

These high-quality, professionally conducted training sessions have significantly contributed to enhancing awareness and understanding of global best practices in energy management across India. The regularity and quality of these trainings have not only elevated the professional standards in the energy efficiency sector but have also led to a notable increase in AEE membership and recognition within the Indian energy and sustainability community. This, in turn, has strengthened the presence and influence of AEE in India, encouraging more professionals to pursue internationally acclaimed certifications and adopt energy-efficient practices.

These achievements collectively position AEE Kolkata Chapter at IISWBM as a significant contributor to energy management education, research, and practice in India, with impacts extending to industry partnerships, gender, diversity, and student development in the field. These activities are the lifelines for the sustenance and progress of AEE Kolkata Chapter IISWBM directly as well as all other professional and student Chapters in India indirectly.

Featured Articles

1. EV Switch in 44 Cities Can Slash 61 Million Tonnes CO_2: TERI Study

By Arindam Hazra
MBA-Energy Management (23-25), IISWBM

A new TERI study indicates that switching to electric vehicles (EVs) in just 44 major Indian cities —each with over a million residents—could reduce carbon dioxide emissions by 61 million tonnes. This initiative is key to aiding India's Net Zero goal by 2070.

Highlights:

Emission Reduction: Targeted urban EV adoption could cut 61 million tonnes of CO_2.

Focus Areas: Electrifying public transport, two- and three-wheelers, and urban freight vehicles.

Economic & Social Benefits: Besides cutting emissions, the shift promises lower operational costs, job creation, and improved urban air quality.

Key Challenges: High vehicle costs, limited charging infrastructure, grid capacity issues, and battery sustainability concerns.

Policy Recommendations: TERI suggests city-specific EV roadmaps, expanded charging networks, fiscal incentives, and coordinated efforts among governments and the private sector.

Overall, the study emphasizes that a strategic approach to EV adoption can significantly enhance urban sustainability while driving economic growth and public health improvements.

2.The Evolving Landscape of GHG Accounting: 2025 Update

By Suman Mandal,
MBA-Energy Management (24-26), IISWBM

As climate regulations tighten worldwide, new developments in greenhouse gas (GHG) accounting are paving the way for clearer, more reliable emissions reporting. Key initiatives include:

GHG Protocol Enhancements: The Protocol has welcomed five new Observing Entities to its Independent Standards Board. This move reinforces robust governance and aligns emissions reporting with evolving global climate policies.

ISSB's Revised Scope 3 Reporting: In a bid to simplify the reporting process for financial institutions, the ISSB has refined its IFRS S2 standard. These changes allow firms to exclude certain Scope 3 emissions (e.g., those linked to derivatives and insurance), sparking a dialogue on balancing administrative ease with full disclosure.

PCAF's Updated Accounting Standard: PCAF has rolled out version two of its Global GHG Accounting and Reporting Standard. With new methodologies to account for emissions—from sovereign debt to removal processes—this update promises a more uniform and actionable framework for the financial sector.

Together, these updates are not only enhancing transparency and accountability in GHG reporting but also empowering organizations to meet rigorous regulatory demands while driving forward sustainable practices.

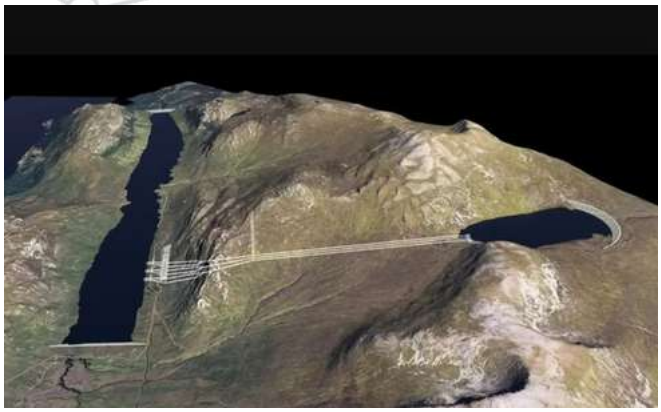
Energy News

Scotland's Pumped Hydro Projects Gain Momentum

Scotland is experiencing a resurgence in pumped storage hydro (PSH) development, a method of energy storage that involves releasing water from elevated reservoirs to generate electricity during peak demand. The technology, exemplified by the Cruachan station built in the 1960s, has gained renewed momentum. In 2019, Drax, known for operating the UK's largest thermal power station, acquired Cruachan and emphasized PSH's potential as a sustainable and innovative energy solution. Since then, numerous PSH projects have been proposed, particularly around Loch Awe and Loch Ness.

Norwegian energy firm Statkraft, Europe's largest producer of renewable energy, acquired the 450 MW Loch na Cathrach project from Scottish developer ILI in 2023, pledging job creation and capital investment. ILI's Mark Wilson is now pursuing an even larger project at Balliemeanoch near Cruachan. Meanwhile, the Balmacaan estate's MacLeod family is spearheading another PSH initiative at Glen Earrach on Loch Ness.

Scotland currently hosts nine of the UK's eleven largest PSH projects, reflecting its strategic role in advancing green energy infrastructure. Collaborations between local landowners and global firms, such as AECOM, are key to this momentum. The comparative effectiveness of private versus state-led models, however, remains to be seen.



EDF Offers Free Electricity to Encourage Off-Peak Usage

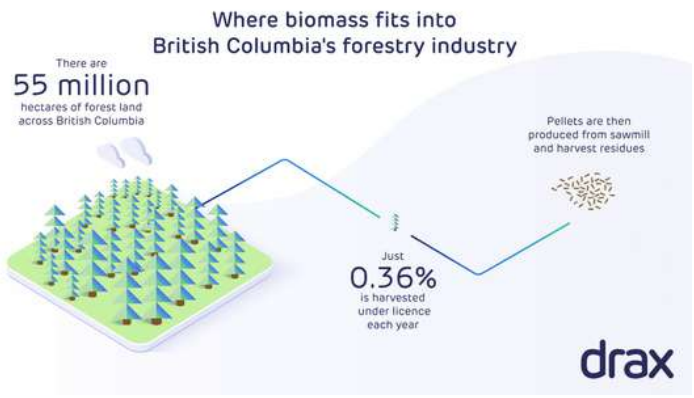
EDF, a major energy supplier, is launching a Sunday Saver challenge offering free electricity to customers on four Sundays: May 18, May 25, June 1, and June 8, 2025. To qualify, customers must reduce their weekday electricity usage between 4pm and 7pm, starting May 5, and sign up between April 28 and May 4 via their EDF MyAccount. The more peak usage they avoid, the more free electricity they earn, up to 16 hours credited for Sunday use. Users must have smart meters set for 30-minute readings.

Other energy companies are offering similar incentives. E.ON Next gives free electricity on bank holidays to customers on its Pledge tariff. Ovo Energy offers prize draws for users who minimize peak usage, with prizes up to £2,000. Scottish Power provides half-price electricity on weekends during set hours for registered users. Octopus Energy rewards customers during negative wholesale price periods via its Octoplus program.

The average UK energy bill rose to £1,849 in April 2025, increasing household costs. Assistance is available from suppliers like British Gas, EDF, and Octopus. Vulnerable customers are encouraged to register for the Priority Services Register for additional support and protections.

Energy Leaders Convene at London Summit to Discuss Energy Security

At a recent summit in London, energy sector leaders gathered to usher in a new era of energy security. The International Energy Agency (IEA) emphasized its commitment to spearheading international efforts to ensure secure, affordable, and sustainable energy supplies for all. The summit highlighted the importance of collaboration among nations to address energy challenges and transition towards cleaner energy sources.



Drax Faces Criticism Over Biomass Energy Practices

A recent House of Commons Public Accounts Committee (PAC) report has harshly criticized the substantial government subsidies granted to Drax, the UK-based, publicly listed biomass energy company that burns approximately 27 million trees annually. Though marketed as a renewable energy source, wood biomass emits around 20% more CO2 than coal at the point of combustion. Under current accounting rules, emissions are attributed to the forests of origin rather than the UK, masking Drax's true carbon footprint. Drax has received £22 billion in subsidies and was found to have used material from old-growth forests, despite previous claims of only using sustainable waste wood. Oversight from Ofgem and the Climate Change Committee was found to be inadequate, with the latter's impartiality questioned due to a board member's prior role at Drax. The PAC found regulatory gaps, insufficient sustainability checks, and questioned the value for money of continued subsidies. Despite criticism, Energy Secretary Ed Miliband—who first pushed for biomass expansion in 2008—remains a key proponent. Drax's proposed carbon capture project, crucial to government net-zero goals, faces delays and staff layoffs, casting doubt on its viability. Meanwhile, the UK continues to depend on Drax for energy security amid declining investment in alternatives like nuclear power.

Global Electricity Review Highlights Solar's Rapid Rise

The global power system will be dominated by two mega-trends over the rest of the decade: solar's share in the electricity mix rising rapidly as costs continue to fall, and the need for flexible resources to balance variable renewable generation. These trends are reshaping electricity systems worldwide, with solar becoming the cheapest source of new power in many regions.

Clean Energy Expansion Faces Multiple Threats

Clean energy is rapidly expanding, with 93% of new U.S. energy capacity in 2024 coming from low-emission sources like wind, solar, and batteries. The Energy Information Administration projects that solar and battery power will account for 81% of new capacity in 2025. Globally, about 80% of the increase in electricity generation in 2024 came from zero-emission sources. Despite this growth, several challenges threaten to slow the transition.

First, tariffs, particularly under President Trump, may raise the cost of clean energy imports and provoke retaliatory measures abroad, affecting U.S. exports and jobs in a fast-growing employment sector. Second, economic uncertainty and reduced government support under the Trump administration could limit investment and hinder development. Third, regulatory issues and outdated permitting processes delay project approvals. Fourth, an aging power grid is ill-equipped to handle renewable sources, needing significant updates and expansion. Lastly, fossil fuel industries continue to dominate global energy and invest heavily to maintain their influence.

Nonetheless, technological advancements, domestic manufacturing gains like new battery plants, and continued commitments from states, businesses, and individuals support the ongoing shift. Though the path faces hurdles, the clean energy transformation is progressing and increasingly difficult to halt.

Trump Administration Accelerates Fossil Fuel Project Approvals

The Trump administration has drastically reduced the timeline for environmental reviews of oil, gas, coal, and critical mineral projects on federal lands, cutting approval times from years to as little as 14 to 28 days. This move, announced by the Interior Department, is in response to President Trump's earlier declaration of a national energy emergency, aiming to boost U.S. energy security by accelerating project approvals. However, the expedited process does not apply to solar and wind energy projects. The American Petroleum Institute praised the reform, while environmental organizations, such as the Sierra Club, criticized the decision, warning it compromises comprehensive environmental assessments and increases risks of pollution. Legal challenges are anticipated, and some developers may hesitate until courts validate the emergency permitting process. Approximately 24% of U.S. oil production is from federal lands and waters, potentially benefiting companies located in regions like Houston.

Interior Secretary Doug Burgum and Energy Secretary Chris Wright speak to reporters outside of the White House on March 19, 2025.

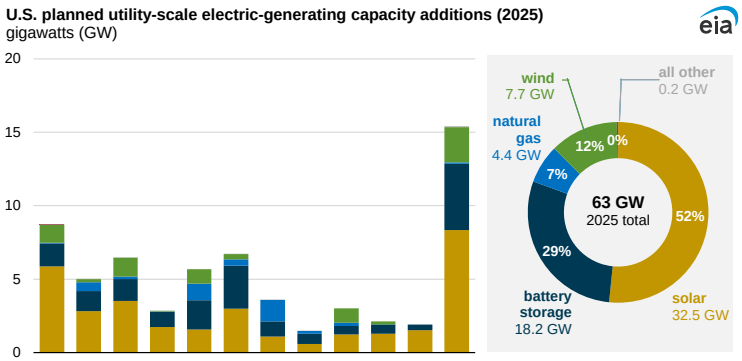
Queensland's Borumba Pumped Hydro Project Faces Opposition

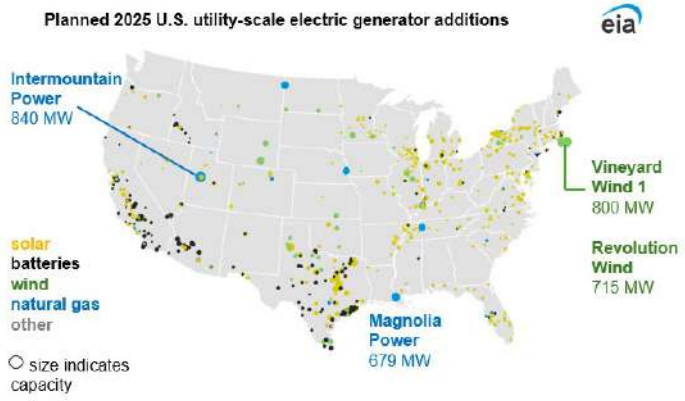
A growing petition initiated by Moy Pocket resident Sarah Stewart has amassed nearly 5,000 signatures in just two weeks, expressing opposition to the Borumba Pumped Hydro Project planned for the Mary River catchment in Queensland. Concerns center around the potential ecological damage to the region's fragile ecosystem, home to around 150 plant and animal species, including endangered species like the Mary River cod, Mary River turtle, Australian lungfish, and the white-throated snapping turtle. The $14 billion project, which dates back 40 years in planning, has faced rising costs and community backlash. The Queensland Hydro project is currently in its exploratory phase and has received state-level approvals, but still awaits approval under the Commonwealth EPBC Act. Queensland Hydro stated the project is being refined to minimize environmental, cultural, and community impact while addressing the state's long-term energy storage needs. The project could begin producing energy by February 2033 if final approvals are granted.

The new LNP Queensland government has already scrapped plans for the 120GWh Pioneer-Burdekin Pumped Hydro site

U.S. Solar and Energy Storage Set for Major Growth in 2025

The U.S. energy system is changing fast. In 2025, the country is expected to add about 97 gigawatts (GW) of new electricity capacity. Most of this growth will come from solar power and energy storage, showing strong momentum for clean energy, even as fossil fuels remain part of the mix.





Initiatives by the Indian Institute of Social Welfare and Business Management

ASAR Social Impact Advisors Pvt Ltd and IISWBM signed a research project on optimal use in Micro and cottage industries comprise the bulk of the MSME sector and contribute to most of the employment attributable to the sector, the second largest employer after agriculture. The proposed project seeks to enable the clusters with presence of micro and cottage industries to decarbonize. The project relies on a large sample of such industries to conduct walk-through assessment of energy use to identify implementation pathways.

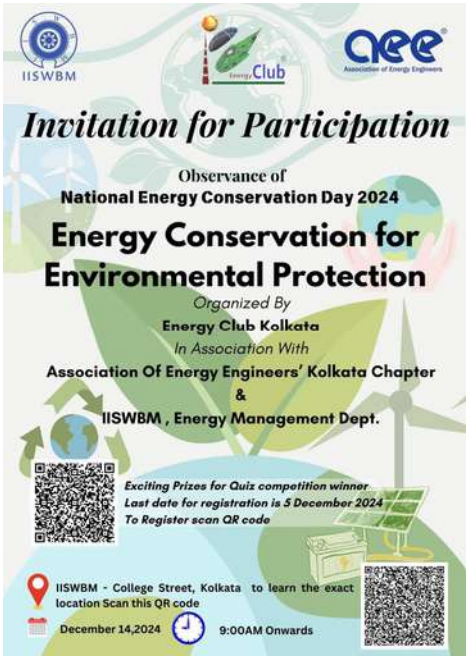
The walk-through assessment is in progress and the final result to be conducted in collaboration with the Indian Institute of Social Welfare and Business Management (IISWBM). The findings of the assessment will be compiled into a report and released at a state-level convening on decarbonisation of MSMEs. The project would call for IISWBM to develop and equip a cluster-level decarbonisation accelerator with advanced capacity to conduct such audits. Study in at least three sectors would be a detailed energy analysis of at least five unis in each sector

DVC-IISWBM joint venture

DVC and IISWBM are collaboratively undertaking an innovative agrivoltaics project that leverages coal ash to support sustainable agricultural practices. By integrating solar energy with crop cultivation, the initiative aims to enhance land-use efficiency, reduce environmental impact, and promote clean energy adoption. This project exemplifies a forward-thinking approach to achieving sustainable development in agriculture and energy sectors.

Initiatives by the Indian Institute of Social Welfare and Business Management

IISWBM celebrates National Energy Conservation Day on 14th December and Earth Day on 22nd April through the MBA – Energy Management department. These events feature expert talks, student activities, and awareness campaigns aimed at promoting energy efficiency, environmental sustainability, and responsible resource use.



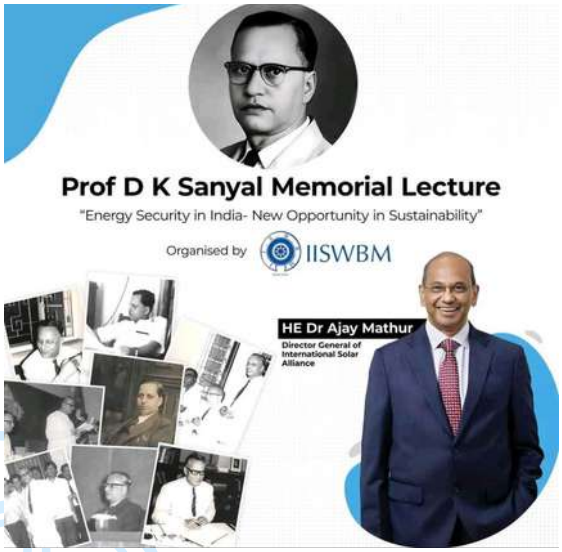
National Energy Conservation Day (14th December , 2024)

Earth Day (22nd April , 2025)

Latest Chapter News


সোপান
এনার্জি ম্যানেজমেন্ট

IISWBM on the news for energy management at local news paper (aajkal potrika)



Seminar on Energy Security in India- New Opportunity in Sustainability on the occasion of Prof . D K Sanyal Memorial Lecture

Career in Energy Management

Why Energy Management At IISWBM?

The power and energy sector are experiencing a remarkable transformation worldwide, driven by the need for sustainable and clean energy solutions. This paradigm shift presents immense potential for individuals seeking a rewarding and impactful career. At IISWBM, we understand the significance of this industry and have designed our MBA-Energy Management program to equip students with the knowledge and skills necessary to excel in this dynamic field. As the first management institute in Southeast Asia, we take pride in offering a comprehensive and specialized curriculum that addresses the evolving needs of the energy sector. Our program focuses on areas such as renewable energy, electric vehicles, energy efficiency, and sustainable infrastructure development. By enrolling in our MBA in Energy Management program, you will have the opportunity to gain in-depth knowledge of these critical aspects and contribute to shaping a greener future.