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present

18th Environment and Energy Conclave

Sustainability in Viksit Bharat - Collaborations and Implementations with **Financial Models** and **Technology Adaptations**

4th September 2025

India Habitat Centre, New Delhi

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1. Introduction

The Bengal Chamber of Commerce and Industry (BCC&I), organized the 18th Edition of BCC&I's Annual Environment and Energy Conclave on 4th September 2025 at the India Habitat Centre, New Delhi. Over the years, the annual flagship initiative has evolved into one of the most significant platforms for dialogue and action on energy, environment and sustainability in India.

The theme for this year, 'Sustainability in Viksit Bharat – Collaborations and Implementations with Financial Models and Technology Adaptations', reflects the nation's aspirations to balance rapid economic growth with climate resilience, social progress and good governance. As India advances towards the vision of Viksit Bharat 2047, the role of renewable energy, efficient resource utilization, innovative financial strategies and technological adaptation is more critical than ever.

The Conclave brought together leaders from corporates, governance, academia and civil society, fostering constructive dialogue on pathways to a low-carbon, inclusive and resilient future. Through leadership addresses, B2B meetings and digital exhibitions, the conclave enabled multi-stakeholder engagements for addressing India's energy transition and climate commitments. The conclave had participation of over 200 delegates from Delhi-NCR, Mumbai, Kolkata and other cities.

The winners and the finalists of the 'Pan-India Awards on Energy Efficiency and Resource Utilisation', organised by BCC&I, were also felicitated during the conclave recognizing their exemplary contributions towards implementing transformative initiatives for driving operational efficiency and sustainable growth.

2. Objectives

- Advance Sustainability in Viksit Bharat Vision – to promote strategies that integrate economic growth, environmental protection and social justice to achieve India's goal of becoming a developed nation by 2047.
- Promote Financial Models & Technology Adaptations – to explore innovative financing mechanisms – digital and technological solutions necessary to meet India's Net Zero targets and clean energy investment requirements.
- Facilitate Multistakeholders' Collaborations – to strengthen partnerships and collaborations for accelerating sustainable development initiatives
- Strengthen India's Global Role in Renewable Adoption – To provide a platform for leadership dialogues, policy roundtables and B2B collaborations that reinforce India's position as a global leader in climate action and sustainable energy transitions.
- Recognizing Corporates, MSMEs and Startups across the Country through the 'Pan India Awards on Energy Efficiency and Resource Utilization' for innovative practices and their role as key drivers of India's clean energy transition and sustainable future.

3. Recommendations

- Building reliable grids is central to the energy transition, requiring a gradual phase-out of coal, greater reliance on nuclear and hydro and timely policy clearances to adopt new technologies. Energy efficiency, consumer responsibility, and localization will be crucial in ensuring sustainability.
- Transition pathways for private sector engagement in responsible supply chains that reduce carbon footprints, green certifications and scalable solutions in areas such as waste management, healthcare, AI-driven circular economy. Economic opportunities for women and marginalized communities in the green sector.
- Any transition initiative must satisfy three conditions—social, commercial, and political viability, emphasizing on the need for frameworks that balance environmental progress with market realities.
- Identified four imperatives for India's sustainable transition: aligning long- and short-term goals, creating demand, investing in research and raising public awareness.
- While electrolyzers are currently imported there is urgent need to build indigenous manufacturing capacity to strengthen self-reliance and capture value within India. India is deeply dependent on fossil fuel for energy generation which can have negative geopolitical implications for India.
- Emphasize on the role of Industry 4.0 technologies like AI/ML, digital twins, IoT and advanced analytics in enhancing operational efficiency, asset performance and customer experience.
- While renewables have emerged as a cornerstone of India's clean energy transition, challenges such as intermittency, distribution, storage and grid integration remain critical. To address these, large-scale renewable projects, smart grids, digital technologies and storage solutions such as Battery Energy Storage System (BESS) and pumped hydro should be implemented.
- Emerging solutions such as Vehicle-to-Grid (V2G) technology, national registries for rooftop solar and distributed energy and blockchain-enabled green energy certificates. These innovations will strengthen resilience, reduce costs and accelerate India's energy transition.

4. Pan India Awards on Energy Efficiency and Resource Utilisation

The winners and the finalists of the 'Pan India Award on Energy Efficiency and Resource Utilisation' were felicitated during the 18th Environment and Energy Conclave to recognize corporates and startups demonstrating exemplary commitment to sustainability, resource optimization and innovative energy management practices. The award was divided into three categories : 1) Large Industries 2) MSME and 3) Startups.

The Winners of the Pan India Awards on Energy Efficiency and Resource Utilisation are:

- Indian Oil Corporation Limited, Refineries Division - Winner of 'Excellence Award in Energy Efficiency and Resource Utilisation'

- Berger Paints India Limited - 2nd Place for 'Excellence Award in Energy Efficiency and Resource Utilisation'

- Megatherm Induction Limited - 'Leadership Excellence in Operational Efficiency & Green Innovation Award' (MSME)

- IQPonics Technologies Pvt Ltd - 'Excellence in Digital Sustainability Leadership Award' (Startup)

The Other Finalists of the Pan India Awards on Energy Efficiency and Resource Utilisation are:

- CESC Limited (Distribution)
- CESC Limited (Generation)
- GAIL (India) Limited
- Haldia Petrochemicals Limited
- Mahanagar Gas Limited

BCC&I recognizes the important role that private sector plays in facilitating sustainable solutions and green transition. Large corporates, MSMEs and start-ups alike play a vital role in leading India's transition toward energy efficiency and responsible resource utilization. The winners and finalists demonstrated best practices that align with India's larger goals of sustainable growth, reduced emissions and circular economy in line with the vision of becoming Viksit Bharat by 2047.

5. Exhibition Stalls

Delegates in the exhibition stalls area on 4th September 2025

6. Conclusion

The 18th Environment and Energy Conclave deliberated on various pathways for building a sustainable and resilient Viksit Bharat. The key objective of the conclave was advancing energy transition and net zero goals leveraging financial models and technology adaptations. Speakers highlighted importance of diversifying India's energy mix. Green hydrogen, ammonia, advanced storage solutions, biofuels and the integration of hydro and nuclear power is essential to decarbonizing. Import substitution, particularly to facilitate stronger homegrown R&D industry was recognized as vital for strengthening domestic capabilities and positioning India as a clean energy hub.

Another focus was strengthening energy security by building resilient grid infrastructure integrated with AI-driven forecasting, predictive monitoring, smart grids and distributed generation to ensure reliable and affordable power. AI integration will also enable optimization of operations, improve efficiency and unlock new business models.

The role of climate financing instruments and mechanisms and regulatory frameworks were also emphasized. ESG frameworks, SLBs, green bonds and government-backed mechanisms such as PAT, CCTS and RCO obligations were recognized as critical for aligning profitability with sustainability. Banks and investors increasingly link financing to emissions performance shows us that green finance is now integral to competitiveness.

Finally, collaboration and partnerships were underlined as the cornerstone of progress. With MSMEs contributing 30% of GDP and agriculture 18%, participants emphasized inclusive growth, green skills, and circular economy solutions, alongside global cooperation. The conclave concluded with consensus that India can align purpose with profit through shared responsibility, translating sustainability into the foundation of a prosperous and equitable Viksit Bharat.

Distinguished Audience During the Conclave

7. Annexure A

Inaugural Session

Mr. Vineet Sikka, Chairperson, Energy Environment Water National Committee, BCC&I and MD-Distribution, CESC Ltd

The Inaugural Session of the 18th Environment and Energy Conclave opened with the Welcome Address by Mr. Vineet Sikka, Chairperson, Energy Environment Water National Committee, BCC&I and MD-Distribution, CESC Ltd, who extended his gratitude to the eminent speakers and dignitaries for their presence. With a population of 1.4 billion, India is one of the largest consumers of energy, making energy security a matter of national importance. While the Country has made commendable progress in renewable adoption, he emphasized that long-term sustainability requires continuous innovation and collaborative efforts. He also underlined BCC&I's continuous engagements in the sustainability sector through diverse initiatives spanning waste management, ESG, carbon sequestration, skilling, and policy advocacy. Reflecting on the evolution of the Conclave and it's previous 17 editions, Mr. Sikka noted how BCC&I has navigated discussions critical to global prioritise - from the Kyoto Protocol to the Paris Agreement and worked in the areas of Circular Economy , Diversity Equity and Inclusion, Energy Efficiency, Biodiversity Conservation, etc. He introduced the theme of the Conclave – 'Sustainability in Viksit Bharat: Collaborations and Implementations with Financial Models and Technology Adaptations', emphasizing on the need for low-cost innovations, cross-sectoral partnerships and financial models that can accelerate India's green transition.

Mr. Vineet Sikka

Chairperson, Energy Environment Water National Committee, BCC&I and MD-Distribution, CESC Ltd

Mr. Ghanshyam Prasad, Chairperson of the Central Electricity Authority (CEA)

- While India has already achieved around 490 GW of renewable capacity and over 40% of its energy mix from non-fossil sources, achieving the net zero target by 2070 will require doubling installed capacity at an accelerated pace.
- Noting the challenges around land, transmission, connectivity, and consumer behaviour that make renewable transition complex, he stated emerging technologies offer potential solutions.
- Encouraging progress in long-duration battery storage and hydro-pump storage, particularly in the peninsular region, though leveraging imported technologies may be necessary to meet quick adaptation goals.
- Mr. Prasad further cautioned that growing demands from green hydrogen, ammonia, electric vehicles, and data centers will put additional strain on the grid. Green power, he noted, also poses challenges for DISCOMs, raising the question of 'whether' and 'how' renewable energy generated can be formally demarcated as 'green'.
- He concluded by emphasizing that energy planning must balance environmental imperatives with developmental needs while ensuring reliable and sustainable grids.

Mr. Ghanshyam Prasad

Chairperson, Central Electricity Authority (CEA)

Mr. Rajib Kumar Sen, Programme Director - (Health & Family Welfare, State and Finances, Sustainable Development Goals, Women & Child Development), NITI Aayog

Mr. Rajib Kumar Sen, Programme Director, NITI Aayog, addressed the topic 'India's Voluntary National Review 2025 towards Sustainable Development Goals - Scope of Private Sector Participation'.

- He emphasized that realizing the 2030 SDG agenda demands active involvement of the private sector, which is central to building resilient markets and aligning India's growth trajectory with global sustainability commitments.

- While SDGs are often perceived through a social lens, their commercial dimension is equally vital. Responsible consumption strengthens business models by reducing operational risks, making supply chains resilient and aligning profit with purpose.
- Transitioning to sustainable development must also mean just and inclusive growth. The private sector can play a leading role in skilling the workforce for green jobs.
- India has strongly recognised the need for private sector's role on achieving Agenda 2030. The 2025 Voluntary National Review (VNR) process galvanised voices from every sector including national and sub-national governments, civil society, and the private sector. A national consultation on "The Role of the Private Sector in Accelerating SDG Achievement and Towards Viksit Bharat 2047" was convened by NITI Aayog and UN agencies in 2025 and three clear pathways emerged: Corporate Social Responsibility (CSR); Responsible Business Conduct, and Start-up and Innovation Ecosystem. It is clear that a "whole-of-society" approach is essential for SDG progress.
- Instruments like Sustainability-Linked Bonds (SLBs), green bonds and ESG disclosures are no longer symbolic, they directly influence the creditworthiness of companies. Opportunities also lie in sustainable packaging, green transport, urban planning and green skilling which can generate jobs and drive competitiveness.
- Without private sector leadership, the SDGs will remain aspirational, a sustainable and equitable India must be built through participation of the all sections of the society.

"The SDGs are often perceived primarily through a social lens - poverty alleviation, education, health, gender equality. And indeed, these pillars are foundational for human dignity and collective progress. Yet, what is sometimes underemphasised is the fact that the SDGs are equally commercial in nature. They are not only about addressing immediate social needs, but also about creating conditions where economies can thrive sustainably and where the natural resources, we depend on are preserved for generations to come."

"Today, the SDGs are a roadmap for resilient business, inclusive growth, and a sustainable planet."

Mr. Rajib Kumar Sen

Programme Director - (Health & Family Welfare, State and Finances, Sustainable Development Goals, Women & Child Development), NITI Aayog

Dr. Ajay Mathur, Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA

Dr. Ajay Mathur, Professor of Practice at the School of Public Policy, IIT Delhi and Former Director General of the International Solar Alliance, delivered the Theme Address, outlining the pathways to achieve Viksit Bharat.He emphasized that realizing the 2030 SDG agenda demands active involvement of the private sector, which is central to building resilient markets and aligning India's growth trajectory with global sustainability commitments.

- Long term goals such as net zero are well established but short-term goals are crucial to sustain momentum and demonstrate benefits.
- He highlighted India's efforts to attract investment through Production Linked Incentives (PLI), the National Solar Mission as a technological driver and policy tools such as incentivizing battery manufacturing for EVs and issuing green bonds by the RBI.
- These steps, supported by a green finance taxonomy, aim to mobilize capital and technology while creating competition and demand.
- He also emphasized that any transition must satisfy three conditions—social, commercial, and political viability, emphasizing on the need for frameworks that balance environmental progress with market realities.
- Challenges such as urea subsidies, coal price controls and the high upfront costs of renewables create considerable obstacles for adoption of clean energy sources.
- Demand creation is key to lowering costs and scaling storage solutions. There is a need to invest in R&D, Anusandhan National Research Foundation (ANRF) is there but they are unable to bridge the gap between private sector and academia.
- Whenever private sector needs technology they go aboard as it's cheaper and less time consuming. A forward looking policy that links procurement with performance needs to be pursued.

Dr. Ajay Mathur

Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA

- **Mr. Derek Michael Shah, Chief Executing Officer & Managing Director, L&T Energy GreenTech**
- Mr. Derek Michael Shah, Chief Executive Officer & Managing Director, L&T Energy GreenTech, addressed the theme 'Hydrogen Economy: Possibility for India'.
- Hydrogen represents a powerful convergence of India's decarbonization goals, rising energy demands and the global push for sustainability.
- Green hydrogen goes beyond reducing emissions, it can play a pivotal role in decarbonizing hard-to-abate sectors such as steel and cement.
- With the European Union's Carbon Border Adjustment Mechanism (CBAM) set to impact India's steel exports, transitioning to green hydrogen is both an environmental and economic necessity.
- At present, renewable energy is at an intermittent phase which will allow hydrogen economy to develop, at present hydrogen is mostly used as a feedstock but there is also scope for it's utility in storage systems.
- Describing the hydrogen ecosystem as a huge up and coming economic opportunity, he noted the price discovery for green hydrogen has been great and there has been rising interest from industries in adopting green hydrogen and green ammonia.
- With strong interests from the European Union, Japan and Singapore, India is poised to become an important global supplier due to price competitiveness.
- Referring to the Prime Minister's Green Hydrogen Mission, he emphasized that private sector players like L&T Greentech are ready to integrate hydrogen with storage, nuclear and other clean energy solutions.

Mr. Derek Michael Shah

Chief Executing Officer & Managing Director, L&T Energy GreenTech

- **Mr. Abhishek Ranjan, CEO, BSES Rajdhani Power Limited**
- Mr. Abhishek Ranjan, CEO of BSES Rajdhani Power Limited, spoke on 'Technology-led Sustainability in Power Distribution'.
- Highlighted that the future of sustainable energy lies in technology adoption, particularly Artificial Intelligence (AI) and digital solutions. As energy demand grows - both in the form of electricity and non-electricity, technology will be the key enabler for achieving grid stability and sustainable distribution channels.
- To increase the share of green power in the energy basket would require grid flexibility and innovative approaches for demand forecasting and management.
- He highlighted the role of distributed energy sources and the importance of forecasting net demand accurately.
- Artificial Intelligence, combined with tools like weather modelling, can forecast both demand and generation while minimizing disruption. A strong emphasis must also be placed on reducing losses across the system to make grids more efficient and reduce cost.
- Mr. Ranjan also underscored the concept of a digital energy grid where every node is digitized to provide real-time situational awareness, allowing synergies in grid management and optimizing infrastructure use even during off-peak periods.
- The Central Electricity Authority's (CEA) regulations support making the grid greener and more decongested. Predictive monitoring, demand flexibility mechanisms, and resilient transmission lines will enhance reliability while lowering costs.
- He concluded that AI-driven solutions, including industrial heat modeling will be crucial in building a reliable, efficient and sustainable power distribution system for the future.

Mr. Abhishek Ranjan

CEO, BSES Rajdhani Power Limited

Session 2: Financial Models and Technology Adaptations

Chaired by: Mr. Deb A Mukherjee, Former President, BCC&I and Managing Director, Cenergist Energy Private Limited introduced the session

- He emphasized that technology and finance must work together to deliver tangible, scalable benefits, cautioning that businesses will not embrace sustainability unless it is economically viable.
- Technology and finance has a symbiotic relationship and one can't implement sustainable solutions if it gives palpable benefits. If social political and economic consideration is not met then any kind of adaptation will not yield potential benefit.
- Stating the importance of the MSME and agriculture to the Indian economy, he urged the speakers of the session to address how these two sectors can navigate green transition.
- A balanced and calibrated approach is needed to navigate CBAM and the trade barriers due to current geopolitical scenario

Mr. Deb A Mukherjee

Former President, BCC&I and Managing Director, Cenergist Energy Private Limited

Mr. Asim Prasad, Executive Director (Corporate Strategy, Planning, Advocacy and Corporate Affairs), GAIL (India) Ltd

- Mr. Asim Prasad, highlighted GAIL's expanding business portfolio, strategic initiatives in advancing energy transition and sustainability while embracing cutting-edge technologies for business transformation.
- He shared GAIL's progress in diversifying its portfolio through joint ventures in ethanol, urea production using coal gasification, and synthetic natural gas. Compressed bio gas is an important lever for green transition.
- The company has also accelerated its sustainability roadmap by advancing its net-zero Scope 1 and 2 emissions target to 2035, commissioning India's first 10 MW green hydrogen electrolyser, and expanding solar and floating solar capacities.
- On the infrastructure front, GAIL continues to strengthen the natural gas ecosystem with pipelines, LNG for transportation, CBG plants, innovative SSLNG units along with commissioning new green hydrogen plants.
- The role of IR4 Technology and Data Analytics was also highlighted. These are essential for business transformation leading to process optimization, improving customer experience and driving innovation through use cases using IR4 technologies.

Mr. Asim Prasad

Executive Director (Corporate Strategy, Planning Advocacy and Corporate Affairs), GAIL (India) Ltd

Mr. Subhajit Sarkar, Executive Director (Operations), RHQ, Indian Oil Corporation Limited

- IOCL is the largest refiner in India, operating 10 refineries (nine owned, one in CPCL). The current combined crude processing capacity is 80.75 MMTPA. IOCL plans to expand its capacity from 80.75 MMT to 98.4 MMT by 2027. IOCL is also diversifying into petrochemicals and green fuels.

- IOCL aspires to achieve Net Zero goals for Scope 1 and 2 emissions by 2046, which is one year before the 100th year of India's independence. IOCL has already reduced approximately 3 million tonnes of CO2 over the last three years (based on the 2022 base year) through energy savings schemes. These schemes include improving the efficiency of furnaces and boilers and converting less efficient steam drives to electrical drives. This transition requires expanding and integrating with the electrical grid.

- IOCL is pursuing Green Hydrogen and Biofuels as key pathways for decarbonisation. IOCL's corporate target is to convert 50% of its gray hydrogen consumption to green hydrogen by 2030. A tender for 10 KTA green hydrogen plant in Panipat was awarded. This plant is expected to be functional by December 2027

- A simple, cost-effective method involves feeding Compressed Bio Gas (CBG) into the existing natural gas network. Since the CO2 emission from CBG (mostly methane) is captured through biomass in its life cycle, using it in the existing SMR plant makes the resulting hydrogen 'green'. This represents technological adaptation—changing the feedstock instead of setting up a new plant.

- IOCL is active in supporting the economy and farmers through biofuels. IOCL has been a leader in increasing ethanol blending in Motor Spirit (MS) is currently standing at 20%. IOCL has a 2G bio-plant in Panipat that uses rice stubble as feedstock. This helps farmers avoid burning stubble and converts stubble into ethanol.

- The international mandate requires the total aviation fuel supply to contain 1% SAF by January 1, 2027, 2% by 2028, and 5% by 2030. IOCL is producing SAF through co-processing at Panipat, another example of technological adaptation where costs are lower.

- Financial models are vital for business viability. Government backed mechanisms such as PAT, CCTS, RCO adoption and MNRE rebates for green hydrogen will encourage investment in India’s clean energy sector.

“Adoption brings in the new. Adaptation reshapes the existing—and that’s where transformation truly begins.”

“Sustainability isn’t just about being environment-friendly; it must also be ‘interest-friendly.’ Without financial viability, no green initiative can endure. True sustainability balances care for the planet with care for profitability.”

Mr. Subhajit Sarkar

Executive Director (Operations), RHQ,
Indian Oil Corporation Limited

Mr. Manish Ranjan, Co-Chairperson, Energy Environment Water National Committee, BCC&I and ESG and Sustainability Practice Lead India Geo, Hewlett Packard Enterprise India Pvt. Ltd

- While talking about the role of regulator's, he emphasized on SEBI's Business Responsibility and Sustainability Reporting (BRSR) framework which applies to the top 1,000 listed companies. While disclosures are currently mandatory only for these large firms, the inclusion of supply chains in the reporting structure will gradually bring MSMEs into the sustainability ecosystem helping curb Scope 3 emissions.
- Large corporations have the financial strength to decarbonize, their MSME partners often lack resources. Ensuring MSME participation is crucial for building a low-carbon value chain.
- Finance is the fulcrum of any sustainable project. Banks and financial institutions are now integrating environmental risk into lending practices, for example, the bank lending money for a company's large infrastructure project will also be liable for the company's scope 3 emissions, influencing credit decisions.
- He referred to the recently launched **ADEETIE** scheme, aimed at supporting innovation and sustainable projects, underscoring the government's commitment to enabling green finance.

Mr. Manish Ranjan

Co-Chairperson, Energy Environment Water National Committee, BCC&I and ESG and Sustainability Practice Lead India Geo, Hewlett Packard Enterprise India Pvt. Ltd

Session 3: Energy Security in Viksit Bharat

Session Chaired by Dr. Ajay Mathur, Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA

Dr. Ajay Mathur, set the context for Session 3 on 'Energy Security in Viksit Bharat'. Emphasizing that energy is the backbone of development, central to powering India's economy, improving living standards and ensuring environmental sustainability, he highlighted India's ambitious transition targets: 500 GW of non-fossil fuel capacity and decarbonizing 50% of the energy mix. He noted that the country is at a transformative juncture. He also stressed climate justice and inclusive growth as guiding principles for India's net zero journey.

Dr. Ajay Mathur

Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA

Mr. Ajay Kumar, General Manager- Production, ONGC

- India is projected to account for 18% of global energy consumption by 2047, faces both immense challenges and opportunities in balancing growth with sustainability.
- Highlighting India's ambitious Panchamrit commitments, he underlined targets such as achieving 500 GW of non-fossil fuel capacity, reducing carbon intensity of GDP by 45% by 2030 and attaining net-zero emissions by 2070.
- Mr. Kumar stressed the importance of diversifying the energy mix through solar, wind, hydrogen, CCUS, biofuels and emerging technologies like geothermal, while simultaneously boosting exploration, MSMEs, and downstream businesses.
- He also showcased ONGC's target to achieve Scope 1 and 2 net-zero by 2038 and its foray into green hydrogen, biofuels, and circular economy initiatives reinforcing ONGC's commitment to driving sustainable growth, energy independence, and innovation for a low-carbon future.

Mr. Ajay Kumar

General Manager- Production, ONGC

Mr. Bikram Singh, Executive Director, PTC India Limited

- Energy is not just a sectoral requirement but the backbone of India's developmental aspirations. Electricity demand is projected to nearly double by 2040, ensuring a reliable, affordable and sustainable energy supply is vital for achieving the vision of Viksit Bharat 2047.
- Role of innovative power market instruments like Virtual Power Purchase Agreements (VPPAs) which are expected to be introduced soon and electricity derivatives in providing long-term price stability, reduce exposure to volatility and support corporate sustainability goals. These tools are reshaping the market by enabling flexibility and hedging mechanisms for stakeholders.
- Emerging pathways such as green hydrogen, bio-CNG and ammonia will play an important role in decarbonizing hard-to-abate sectors.
- He stressed that energy traders will play a strategic role as portfolio managers, ensuring balanced growth, risk mitigation and market stability, ultimately strengthening India's energy security.

Mr. Bikram Singh

Executive Director,
PTC India Limited

Mr. Pramod Singh, Member, Energy, Environment and Water National Committee, BCC&I and Chief Business Officer, India Power Corporation Limited

- India has achieved remarkable capacity addition, the capacity addition in last one decade is equivalent to previous six decades. This rapid expansion has also been accompanied by a doubling of per capita energy consumption every one decade, reflecting both economic growth and rising living standards.
- Technological adoption challenges related to the integration of green hydrogen, battery storage and other emerging technologies. Addressing intermittency and ensuring reliable supply during peak demand are priority.
- The importance of long-term contracts in providing flexibility to get power when needed. Such mechanisms are vital to balance demand fluctuations and support renewable integration.
- Government policies are playing a catalytic role, particularly through investments in transmission pipelines and infrastructure that enable smooth power flow across regions.

Mr. Pramod Singh

Member, Energy, Environment and Water National Committee, BCC&I and Chief Business Officer, India Power Corporation Limited

Mr. Sambitosh Mohapatra, Partner, iBT - Resource Transformation/ Sustainability Transformation, PwC India

- Energy security requires a balanced energy basket including oil, gas, coal, nuclear, and renewables to avoid overdependence on any single source. Equally important is building resilient infrastructure power plants, grids, and transport systems—that can withstand natural disasters, terrorist attacks, and cyber threats.
- Stable energy markets are essential to reduce price volatility and ensure predictability for consumers and industries.
- Maintaining strategic reserves such as petroleum stockpiles to safeguard against crises. Simultaneously, investments in innovation and technology ranging from new energy systems to sustainable consumption models are critical to advance efficiency and resilience.
- Strong regulatory frameworks, coupled with international collaboration in trade, technology, and joint projects, will enhance long-term stability. He also linked energy security to environmental stewardship, stressing emission reduction, climate change mitigation, and ecosystem protection.
- Finally, he underlined that social acceptance, political stability and adaptability to evolving global dynamics are indispensable for holistic energy security.

"Energy security in India is pivotal for sustainable growth, balancing economic development with environmental concerns. It involves ensuring reliable, affordable, and diverse energy supplies to meet rising demand.

India's strategy emphasizes renewable energy expansion—targeting 500 GW by 2030—while reducing dependence on imported fossil fuels. Strengthening domestic production, enhancing grid infrastructure, and promoting energy efficiency are critical. Geopolitical stability and strategic partnerships for oil and gas imports remain essential.

By integrating renewables, advancing technology, and fostering policy reforms, India aims to achieve energy independence, resilience, and inclusivity, powering its ambition to become a global economic leader."

Mr. Sambitosh Mohapatra

Partner, iBT - Resource Transformation/
Sustainability Transformation, PwC India

Session 4: 2030 Agenda for Sustainable Development - Collaborations and Partnerships

Fireside chat moderated by Mr. Rijit Sengupta, Member, Energy, Environment and Water National Committee, BCC&I and CEO, Centre for Responsible Business (CRB) with Mr. Joseph George, Research Associate, South and South-West Asia Office, United Nations ESCAP

The discussion focused on the role of international collaborations and partnerships, especially in trade for advancing the Sustainable Development Goals (SDGs). While trade offers clear benefits, stronger rules and regulations are essential to ensure sustainability regulations are followed. Joseph George expressed concern over the limited progress in partnerships, noting that cooperation is not only vital for SDG 13 but also for addressing all other goals such as fighting poverty under SDG 1. Since no country can tackle climate change alone, he stressed the need for enhanced collaboration, increased funding for adaptation activities and robust power purchase agreements (PPA) and transmission agreements between countries to strengthen grid integration. Building on this, Rijit Sengupta highlighted how sustainability is increasingly being woven into trade agreements. He pointed out that while global north is pushing for uniform regulations, developing countries require time and flexibility to adapt. India faces high trade costs with partners and while national logistics policy and domestic transport policies are steps forward, greater investment in digital infrastructure and efficient trade models is necessary. Both speakers agreed that cooperation, resource mobilization and regional trade treaties are crucial as such collaborations create win-win outcomes for India and its trade partners.

Fireside Chat Moderated by **Mr. Rijit Sengupta**, CEO, Centre for Responsible Business (CRB), Member, Energy, Environment and Water National Committee, BCC&I with **Mr. Joseph George**, Research Associate, South and South-West Asia Office, United Nations ESCAP

Valedictory Session

Mr. Reji Kumar Pillai, President, India Smart Grid Forum (ISGF) & Chairman, Global Smart Energy Federation (GSEF) gave presentation on 'Leveraging Smart Grid for Energy Transition'

- 137 countries, 330 cities and more than 1,200 companies have set net zero targets between 2035-2070, with electrification emerging as the primary pathway for energy transition. By 2050, global power generation capacity is expected to nearly double, requiring massive investments in grids, renewables, and storage.
- Smart grids are not a single solution but an ecosystem of technologies that enhance real-time visibility, flexibility and control across the energy value chain. They enable integration of distributed energy resources and bidirectional power flows, marking a shift from centralized generation to integrated, decentralized grids.
- India has taken significant steps through Green Corridors, Renewable Energy Monitoring Centers, smart metering and large-scale deployment of solar and wind. Initiatives like solarization of irrigation pumps, distributed storage systems and peer-to-peer trading of rooftop solar are positioning India as a leader in innovative grid solutions.

Mr. Reji Kumar Pillai, President, INDIA SMART GRID FORUM (ISGF)
& Chairman, GLOBAL SMART ENERGY FEDERATION (GSEF)

8. Annexure B

Programme Schedule

9:15 a.m.- 10:00 a.m.	Tea/Coffee and Registration	
10:00 a.m. onwards: **Inaugural Session: Sustainability in Viksit Bharat- Collaborations and Implementations with Financial Models and Technology Adaptations** Sustainability is at the core of the Viksit Bharat Vision. India's Viksit Bharat is a vision for 2047 making her a developed nation with economic growth, environmental sustainability, social progress and good governance.		
10:00 a.m.-10:10 a.m.	**Welcome Address**	**Mr. Vineet Sikka**, Chairperson, Energy Environment Water National Committee, BCC&I and MD-Distribution, CESC Ltd
10:10 a.m. -10:25 a.m.	**Special Address**	**Mr. Ghanshyam Prasad**, Chairperson, Central Electricity Authority (CEA)
10:25 a.m. -10:40 a.m.	**"India's Voluntary National Review 2025 towards Sustainable Development Goals - scope of private sector participation"**	**Mr. Rajib Kumar Sen,** Programme Director - (Health & Family Welfare, State and Finances, Sustainable Development Goals, Women & Child Development), NITI Aayog
10:40 a.m.-10:55 a.m.	**Theme Address**	**Dr. Ajay Mathur,** Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA
10.55 a.m. – 11.05 a.m.	**"Hydrogen Economy: Possibility for India"**	**Mr. Derek Michael Shah,** Special Invitee Member, Energy Environment Water National Committee, BCC&I and Chief Executing Officer & Managing Director, L&T Energy GreenTech
11.05 a.m. – 11.15 a.m.	**"Technology led Sustainability in Power Distribution"**	**Mr. Abhishek Ranjan**, CEO, BSES Rajdhani Power Limited
11.15 a.m. – 11.20 a.m.	**Conclusion of the Opening Session**	
11.20 a.m. – 11.30 a.m.	**Change Over**	
Session 2: Financial Models and Technology Adaptations Towards attaining Sustainability in Viksit Bharat, finance will play an important role. India's total financial requirement for achieving the Net Zero Goal by 2070 was estimated at $10.1 trillion. According to the IEA and IFC, India needed $253 to $263 billion for clean energy investments between 2026 and 2030, while the current available investment was only $44 billion per year. Technology is all pervasive now with digital transformations taking accelerated pace in all sectors across the globe. Sustainable practices are also not beyond the domain of technology adaptation. Digital innovations are reshaping processes and practices.		
11:30 a.m. -12.30 p.m.	**Financial Models and Technology Adaptations**	**Chaired by: Mr. Deb A Mukherjee,** Former President, BCC&I and Managing Director, Cenergist Energy Private Limited

		Speakers:. • **Mr. Asim Prasad,** Executive Director (Corporate Strategy, Planning Advocacy and Corporate Affairs), GAIL (India) Ltd • **Mr. Manish Ranjan,** Co-Chairperson, Energy Environment Water National Committee, BCC&I and ESG and Sustainability Practice Lead India Geo, Hewlett Packard Enterprise India Pvt. Ltd • **Mr. Subhajit Sarkar,** Executive Director (Operations), RHQ, Indian Oil Corporation Limited
12.30 p.m. – 12.35 p.m.	**Change Over**	
Session 3: Energy Security in Viksit Bharat Role of energy, being the backbone of development, is crucial in Viksit Bharat Vision powering economic activities, standards of living and also balancing environmental sustainability. With a goal to decarbonise 50% of the energy mix and achieve 500 GW of non-fossil generating capacity, it is transformative stage in India's environmental leadership. India is also at the forefront of Net Zero Targets. Climate justice is emerging as an significant goal for the Country to keep pace with economic growth with inclusive approach.		
12.35 p.m. – 1.45 p.m.	**Energy Security in Viksit Bharat**	**Chaired by Dr. Ajay Mathur,** Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA **Speakers:** • **Mr. Ajay Kumar,** General Manager-Production, ONGC • **Mr. Bikram Singh,** Executive Director, PTC India Limited • **Mr. Pramod Singh**, Member, Energy, Environment and Water National Committee, BCC&I and Chief Business Officer, India Power Corporation Limited • **Mr. Sambitosh Mohapatra**, Partner, iBT - Resource Transformation/ Sustainability Transformation, PwC India
1.45 p.m. – 2.45 p.m.	**Networking Lunch**	

Session 4: 2030 Agenda for Sustainable Development - Collaborations and Partnerships		
2:45 p.m. – 3.15 p.m.	**2030 Agenda for Sustainable Development - Collaborations and Partnerships**	**Fireside chat; Moderated by Mr. Rijit Sengupta,** Member, Energy, Environment and Water National Committee, BCC&I & CEO, Centre for Responsible Business (CRB); with **Mr. Joseph George,** Research Associate, South and South-West Asia Office, United Nations ESCAP
Valedictory & Award Session on Energy Efficiency & Resource Utilisation		

3.15 p.m. – 3.45 p.m.	**"Leveraging Smart Grid for Energy Transition"**	**Mr. Reji Kumar Pillai,** President, INDIA SMART GRID FORUM (ISGF) & Chairman, GLOBAL SMART ENERGY FEDERATION (GSEF)
3.45 p.m. – 4.00 p.m.	**Presentation of Awards on Energy Efficiency and Resource Utilisation** **in presence of Dr. Ajay Mathur,** Professor of Practice in the School of Public Policy at IIT, Delhi and Former DG, ISA; **Mr. Reji Kumar Pillai,** President, INDIA SMART GRID FORUM (ISGF) & Chairman, GLOBAL SMART ENERGY FEDERATION (GSEF), **Mr. Deb A Mukherjee,** Former President, BCC&I and Managing Director, Cenergist Energy Private Limited.	
4.00 p.m.	**Tea/Coffee**	

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