THE GREEN CLOCK
ESG MATTERS

Contents

Editor's Note

Dear Readers,

Welcome to the Sixth Edition Vol. 2 of our newsletter, '**The Green Clock: ESG Matters'**. As the global focus on sustainability intensifies, businesses increasingly recognise the importance of integrating ESG considerations into their operations. From reducing carbon footprints to enhancing social impact, companies embrace a more holistic approach to value creation beyond financial performance. This edition explores the latest trends, developments, and best practices in sustainability and responsible corporate conduct. We also look closely at key sustainability trends shaping the business world, from the rise of renewable energy to the growing emphasis on diversity and inclusion. We hope you find this edition of our newsletter informative and inspiring as we journey towards a more sustainable and responsible future.

Warm regards,

[T S Vishwanath]

Smart Systems, Sustainable Future

In the evolving landscape of sustainability, artificial intelligence (AI) has rapidly moved from a niche innovation to a strategic enabler. While once associated primarily with tech labs and futuristic applications, AI today is quietly revolutionising how governments, businesses, and civil society tackle environmental challenges. As the climate crisis grows more complex, AI is emerging not just as a tool for optimisation, but as a system-level catalyst for change, one capable of reshaping how we produce, consume, and conserve.

From reducing emissions in industrial processes to forecasting climate-related risks, the applications of AI are wide-ranging and impactful. For instance, companies are deploying machine learning models to map carbon footprints across supply chains with unprecedented granularity, turning what was once a guesswork-heavy process into a data-driven exercise. This has had profound implications for ESG reporting, where AI now helps organisations detect greenwashing, benchmark their climate disclosures, and enhance transparency, all of which are becoming key metrics for investors.

One of the most significant areas of impact has been energy management. In data centres, which are notorious for their high electricity consumption, AI has helped optimise cooling systems and server loads, significantly reducing energy use. Google's DeepMind famously cut data centre energy usage by nearly 40% through such interventions. This logic is now being applied to commercial buildings, smart grids, and even city infrastructure. By adjusting power use based on occupancy patterns, weather conditions, and predictive modelling, AI can help lower urban emissions while improving efficiency.

In the broader fight against climate change, AI is also enabling real-time environmental monitoring. Satellite data, paired with AI, can detect illegal deforestation, methane leaks, and water pollution far more rapidly than conventional reporting mechanisms. This enhances the ability of regulators and conservationists to act swiftly and precisely. At the same time, AI-powered climate models are becoming more sophisticated, allowing scientists to simulate extreme weather events, sea-level rise, and agricultural disruptions with greater speed and

accuracy. These insights are critical for both adaptation and disaster preparedness, especially for vulnerable geographies.

However, it would be short-sighted to champion AI's sustainability potential without acknowledging its own environmental footprint. Training large AI models requires substantial computing power and energy, with some estimates suggesting that training a single model can emit as much CO_2 as five average cars over their entire lifetime. This paradox presents a challenge: how do we ensure that the tools meant to combat the climate crisis do not exacerbate it? The answer lies in developing AI responsibly, using renewable energy to power data centres, improving model efficiency, and instituting carbon accountability in AI development pipelines.

Ultimately, the promise of AI in sustainability hinges on balance. It must be implemented with a deep awareness of its socio-environmental consequences, ensuring that the benefits it delivers do not come at an unseen cost. For ESG professionals, this means moving beyond the hype and evaluating AI solutions not only for what they claim to solve, but also for how they are built, deployed, and governed. In a world inching toward irreversible ecological tipping points, AI offers a unique opportunity—not just to predict the future, but to protect it.

News From the World

EU-China Climate Pact Signals Ambition Ahead of COP30

In a significant step toward global climate cooperation, the EU and China have pledged to submit updated 2035 climate targets covering all sectors and greenhouse gases before COP30. The joint climate statement—released during the EU-China Summit in Beijing, reaffirms both sides' commitment to the Paris Agreement and UNFCCC as the backbone of global climate governance. Key areas of focus include the deployment of renewable energy, methane reduction, strengthened carbon markets, and increased adaptation support, especially for developing

countries. With support for Brazil's COP30 presidency, the statement signals a new phase in green diplomacy aimed at promoting an ambitious and inclusive climate agenda.

For businesses, this agreement points to a future of stricter emissions regulations, expanded carbon pricing mechanisms, and increased demand for low-carbon technologies across markets. Companies operating in or trading with the EU and China should prepare for enhanced climate disclosure requirements, more aggressive transition timelines, and greater scrutiny of supply chain emissions. For ESG-aligned firms, it presents new opportunities in clean energy, decarbonisation tech, and cross-border climate finance, positioning green innovation as both a compliance needs and a growth driver.

Renewables Lead on Price in 2024, But Financing Risks Could Stall Momentum

Renewables dominated global energy markets in 2024, with 91% of new renewable power projects, particularly solar PV and onshore wind, proving more cost-effective than fossil fuel alternatives, according to the report by the International Renewable Energy Agency (IRENA). Onshore wind delivered electricity at just USD 0.034/kWh, making it 53% cheaper than fossil fuels, while solar PV averaged 41% cheaper. The addition of 582 GW in renewable capacity not only expanded global energy access but also helped avoid USD 57 billion in fossil fuel use, contributing to a staggering USD 467 billion in total avoided fossil fuel costs last year. Yet, while renewables are now the most economical energy source, IRENA warns that financing gaps, trade barriers, and grid constraints, especially across the Global South, could threaten the pace and equity of the transition.

For businesses, this signals a decisive shift in energy economics: renewable procurement is no longer just climate-positive, but financially prudent. However, rising regional disparities in costs and access mean that companies with global operations must navigate a fragmented transition landscape. Long-term competitiveness will hinge on de-risking clean energy investments, securing reliable green supply chains, and aligning with markets where policy, finance, and technology converge to support a net-zero trajectory.

UK ETS to Include Engineered Carbon Removals from 2029 with Strict Permanence Rules

The UK Government has announced the phased inclusion of engineered greenhouse gas removals (GGRs) into the UK Emissions Trading Scheme (UK ETS) by 2029, marking a strategic step toward net zero. Under the new framework, GGRs will replace emissions allowances on a one-for-one basis without increasing the overall cap, preserving market stability and the incentive to decarbonise. Only UK-based engineered removals will be eligible at launch, and projects must meet a rigorous 200-year carbon storage requirement, with strong liability and buffer mechanisms to ensure long-term permanence.

All credits will be issued ex-post, based on verified sequestration under the developing UK GGR Standard.

The Authority is also exploring differentiated allowance structures, auction mechanisms, and future market access options to support liquidity and voluntary demand. While woodland-based removals remain under review, new evidence has strengthened the case for their future inclusion under strict safeguards.

For businesses, this signals a tightening compliance landscape with rising demand for verifiable carbon removal. Companies in hard-to-abate sectors should closely track GGR eligibility and MRV developments, as early participation could offer cost-effective mitigation and reputational benefits. The ETS expansion also opens the door for carbon removal innovators to engage in a high-integrity, government-backed market.

News From India

SAEL to Invest USD 954 Million in 5 GW Solar Plant Ahead of 2026 Domestic Mandate

Sukhbir Agro Energy Limited (SAEL) Industries Ltd will invest INR 82 billion (USD 954 million) to build a 5 GW integrated solar cell and module manufacturing facility in Greater Noida, Uttar Pradesh, significantly boosting India's solar manufacturing capacity. With this move, SAEL's total module production will reach 8.5 GW, supporting India's June 2026 mandate requiring domestically made solar cells for government projects. The expansion helps bridge the gap between India's 80 GW module capacity and its much lower 15 GW cell production, reducing import dependence, especially on China. The plant will begin construction this year,

positioning SAEL to meet rising demand for local components as India accelerates its clean energy transition.

For businesses, this marks a key shift in the solar value chain. Infrastructure firms, EPC contractors, and government-linked projects will need to align procurement with domestic sourcing norms. The development also underscores growing investor interest in clean tech manufacturing SAEL, which aims for 20 GW of power capacity by 2030, is preparing for an IPO in 2025 amid rapidly expanding revenue. As domestic content rules tighten, strategic partnerships with approved local manufacturers like SAEL could offer long-term cost and compliance advantages in India's maturing solar market.

HPCL to Invest USD 231 Million in 24 Biogas Plants as India Scales Up CBG Mandate

Hindustan Petroleum Corporation Ltd (HPCL) will invest INR 20 billion (USD 231 million) over the next 2–3 years to build 24 compressed biogas (CBG) plants through its green energy arm, aiming to cut emissions and strengthen India's domestic gas ecosystem. Each plant will produce 10–15 tons of CBG per day from organic waste, including agri-residue and sewage. The move aligns with India's new CBG blending mandate,1% blending in auto and cooking gas starting April 2024, rising to 5% by FY 2028–29 as the country works to reduce its 50% dependence on imported LNG and boost gas's share in the energy mix from 6% to 15% by 2030.

For businesses, the CBG push opens new avenues in waste-to-energy, decentralised energy supply, and green logistics. Companies in agri-processing, municipal services, transport, and urban utilities can explore partnerships across feedstock supply, plant operations, and gas distribution. With 480 CBG plants expected by 2029, the sector is fast becoming a cornerstone of India's energy transition—and a ripe ground for investment, innovation, and sustainable revenue models.

Corporate Foundations Drive Deeper Impact: M3M Reaches 4.8 Million Across India

M3M Foundation, the philanthropic arm of real estate developer M3M India, has announced that its programmes have impacted 4.8 million individuals across 22 states and 85 districts. Focused on education, employability, healthcare, and digital inclusion, the foundation works in alignment with national missions like Digital India and Skill India. Its model emphasises long-term partnerships with over 40 government and civil society institutions, moving away from one-off CSR activities toward sustained, policy-aligned development. With ESG reporting frameworks increasingly prioritising measurable social outcomes such as rural skilling, education equity, and digital access, M3M's approach reflects a broader shift in how businesses are embedding community impact into core strategy. According to the India ESG Alliance (2025), over two-thirds of large enterprises are now incorporating digital and social inclusion into their sustainability disclosures.

For businesses, this signals a maturing ESG landscape where long-term, systems-led engagement is not just a reputational asset but also a regulatory and stakeholder expectation. As ESG scrutiny deepens, models like M3M's offer a blueprint for corporate foundations to go beyond optics, co-creating social infrastructure and contributing meaningfully to inclusive, digitally empowered growth.

VeK is a policy advisory and research firm, distinguished by its data-driven approach to analyse policy and regulatory developments in India and globally. For Further Information, please contact: Leah Miriam George, Senior Associate at +91 7994722955 or email at leah@vekpolicy.com