



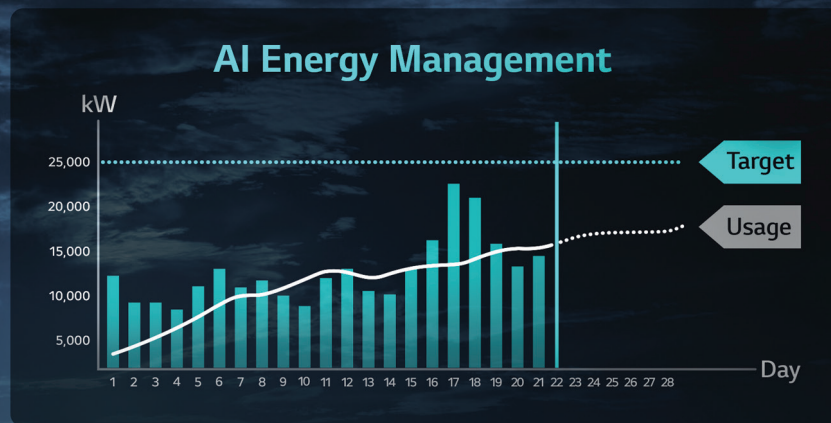
Specialized Publication On Infrastructure Industry Of Bangladesh

Smart and Sustainable Integrating Technology into Bangladesh's Green Infrastructure

Feb 2025
1st Edition

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Editorial

Welcome to the 1st issue of GreenScape Bangladesh: Specialized Publication On Infrastructure Industry Of Bangladesh, where we bring a renewed focus to sustainable development and environment friendly construction—our cover story this month.

As the world faces growing challenges of climate change, resource depletion, and urbanization, the construction industry stands at a crucial crossroads. This issue is dedicated to exploring innovative approaches and solutions that can make our built environment more sustainable. From green building materials and renewable energy integration to water-efficient designs and eco-conscious urban planning, Greenscape Magazine aims to inspire and inform those committed to shaping a greener future.

Our mission is to create a community of industry experts and readers who are passionate about sustainable construction and environmental preservation. By curating insights from experts and showcasing cutting-edge research, we strive to make Greenscape Magazine a trusted source of knowledge for professionals, policymakers, and eco-conscious individuals alike.

We also value your input and encourage constructive feedback that helps us make each issue more relevant and engaging. Your perspectives drive our commitment to delivering meaningful content that supports the global shift toward sustainability.

Happy reading.



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VIETNAM RANKS AS SOUTHEAST ASIA'S LEAST TRANSPARENT REAL ESTATE MARKET

Vietnam's real estate market has been ranked as the least transparent in Southeast Asia, placing 49th out of 89 countries and territories in JLL's 2024 Global Real Estate Transparency Index. The report, released on September 11, 2024, positions Vietnam behind regional counterparts Singapore (13th), Thailand (32nd), Malaysia (33rd), Indonesia (40th), and the Philippines (45th). It highlights challenges for investors related to regulatory clarity, investment performance, and sustainability.

The index evaluates transparency by combining quantitative data and survey results from 151 cities, assigning each market a score from one to five, with one representing the highest level of transparency. Vietnam's semi-transparent ranking reflects its underperformance in critical areas such as investment, regulatory and legal frameworks, transaction processes, and sustainability standards. By contrast, Japan was ranked as the most



Image Credit: www.freepik.com

transparent real estate market in the Asia-Pacific region, securing the 11th position globally.

JLL emphasized that transparency across Asian markets has significantly improved since 2022, with India leading global advancements. However, sustainability continues to be a low-ranking factor worldwide, hindered by the lack of mandatory building performance standards, public energy-use disclosures, and climate risk reporting in many markets. The report also flagged money laundering as an ongoing concern.

Richard Bloxam, CEO of Capital Markets at JLL, noted that markets with clear pricing, robust fundamentals, and enhanced transparency—especially in emerging specialty sectors—are likely to drive a recovery in real estate liquidity. He further predicted that "emerging factors such as artificial intelligence and increasing sustainability standards will push investors to demand greater transparency across global real estate markets."

Source: construction-property.com

COMMERCIAL HEATING EQUIPMENT MARKET REPORT: 2023–2032

Allied Market Research has published a comprehensive analysis of the global **Commercial Heating Equipment Market**, covering product types (heat pumps, furnaces, boilers), fuel types (fossil fuel, electric), and key end-users (offices, restaurants & hotels, and others). The market was valued at **\$15.1 billion in 2018** and is projected to grow to **\$25.6 billion by 2032**, with a CAGR of **5.2%** during the forecast period.

MARKET DRIVERS AND OPPORTUNITIES

The market's growth is fueled by **rapid urbanization**, increased awareness of **environmental issues** and the expansion of the commercial sector. The adoption of **IoT devices** and **energy-efficient technologies** in heating systems presents lucrative growth opportunities. However, high initial costs and stringent environmental regulations remain challenges for market expansion.

KEY SEGMENT INSIGHTS

Heat Pumps: This segment is poised for significant growth due to advancements in energy efficiency and government incentives. Heat pumps' dual functionality for heating and cooling makes them ideal for diverse commercial applications.

Electric Segment: Rising concerns over sustainability and technological innovations, such as smart controls and IoT integration, are driving the growth of electric-powered heating systems.

Restaurants & Hotels: The demand for adaptable and efficient heating solutions, including portable units and infrared heaters, is rising to enhance customer comfort and maximize space utilization.

REGIONAL OUTLOOK

The **Asia-Pacific** region leads the market, driven by rapid industrialization and growing demand in key industries such as automotive and electronics. Countries like Japan and South Korea are pivotal contributors to this growth.

LEADING PLAYERS

Major companies such as **Carrier**, **Daikin Industries** and **Mitsubishi Electric Corporation** are leveraging strategies like product launches, joint ventures, and collaborations to maintain competitive positions globally.

This report highlights market trends, innovations, and strategic insights, providing valuable information for stakeholders and decision-makers.



Image Credit: www.freepik.com



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ASIA-PACIFIC RENEWABLE ENERGY INVESTMENTS SET TO SURGE BY 2030

Investment in wind and solar energy across the Asia-Pacific region is projected to reach \$1.3 trillion by 2030, doubling the amount spent in the decade to 2020, according to Wood Mackenzie. Speaking at the inaugural Asia Pacific Power and Renewables Conference, research director Alex Whitworth highlighted the region's leadership in global power generation investments, expected to total \$2.4 trillion this decade, with over half allocated to renewables.

Fossil fuel investments are forecast to drop by 25% from the previous decade to \$54 billion annually, with coal comprising 55% of this spending until 2030 before declining to 30% as gas takes precedence. Subsidy reductions across Asia will not hinder renewables, as stronger policies and cost reductions position them to compete with coal power from 2025 in most markets.

Major contributors to renewable energy growth include China, Japan, India, South Korea, and Taiwan, with 140GW of new wind and solar capacity projected annually until 2030, comprising two-thirds of total power additions. China alone aims to add over 534GW of renewables to meet its 1,200GW wind and solar capacity target by 2030.

Offshore wind is expected to play a pivotal role in Japan and South Korea, with the latter poised to lead the sector in Asia with 4.4GW in development. Southeast Asia will require \$14 billion annually for wind and solar investments through 2040, while Australia's investments, though declining initially, will rebound to \$7 billion annually by the 2030s.

Despite robust investments, carbon emissions from the region's power sector are expected to peak at 7.3 billion tonnes by 2025, signaling ongoing challenges in transitioning to carbon-free power by 2050.

Source: windpowermonthly.com

TATA POWER LAUNCHES INDIA'S FIRST PEER-TO-PEER SOLAR ENERGY TRADING PILOT IN DELHI

Tata Power, in collaboration with India Smart Grid Forum (ISGF) and Australian technology firm Power Ledger, has initiated Delhi's first peer-to-peer (P2P) solar energy trading project. Using Power Ledger's blockchain-enabled technology, the project facilitates real-time trading of over 2MW of solar energy between consumers and producers (prosumers) in North Delhi.

The pilot involves 150 sites, including Tata Power Delhi Distribution Limited's (TPDDL) locations and residential or commercial consumers with rooftop solar systems. Prosumers can sell surplus solar energy directly to other users, with dynamic pricing ensuring transparent, near-instant settlements via blockchain.

This initiative supports the integration of distributed energy resources, such as EV charging stations and Battery Energy Storage Systems, into the grid-connected ecosystem. It aligns with India's National Strategy on Blockchain and the International Solar Alliance's mission to scale up solar energy and promote innovation.



Image Credit: www.freepik.com

Set to run through June 2021, the pilot will gather insights to aid regulators in establishing frameworks for P2P energy trading and expanding rooftop solar adoption across India. Power Ledger's Dr. Jemma Green hailed the project as pivotal to achieving India's renewable energy goals, including 100GW of solar by 2022. Tata Power-DDL CEO Ganesh Srinivasan emphasized the initiative's role in empowering consumers as prosumers, while ISGF President Reji Kumar Pillai underscored blockchain's transformative potential in India's clean energy transition.

Source: smart-energy.com

TACKLING SOUTHEAST ASIA'S WATER QUALITY CRISIS CHALLENGES AND SOLUTIONS

Sectors like agriculture and manufacturing exacerbate water pollution through inadequate wastewater treatment and excessive chemical use. Contaminated water is linked to severe health risks, including cancer and cognitive impairments. Urban-rural disparities also persist, as seen in Jakarta, where only 59.4% of residents had piped water by 2017 despite privatization efforts.

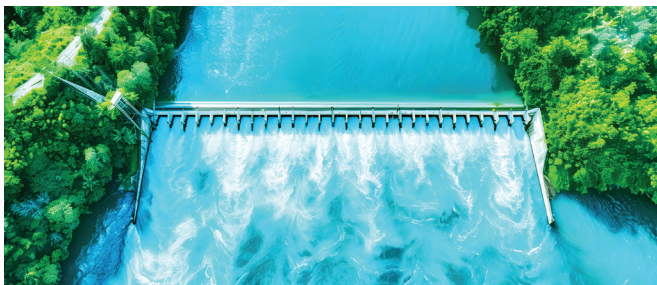


Image Credit: www.freepik.com

Mining activities worsen the crisis, with local communities, such as those near the Didipio mines in the Philippines, facing unchecked water pollution.

A multi-pronged response is essential, focusing on government accountability, stringent regulations, corporate responsibility, and public involvement. Promising initiatives like nature-based solutions and sustainable agriculture offer hope, but collective action is vital to secure clean water access for Southeast Asia's future.

Southeast Asia grapples with a severe water quality crisis driven by rapid industrialization, urbanization, population growth, and climate change. This challenge threatens public health, ecosystems, and socioeconomic stability in a region where water is essential yet unequally accessible.

The 2023 UN World Water Development Report highlights global progress in safe water access, yet approximately 110 million South-east Asians still lack it. Climate change compounds the crisis, with the Mekong River Commission reporting that dam construction and climate shifts cause erratic water levels, sediment loss, salinity, and erosion—issues that amplify other challenges.

Source: envirotech-online.com

SUEZ SECURES THREE MAJOR WATER PROJECTS ACROSS ASIA TO ENHANCE SUSTAINABILITY AND RESILIENCE

SUEZ, a global leader in circular water and waste management solutions, has secured three new projects in Asia, announced during the Singapore International Water Week (SIWW). These initiatives highlight the company's focus on advanced water management in both municipal and industrial sectors, emphasizing digital solutions, seawater desalination, and water reuse. The projects in Singapore, China, and the Philippines underline SUEZ's dedication to addressing critical water challenges and enhancing resilience against climate impacts through strategic partnerships and innovative, circular approaches.

In Singapore, SUEZ has been awarded a contract by PUB, the National Water Agency, to implement and maintain a Smart Water Grid Analytics Platform for the country's water supply network. This platform, based on SUEZ's AQUADVANCED® Water Networks technology, will improve PUB's operational efficiency and resilience. It will detect water quality and pressure issues, generate simulations, and provide actionable



Image Credit: www.freepik.com

insights, enabling better decision-making and optimizing network management.

In the Philippines, SUEZ and JEMCO are collaborating to design, build, and operate a large-scale seawater desalination plant in Metro Iloilo. This facility, which will produce 66,500 cubic meters of water daily, aims to address the region's critical water shortage, supplying water to 50,000 households and a nearby power plant. The project will utilize SUEZ's SeaDAF™ Filter technology and is expected to be completed within 24 months.

In China, SUEZ is working with Shandong Public to invest in and operate an industrial wastewater treatment plant in the Jining New Materials Industrial Park. The plant will treat high-salinity wastewater and recycle it for industrial use, achieving 100% wastewater recycling and significant environmental benefits. 🌱



Image Credit: www.freepik.com

PIONEERING PROGRESS A VISION FOR BANGLADESH'S ENGINEERING FUTURE

Md. Hasmotuzzaman

Managing Director, Utility Professionals
Ex President & Founder Governor of ASHRAE Bangladesh
President, Fire & Electrical Safety Consultants' Association of BD



In this in-depth interview, Md. Hasmotuzzaman reflects on his journey from a passionate participant to a leader in the engineering community. A member of Industrial Advisory Panel, ME Department at BUET, AUST and IUBAT, this renowned engineer focuses on bridging the gap between industry and academia, overcoming infrastructure challenges, and embracing sustainability. He outlines his vision for transforming engineering sector of Bangladesh. Through strategic collaboration, innovation, and professional development, he sees a future where Bangladeshi engineers lead both locally and globally.

Can you tell us about your journey and how you became involved with ASHRAE?

My career path has been shaped by a strong commitment to the engineering profession and its continuous evolution. My association with ASHRAE began in 2017 after attending a seminar on environmental pollution organized by Savor International. This event sparked a deep interest in ASHRAE's global initiatives, and I became an active participant in their subsequent events. Prior to that, in 2012, I attended a conference and exhibition organized by

ASHRAE in the USA. During this visit that I recognized a significant gap between our local engineering practices and those of the international community. This realization drove me to bring ASHRAE to Bangladesh, so that our engineers could benefit from global resources.

Starting with only four members, we had expanded to meet the minimum membership requirement of forty, and thus we were able to establish an ASHRAE branch in Bangladesh. Under my leadership as President, we launched two magazines, hosted technical seminars, and collaborated with Savor International to organize exhibitions. Today, ASHRAE Bangladesh has grown to include 160 fully registered members, 290 student members, and six university student branches. We have also introduced a reduced membership fee of just \$15 for students, which allows them to transition to associate membership after graduation without any additional cost. By organizing seminars, workshops, and industry visits, we are preparing students with practical knowledge and hands-on experience, readying them for the global job market.

In your opinion, how can we bridge the gap between industry and academia in engineering sector of Bangladesh?

The gap between academia and industry is one of the most significant challenges we face in Bangladesh's engineering sector. While there are 141 universities offering engineering programs, many graduates lack the practical skills required to succeed in the workforce. Even our top engineering institution struggles to produce engineers who possess the hands-on knowledge necessary for immediate productivity. This is due to lacking of communication between academy, institute and industry.

The accreditation system established by the Board of Accreditation of Engineering and Technical Education mandates certain standards for universities, including infrastructure, compliance and safety requirements. But to fulfil these criteria universities often take several years. As a result, many graduates still require additional training after entering the workplace. In contrast, countries like India and Sri Lanka produce job-ready engineers from day one of joining to a job. This leads to Bangladeshi job offering companies reliance on foreign professionals, even as our own engineers remain unemployed.

To close this gap, students must actively participate in workshops, seminars, and exhibitions, which will help them acquire knowledge, industry requirements, updated technologies and practical skills. Moreover, educators must update their expertise to ensure they can effectively guide students. Additionally, industry-academia events should be more professionally oriented, focusing on technical experts rather than political figures, to fulfill their intended purpose. For this to happen, there must be a collective effort to improve educational standards, professional development, and communication. The government also needs to streamline its initiatives and invest in projects critical to the country's economic development.

What are some of the challenges in infrastructure development in your sector, and are there issues with product or service standardization?

Infrastructure development in Bangladesh faces significant challenges, particularly due to our heavy reliance on imported equipment and raw materials. Around 95 percent of industrial products are imported, which creates a dependency that drives up costs and causes delays. Unlike countries such as India & China which emphasize self-reliance and encourage local production, Bangladesh lacks the necessary back-linkage industries to support its economy. The COVID-19 pandemic, Wars and global geopolitical instability have only exacerbated these issues, making it more difficult for businesses to source parts and equipment. This dependence on imports leaves our construction and infrastructure sectors vulnerable to external disruptions.

To overcome this, we need strategic investments in local manufacturing capabilities and government policies that promote industrial self-reliance.

Sustainability is an increasingly important issue in industries worldwide. How can we implement sustainable practices in Bangladeshi industries?

Sustainability is undoubtedly a critical issue for Bangladesh, given our dense population and vulnerability to environmental changes. Many of our industries depend on imported raw materials that are processed locally and then exported as finished products. Unfortunately, the waste generated during these processes remains within the country, contributing to long-term environmental damage. Excessive water usage is depleting groundwater levels, leading to dry weather and affecting agriculture. Rising temperatures—reaching as high as 45°C in Dhaka—are aggravating air pollution and public health crises. Additionally, soil degradation from industrial waste threatens food security.

While Bangladesh does have some "Green" factories, the concept of sustainability remains somewhat ambiguous. In developed countries, sustainable practices are standard, without the need for certification. In Bangladesh, true sustainability must go beyond certification. We need to address fundamental issues such as waste management, resource efficiency, and cleaner production processes.

To achieve sustainability, industries must adopt green practices across all sectors, invest in recycling technologies, and raise awareness among all stakeholders about the long-term benefits of sustainable operations. This will require significant shifts in both mindset and policy.

Finally, what is your vision for the future of engineering sector of Bangladesh?

Bangladesh was once a hub of knowledge. During the period of Monastery and Teacher Atish Dipankar, scholars from Europe came to greater Bangla for learning. However, today many of our students, professionals must travel abroad to receive quality education and training. The challenge we face now is transforming our large population into skilled, employable manpower.

For the engineering sector to improve, we must focus on enhancing professional efficiency, communication skills, and practical knowledge. Collaboration with global organizations can help bridge the knowledge gap, and innovation and entrepreneurship will be key drivers in advancing the sector.

Despite the challenges, Bangladesh holds immense potential. With focused efforts to improve education, industry practices, and sustainability, we can create a future where our engineers are not just globally competitive, but also leaders in addressing both local and international challenges. 🌱

LEADING THE GREEN REVOLUTION

Ananta Ahmed
Managing Director
360 Total Solution Limited



In this compelling interview, Ananta Ahmed, an international green building expert and Managing Director of 360 Total Solution Limited, shares his journey into sustainability and green building consultancy in Bangladesh. A USGBC Faculty and certified LEED professional across multiple domains, Ahmed discusses the transformative impact of green practices, the challenges in achieving LEED certification, and his vision for positioning Bangladesh as a regional leader in sustainability. With over 380 projects spanning 140 million square feet, Ahmed's expertise offers invaluable guidance for a greener future.

Mr. Ahmed, what inspired you to pursue a career in sustainability and green building consultancy in Bangladesh?

The desire to address environmental challenges such as climate change, rapid urbanization, and pollution in Bangladesh inspired me to pursue a career in sustainability and green building consultancy. Additionally, the growing demand for energy-efficient buildings, government initiatives promoting sustainable development, and the opportunity to create a positive impact on people's lives and the environment serve as strong motivations.

With over 380 projects and 140 million square feet of green building projects, what do you consider the key factors for a project to achieve LEED certification?

In Bangladesh, by adhering to LEED guidelines and processes, projects can generate significant financial and environmental benefits almost immediately.

Here are some of the key benefits:

- **Possibility 1:** Reduce building construction costs by 2% to 5%.
- **Possibility 2:** Lower building operational costs.
- **Possibility 3:** Decrease construction time by 20% to 30%.
- **Possibility 4:** Minimize replacement costs.
- **Possibility 5:** Reduce the cost of investment by 5% to 8%.
- **Possibility 6:** Lower corporate taxes by 2%.

At the same time, the key environmental factors for achieving LEED certification include:

- **Sustainable Site Selection:** Choosing locations that minimize environmental impact and promote connectivity.
- **Water Efficiency:** Reducing water use through efficient fixtures, landscaping, and recycling.
- **Energy and Atmosphere:** Enhancing energy efficiency, using renewable energy, and cutting greenhouse gas emissions.
- **Materials and Resources:** Utilizing sustainable, recycled, and locally sourced materials while minimizing waste.
- **Indoor Environmental Quality:** Ensuring good air quality, natural light access, and thermal comfort for occupants.
- **Innovation in Design:** Incorporating innovative solutions that go beyond LEED requirements.
- **Regional Priority:** Addressing specific local environmental priorities.

How have you seen the understanding of sustainability evolve in Bangladesh, particularly among professionals you've trained?

The understanding of sustainability in Bangladesh has evolved significantly, particularly among professionals I've trained, as awareness of environmental challenges like climate change, pollution, and resource scarcity has grown

Initially, the focus was on basic environmental compliance. Now, it has expanded to encompass broader concepts such as energy efficiency, green building practices, waste management, and climate resilience.

Trained professionals, especially in architecture, engineering, and urban planning, are increasingly adopting global frameworks like LEED and integrating sustainable strategies into their projects. This evolution has been driven by international exposure, capacity-building programs, government initiatives, and the growing demand for environmentally responsible development in urban and rural areas alike.

Professionals now view sustainability as an opportunity for innovation, cost savings, and quality-of-life improvements. This reflects a shift from short-term economic goals to long-term environmental and social benefits, marking a mature mindset where sustainability is essential for Bangladesh's resilience and future growth.

What are the biggest challenges for clients when implementing green building practices, and how do you assist them in overcoming these?

The biggest challenges for clients in implementing green building practices in Bangladesh include:

- **Lack of Awareness:** Limited understanding of the short- and long-term benefits of green buildings.
- **Limited Availability of Sustainable Materials:** Difficulty in sourcing eco-friendly materials and technologies locally.
- **Skill Gaps:** A shortage of trained professionals familiar with green building standards.
- **Regulatory Barriers:** Inconsistent policies and insufficient incentives to encourage adoption.
- **Perception of Complexity:** LEED and other certifications may seem complex and time-consuming to those unfamiliar with the process.

To help clients overcome these challenges, we:

- **Demonstrate Long-Term Value:** Provide cost-benefit analyses highlighting reduced energy, water, and operational costs.
- **Raise Awareness:** Conduct training sessions, workshops, and presentations on the benefits of green buildings.
- **Streamline the Process:** Guide clients through certification processes like LEED or EDGE, simplifying them.
- **Raise Awareness:** Conduct training sessions, workshops, and presentations on the benefits of green buildings.
- **Streamline the Process:** Guide clients through certification processes like LEED or EDGE, simplifying them.
- **Facilitate Access to Resources:** Connect clients with reliable suppliers of sustainable materials and technologies.
- **Offer Financial Solutions:** Assist in exploring incentives, grants, or financing options to manage initial costs.
- **Provide Skilled Expertise:** Deliver professional consultancy services to ensure sustainable, cost-effective designs tailored to local conditions.

What steps should Bangladesh take to position itself as a regional leader in sustainability and green development?

To establish itself as a regional leader in sustainability and green development, Bangladesh should:

1. Strengthen Policy and Regulatory Frameworks:

- Enforce stricter environmental regulations.
- Offer tax breaks, subsidies, and grants for green projects.
- Implement mandatory energy efficiency standards for infrastructure.

2. Promote Green Building Certification:

- Simplify certification processes and make them affordable.
- Encourage adoption of systems like LEED or EDGE.

3. Invest in Renewable Energy:

- Expand solar, wind, and renewable energy projects.
- Foster public-private partnerships for clean energy innovation.

4. Enhance Capacity Building and Education:

- Develop specialized training programs for professionals.
- Include sustainability in school and university curricula.

5. Promote Sustainable Urban Planning:

- Focus on green infrastructure, eco-friendly transport, and low-carbon cities.
- Improve waste management and water conservation.

6. Leverage Technology and Innovation:

- Support R&D in sustainable materials and climate-resilient solutions.
- Create innovation hubs for green startups.

7. Increase Public Awareness:

- Launch campaigns to promote eco-friendly practices.
- Foster responsible consumption habits.

8. Collaborate Globally:

- Share knowledge with neighboring countries.
- Partner with international organizations for funding and expertise.

9. Invest in Climate Resilience:

- Prioritize resilient infrastructure projects.

10. Showcase Success Stories:

- Highlight successful sustainable projects to inspire confidence and attract investment.

Looking ahead, what are your key goals in sustainability over the next 5–10 years?

Over the next decade, Bangladesh's sustainability goals could include:

1. Transitioning to Renewable Energy:

- Achieve 30–40% renewable energy in the energy mix.
- Develop large-scale and rooftop solar projects.

2. Expanding Green Building Initiatives:

- Set targets for green-certified buildings.
- Incorporate sustainable construction into building codes.

3. Enhancing Climate Resilience:

- Implement flood management and coastal protection projects.

4. Improving Air and Water Quality:

- Promote cleaner industrial production.
- Strengthen water resource management.

5. Advancing Circular Economy Practices:

- Encourage recycling and zero-waste initiatives.

6. Promoting Sustainable Urbanization:

- Develop smart cities and green transport systems.

7. Strengthening Food and Water Security:

- Promote sustainable farming and water-saving technologies.

8. Building Capacity and Awareness:

- Conduct training programs and awareness campaigns.

9. Reducing Carbon Emissions:

- Commit to net-zero targets through clean technologies.

10. Enhancing Global Collaboration:

- Secure international funding and partnerships to meet sustainability goals.

By addressing these areas, Bangladesh can ensure a resilient, equitable, and sustainable future. 🌱



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THE FUTURE OF RENEWABLE ENERGY IN BANGLADESH



Asadullah Ahmed
Director (SCM)
Scube Technologies Ltd

In an insightful interview, Asadullah Ahmed, Director at SCUBE Technologies Ltd., reflects on his journey in the industry, the potential and challenges within Bangladesh's renewable energy sector, and the necessary steps to accelerate its growth. He emphasizes the importance of sustainability, technological innovation, and policy support to foster a greener future for the nation.

You have had an extensive career in the industry. Could you share your professional journey with us?

I began my career with a multinational company and spent 11 years working across production, marketing, and training. Following that, I joined BRB Cables and spent 10 years focusing on cable insulation production, followed by polymer, compounding, then Head of Operation, administration and commercial. " During my tenure at BRB, I had the opportunity to meet the current Chairman and Managing Director of SCUBE Technologies, whose vision inspired me to join the company. I started as the Director of Supply Chain Management and, over time, have expanded my role to oversee multiple departments, including administration, commercial, distribution, accounts and finance, marketing and pre-sales as well.

What drew me to SCUBE was the company's commitment to sustainability and environmental compliance. In addition to offering competitive salaries, SCUBE is deeply dedicated to Corporate Social Responsibility (CSR) activities, which have significantly contributed to reducing carbon emissions and promoting renewable energy. Over the past nine years, we have successfully reduced over 400,000 metric tons of carbon emissions through our projects. Being part of these sustainable initiatives has been incredibly fulfilling.

What are the current opportunities and challenges in Bangladesh's renewable energy sector?

The renewable energy sector in Bangladesh holds immense untapped potential, particularly in solar energy. Unfortunately, other sources such as wind, wave, and hydropower face geographical limitations. For example, there is only one hydropower plant at Kaptai, and wind power projects have proven ineffective due to the region's low wind flow.

In contrast, Bangladesh enjoys abundant sunlight, making solar energy a viable and growing option. Although solar panel installations require considerable space—around 80,000 square feet to produce 1 MW of electricity—the increasing number of unused rooftops in urban areas

presents a solution. Our company is actively involved in rooftop solar projects for industrial and commercial use, in addition to ground-mounted utility scale on-grid & off-grid solar plant, floating solar plant, solar irrigation solution. We are also exploring innovative solutions, on SCADA monitoring system, utility management system/energy management system.

The renewable energy sector has seen remarkable growth over the past nine years, with SCUBE Technologies capturing more than 50% of the market share. This success is driven by a team of over 50 highly skilled engineers from top universities, enabling us to offer comprehensive solutions to clients, including procurement, installation, storage, and distribution.

Despite these advancements, a major challenge remains: raising awareness about solar energy. Many people are unaware that solar electricity costs around 3 BDT per unit, compared to the government-subsidized rate of 11 BDT per unit for conventional electricity. Educating the public on these cost benefits is crucial for wider adoption.

How can we raise awareness about renewable energy among the general public?

The media plays a pivotal role in raising awareness about renewable energy. Those of us in the private sector are constantly working to engage industrialists, but ideally, this engagement should be mutual. The government must also take a more proactive approach to awareness campaigns.

While organizations like SREDA, BSTI, and BUET are working in the renewable energy field, their efforts tend to be limited to those who directly approach them. To make a broader impact, their initiatives need to be more inclusive and reach the general public. The recent change in government has temporarily halted some policy implementations, but we remain hopeful that the new administration will take the necessary steps to address these challenges.

Has the government set any milestones for the production of electricity through solar panels?

Yes, the government has set a goal to replace 10% of the total electricity consumption in Bangladesh with renewable energy sources. However, this target has not yet been fully realized. We are optimistic and continue to work toward achieving this objective.

How accessible are renewable energy technologies in Bangladesh?

Unfortunately, local production of solar panels has faced challenges due to a lack of suitable developers and scientists. While solar technologies evolve rapidly on the global stage, the pace of innovation in Bangladesh is slower, primarily due to limited research and low profit margins.

Currently, the majority of our solar panels and related equipment are imported from China. However, the price of solar panels has significantly decreased, making them more

affordable. Other components, such as inverters and DC cables, are still not produced locally, although some companies are beginning to explore this area. We expect to see large-scale projects in the near future that focus on producing the necessary equipment for power generation.

What policy support from the government could accelerate growth in the renewable energy sector?

The government has made some positive strides, such as exempting tariff on solar panel imports in industry level, though this was later increased to 1%. However, companies importing panels commercially still face a 11% duty, which is a significant burden. Other equipment like: Solar inverter, DC cable which are importing are facing import duty of from 38% to 58%. Reducing this import duty to 4-5% would encourage more businesses to enter the market.

Furthermore, Bangladesh lacks an aluminium plant, so the import of aluminium for solar plant structure & walkway incurs a hefty 58% tariff. Solar panels are framed with aluminium for durability & light weight. Currently, the high import tariff on aluminium structure & walkway contribute to the cost of solar plant establishments. Reducing the import duty would make solar energy more affordable for consumers.

Another issue is the misuse of government initiatives like net metering, which has resulted in unnecessary charges. Finally, the shortage of skilled talent is a significant challenge, as many graduates Engineers leave the country after completing their studies. Retaining this talent is crucial for the continued growth of the sector.

What is the potential for automation in the renewable energy industry, with AI and IoT becoming increasingly prevalent?

We are actively pursuing automation through utility management systems and other software solutions. These systems allow clients to track their project progress, production data, and specifications seamlessly. While these services are currently offered to clients with larger projects, we plan to expand their availability in the future.

An exciting development is that these software solutions are being developed locally in Bangladesh by our company and are being exported to other countries. This highlights the potential of local talent in contributing to the global market.

What advice would you give to individuals interested in joining the renewable energy industry?

I wholeheartedly encourage anyone interested in joining this field. The renewable energy industry in Bangladesh is expanding rapidly, with annual growth of approximately 50%. More players entering the market will lead to healthier competition, higher-quality products, and a larger market.

This is an exciting and impactful industry where individuals can contribute to a sustainable future while building a rewarding career. It is a sector that offers not only professional growth but also the opportunity to make a significant difference in the world. 🌱

GREEN INITIATIVES IN THE GLOBAL CONSTRUCTION INDUSTRY

INTRODUCTION

The construction industry is one of the most significant contributors to global resource consumption and environmental degradation. Accounting for approximately 39% of global carbon emissions and over 40% of energy consumption, it is imperative that the sector undergo a transformative shift toward sustainable practices. In recent years, there has been a growing push to adopt green initiatives that not only mitigate the environmental impact but also promote long-term economic and social benefits. This article explores the current green initiatives being implemented worldwide in the construction industry, with a focus on sustainable materials, energy-efficient power supply, water management, and HVAC systems. Additionally, it delves into the challenges faced by the industry and proposes practical solutions to overcome these obstacles.

SUSTAINABLE CONSTRUCTION MATERIALS A GREEN REVOLUTION IN BUILDING BLOCKS

Sustainable materials play a critical role in the shift toward greener construction practices. Traditional construction

materials, such as concrete, steel, and glass, are energy-intensive to produce and contribute significantly to carbon emissions. The demand for sustainable alternatives has led to the development of eco-friendly materials that reduce the environmental impact of construction projects.

Current Scenario:

- **Recycled Materials:** The use of recycled materials, such as reclaimed wood, recycled steel, and repurposed concrete, has gained significant traction. The incorporation of waste materials into the production of construction goods helps reduce the demand for virgin resources and lowers the environmental footprint.
- **Low-Carbon Concrete:** One of the biggest innovations has been the development of low-carbon or "green" concrete. Traditional cement production is highly carbon-intensive, but innovations like the use of alternative binders (geopolymers, fly ash, and slag) and carbon capture and utilization (CCU) processes have made concrete production more sustainable.

COVER STORY

- **Biodegradable Materials:** Materials such as bamboo, straw bales, and mycelium-based composites are being utilized in construction to replace energy-intensive options. These biodegradable materials not only have a low carbon footprint but are also renewable.
- **Sustainable Wood:** Forest certification schemes like FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification) ensure the sustainable sourcing of wood for construction, minimizing deforestation and promoting responsible forest management.

Challenges:

- **High Initial Costs:** Sustainable materials often come with higher initial costs compared to conventional materials.
- **Availability and Scalability:** Many green materials are not yet produced on a large scale, leading to limited availability, especially in developing regions.

- **Durability Concerns:** The long-term durability of alternative materials, such as mycelium-based composites, has not been conclusively proven in all environmental conditions.

Solutions:

- **Incentives and Subsidies:** Governments can offer incentives to contractors and developers who use sustainable materials. Tax rebates, grants, and subsidies for green construction can help offset the initial costs.
- **Standardization:** Developing standardized testing and performance data for green materials will help increase their adoption in mainstream construction projects.
- **Research and Development:** Continuous R&D into improving the durability and availability of green materials will make them more competitive with traditional options.

Case Study 1: Low-Carbon Concrete at the Eden Project, UK

Key Details	Impact
<p>Project: The Eden Project in Cornwall, UK, is a prime example of the use of low-carbon concrete in construction. This iconic environmental project, which houses biomes with diverse ecosystems, has employed innovative building materials to minimize its environmental footprint.</p> <p>Materials: Low-carbon concrete (with a blend of recycled materials like fly ash and slag) was used extensively in the construction</p> <p>Outcome: The use of these green materials reduced carbon emissions from cement production by up to 40%. The project also integrated recycled aggregates and low-emission materials for other elements, such as steel and glass, contributing to its sustainable design.</p>	<p>This use of low-carbon concrete set a precedent for future developments in the UK and globally. It demonstrated the viability of using alternative binders like fly ash and slag as substitutes for cement, helping to lower the carbon footprint of major construction projects.</p>



Image Source: www.edenproject.com

ENERGY-EFFICIENT POWER SUPPLY

A CLEAN FUTURE FOR CONSTRUCTION SITES

The power supply used in construction is another critical area where the industry is making substantial strides in sustainability. Energy consumption on construction sites comes from both equipment and temporary structures like offices, lighting, and machinery.

Current Scenario:

- **Solar Power:** Solar energy is increasingly being integrated into construction sites to power lighting, tools, and equipment. Portable solar generators have become a popular option for off-grid construction sites, significantly reducing reliance on fossil fuels.
- **Electric Equipment:** Electrification of construction machinery is advancing, with electric cranes, excavators, and loaders becoming more common. These electric machines produce fewer emissions and operate more efficiently than their diesel-powered counterparts.
- **Renewable Energy Integration:** Beyond solar, the use of wind and other renewable sources for powering temporary construction facilities has increased. Hybrid power solutions, which combine renewable energy with conventional power sources, offer a reliable and low-emission energy mix for remote or large-scale projects.

Challenges:

- **High Upfront Investment:** Transitioning to renewable power sources often requires a significant initial investment in equipment, technology, and training.



Image Source: www.apple.com

- **Reliability in Harsh Environments:** Renewable energy solutions, especially solar, can face challenges in regions with limited sunlight or during harsh weather conditions.

Solutions:

- **Government Support:** Governments can provide grants and tax incentives to contractors who invest in renewable energy systems for construction.
- **Battery Storage:** The development of advanced energy storage solutions can help mitigate the intermittency of renewable energy, ensuring that construction sites have a reliable power supply.
- **Training and Education:** Educating the workforce on the benefits and use of electric construction machinery can speed up the transition to sustainable energy sources.

Case Study 2: Solar-Powered Construction Site - The Construction of Apple Park, USA

Key Details	Impact
<p>Project: Apple’s headquarters, Apple Park, in Cupertino, California, is an excellent example of integrating solar power in construction to create an energy-efficient building. Apple adopted renewable energy strategies not only in the building design but also throughout the construction process.</p>	<p>Apple Park not only sets a standard for renewable energy in construction but also highlights the scalability of solar power in large construction projects. By providing energy to both the site and the final building, it proved that large-scale projects can be powered by renewable resources from start to finish.</p>
<p>Power Supply: The entire construction site was powered by solar energy, with a solar array capable of generating 17 megawatts of power—enough to power the campus and construction activities.</p>	
<p>Outcome: The solar installation helped reduce the reliance on diesel generators for powering the construction site, and it continues to generate clean energy for the building’s operations. The campus itself was designed to be carbon-neutral once completed, with sustainability at the core of its design.</p>	

WATER MANAGEMENT
ENSURING EFFICIENCY AND CONSERVATION

Water usage in the construction industry is often inefficient, with significant waste occurring in activities such as concrete mixing, dust suppression, and worker consumption. With global water scarcity becoming an increasing concern, the construction industry must embrace water-saving technologies and practices.

Current Scenario:

- **Rainwater Harvesting:** Collecting and storing rainwater for use in construction processes (such as mixing concrete, washing equipment, and irrigation) has become a key strategy for reducing the reliance on local water sources.
- **Water-Efficient Equipment:** The adoption of water-efficient machinery, such as low-water-use concrete mixers and dust suppression systems, reduces overall water consumption on construction sites.
- **Wastewater Recycling:** On-site treatment and reuse of wastewater for non-potable purposes (e.g., site cleaning and irrigation) help reduce the need for fresh water.
- **Smart Water Management:** The use of IoT-based sensors and smart technology to monitor and control water usage on construction sites can ensure optimal usage and minimize waste.

Challenges:

- **Initial Costs of Infrastructure:** The installation of rainwater harvesting systems, water-efficient equipment,



Image Source: www.marinabaysands.com

and wastewater treatment plants requires significant upfront investment.

- **Regulatory Barriers:** In some regions, regulatory frameworks around water use and wastewater treatment are not well established, hindering the adoption of such systems.

Solutions:

- **Water-Efficiency Standards:** Governments and industry bodies can set clear water efficiency standards for construction projects, promoting the adoption of water-saving technologies.
- **Circular Economy Models:** Emphasizing the reuse of water within the construction site (e.g., recycling wastewater) can create a more sustainable water loop, reducing overall demand.

Case Study 3: Rainwater Harvesting at the Marina Bay Sands, Singapore

Key Details	Impact
<p>Project: Marina Bay Sands is a world-renowned integrated resort in Singapore that incorporates several green initiatives, particularly in water management. The building’s design includes an extensive rainwater harvesting system to address the region’s water scarcity challenges.</p> <p>Water Management: Rainwater is collected from the rooftops of the three towers and directed into storage tanks. The harvested rainwater is then used for irrigation and cooling purposes, reducing the resort’s dependence on the public water supply.</p> <p>Outcome: The rainwater harvesting system has been a crucial component in the resort’s ability to conserve water, especially given Singapore’s status as a water-scarce country. Additionally, Marina Bay Sands integrates advanced water recycling systems to purify and reuse wastewater, making it a model of water sustainability.</p>	<p>The Marina Bay Sands project demonstrates how rainwater harvesting and water recycling can be incorporated into large-scale urban projects. It provides a blueprint for other developments in water-scarce regions to adopt similar technologies, ensuring a sustainable water supply even in densely populated areas.</p>

HVAC SYSTEMS

REVOLUTIONIZING ENERGY EFFICIENCY IN BUILDING INTERIORS

Heating, Ventilation, and Air Conditioning (HVAC) systems are responsible for a significant portion of energy consumption in buildings. In green construction, innovative HVAC technologies are being employed to reduce energy use, enhance indoor air quality, and lower carbon footprints.

Current Scenario:

- **Geothermal Heating and Cooling:** Geothermal systems use the Earth's natural heat to provide heating and cooling, offering a highly energy-efficient solution. These systems are gaining popularity in commercial and residential buildings alike.
- **Smart HVAC Systems:** The use of AI and IoT to create smart HVAC systems that adjust temperature and air quality based on real-time data is revolutionizing the efficiency of these systems. They can reduce energy consumption by ensuring optimal performance and comfort.
- **Energy Recovery Ventilation (ERV):** ERV systems recover energy from exhausted air to condition incoming fresh air, reducing the need for additional heating or cooling and improving energy efficiency.

Challenges:

- **High Initial Investment:** Geothermal systems and smart HVAC technologies require significant upfront investment, which can deter some stakeholders from adopting them.
- **Complexity of Integration:** Integrating these advanced HVAC systems into existing buildings, especially retrofits, can be technically complex and costly.

Solutions:

- **Incentives for Energy-Efficient Technologies:** Tax rebates, incentives, and low-interest loans for building owners adopting energy-efficient HVAC systems can make these technologies more accessible.

- **Integration with Renewable Energy:** Combining HVAC systems with solar or wind energy can enhance their efficiency and reduce reliance on the grid.



Image Source: www.pexels.com

CONCLUSION

NAVIGATING THE PATH FORWARD

The adoption of green initiatives in construction is essential for mitigating the environmental impacts of the industry. While significant progress has been made in areas such as sustainable materials, energy-efficient power, water management, and HVAC systems, challenges such as high initial costs, scalability, and technological integration remain. By leveraging government incentives, promoting research and development, and creating stronger regulatory frameworks, the construction industry can transition to more sustainable practices, leading to a more sustainable future. 🌱

References

- World Green Building Council (2020). "The Role of Construction in Global Sustainability." Retrieved from www.worldgbc.org.
- UN Environment Programme (2021). "The Global Status Report on Buildings and Construction." United Nations.
- International Energy Agency (IEA, 2023). "The Future of Energy Efficiency in Construction." Retrieved from www.iea.org.
- Green Building Council Australia (GBCA, 2022). "Innovation in Green Building Materials." GBCA Publications.
- The Construction Industry Council (CIC, 2024). "Global Trends in Green Construction." CIC Reports.

Construction

FUGRO AND AUTODESK REVOLUTIONIZE GEOTECHNICAL DATA MANAGEMENT WITH GEODIN® GROUND PLUGIN FOR CIVIL 3D

Fugro and Autodesk have partnered to launch the GeoDin® Ground plugin for Autodesk Civil 3D, a cutting-edge tool designed to improve geotechnical data management in construction projects. GeoDin® consolidates subsurface data from ground drilling and cone penetration tests (CPTs), providing engineers with essential geotechnical insights. The integration enhances foundation design accuracy and reduces risks from unforeseen ground conditions, while also ensuring automatic compliance with local regulations.

Typically, critical geotechnical knowledge is lacking during the design phase, which can result in inefficiencies such as over-engineering or costly redesigns. By integrating real-time

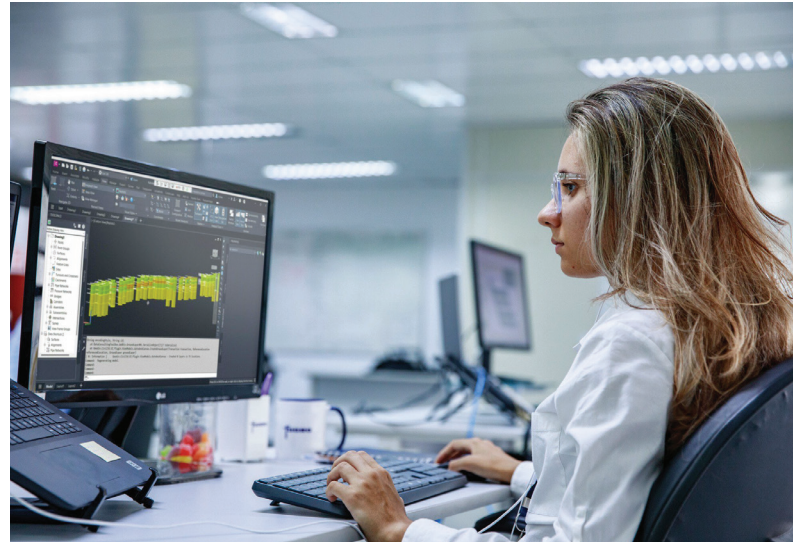


Image Credit: www.fugro.com

geotechnical data, the GeoDin® plugin allows engineers to optimize designs and address potential issues proactively. Studies reveal that over 50% of organizations currently separate geotechnical data from engineering design processes, underscoring the importance of this integration.

Wim Herijgers, Group Director of Strategy and Transformation at Fugro, noted that the partnership advances sustainable and safe construction practices. Dan Lohmeyer, VP of Building and Infrastructure Design at Autodesk emphasized that the collaboration fosters innovation and enhances project efficiency, aligning with their commitment to providing industry-leading solutions.

NEW PRE-FABRICATED MANUFACTURING PLANT SET TO TRANSFORM ETHIOPIA'S CONSTRUCTION INDUSTRY



Image Credit: www.capitalethiopia.com

A new pre-fabricated building materials manufacturing plant in Ethiopia is set to revolutionize the country's construction industry. The Federal Housing Corporation (FHC) has launched the facility with a 1 billion birr investment to tackle challenges in housing development and provide high-quality, reliable materials. Equipped with Turkish-made machinery and operated by trained Ethiopian experts, the plant is designed to stabilize input prices and boost production.

The factory can produce 202,752 cubic meters of reinforcing compound annually, with sales projected to exceed 2.29 billion birr. The plant's expanded footprint, now 14 hectares, includes workshops for wood, metal, glass, aluminium, and elevators. Plans for a pre-fabricated manufacturing unit are also underway, promising to further enhance Ethiopia's construction capabilities.

Rashad Kemal, CEO of FHC, emphasized that the facility will play a critical role in the country's housing sector, helping to produce tall, uniform buildings with higher quality and efficiency.

Power

KOREA SOUTHERN POWER CO. CHOSEN AS PREFERRED PARTNER FOR **WORLD'S FIRST CLEAN HYDROGEN POWER GENERATION PROJECT**

Korea Southern Power Co., Ltd. (KOSPO) has been selected as the preferred negotiating partner for the world's first clean hydrogen power generation bidding process, organized by the Korea Power Exchange on November 22, 2024. This marks a major step in the transition to carbon-free energy.

KOSPO's innovative project will co-fire coal with ammonia, a carbon-free hydrogen compound, at its Samcheok Bitdream headquarters. The initiative aims to reduce carbon emissions by over 700,000 tons annually, helping



Image Credit: www.fuelcellsworks.com

South Korea meet its 2030 Nationally Determined Contribution (NDC) targets for carbon neutrality.

The company has established a full-cycle clean hydrogen value chain, including production, storage, and utilization, enhancing its leadership in the hydrogen sector. If confirmed as the final bidder, KOSPO will begin co-fired power generation at Samcheok Green Power Unit 1 in 2028, with an annual capacity of 750 GWh. KOSPO's comprehensive project planning and strategy made it the most competitive bidder in the process.

14 MAJOR GLOBAL BANKS AND FINANCIAL INSTITUTIONS EXPRESS SUPPORT TO TRIPLE NUCLEAR ENERGY BY 2050

At Climate Week in New York City, major banks, government officials, and industry leaders gathered at the Financing the Tripling of Nuclear Energy event. This included 14 financial institutions supporting the global initiative to triple nuclear energy capacity by 2050, endorsed by 25 nations during COP28 in 2023.

The financial community recognized nuclear energy's critical role in the transition to a low-carbon economy. They emphasized support for expanding nuclear electricity generation, which will help accelerate the clean energy transition. At the event, John Podesta, Senior Advisor to the President for



Image Credit: www.world-nuclear.org

International Climate Policy, stressed that nuclear energy is essential for a sustainable and secure energy future.

Dr. Sama Bilbao y León, Director General of the World Nuclear Association, called for financial institutions to translate their commitment into changes in lending policies, enabling greater access to sustainable financing for nuclear projects.

The Net Zero Nuclear initiative seeks to triple global nuclear capacity by 2050, bringing together global leaders, policymakers, and the nuclear industry to meet climate challenges and ensure a cleaner energy future.

Renewable Energy

JOHNS HOPKINS RESEARCHERS USE MACHINE LEARNING TO SPEED UP SOLAR CELL TESTING

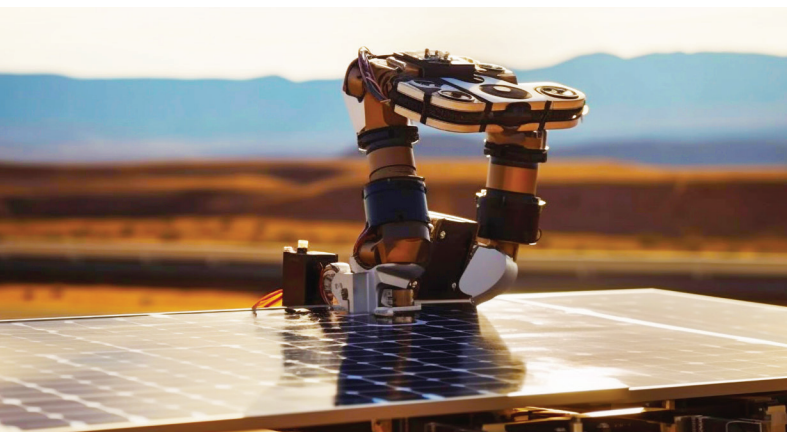


Image Credit: www.freepik.com

A team of Johns Hopkins researchers, led by PhD student Kevin Lee, has developed a groundbreaking machine learning method that could revolutionize the testing of solar cell technologies, drastically speeding up the process and reducing costs. The team's work, published in *Advanced Intelligent Systems*, aims to solve a major hurdle in commercializing new solar materials—the lengthy and expensive fabrication-testing-iteration cycle.

Traditionally, testing solar cells involves multiple time-consuming measurements. However, Lee's new approach extracts essential material properties from a single measurement, saving valuable time and resources. Unlike other methods that rely on simulated data, this technique uses real-world data, capturing thousands of data points from just one solar cell. The machine learning model accounts for complex defects, such as cracks or contaminants, without the need to fabricate numerous test cells.

By converting data into spatial maps and leveraging advanced machine learning models, the team can quickly assess solar cell performance, which could accelerate the development of more efficient renewable energy technologies. The method's versatility also opens the door to applications beyond solar cells, including transistors and light sensors. This innovation promises to fast-track clean energy advancements and make renewable energy solutions more affordable.

OXFORD PV'S PEROVSKITE SOLAR PANELS A GAME-CHANGER FOR SOLAR ENERGY

Oxford PV is pioneering the future of solar energy with its perovskite tandem solar panels, which promise to revolutionize the solar industry. Unlike traditional silicon-based solar panels, perovskite panels use a perovskite crystal structure that enhances efficiency by capturing a wider range of sunlight. The company's first commercial perovskite-silicon tandem modules boast a module efficiency of 24.5%, producing 20% more power than conventional silicon panels.

The key advantage of perovskite technology is its ability to absorb more wavelengths of sunlight through the stacking of layers, optimizing efficiency. Perovskite panels can generate more electricity from the same surface area, making them ideal for space-constrained environments like urban settings.

Additionally, they are cheaper to produce, as they require fewer materials and manufacturing steps, resulting in lower production costs.

The scalability of perovskite technology also opens up new possibilities for both residential and utility-scale systems. With perovskite panels, solar energy becomes more affordable and competitive with fossil fuels, making a significant contribution to the global transition to sustainable energy. As Oxford PV continues to innovate, perovskite solar technology is poised to transform the energy landscape, making clean, efficient solar power more accessible worldwide.

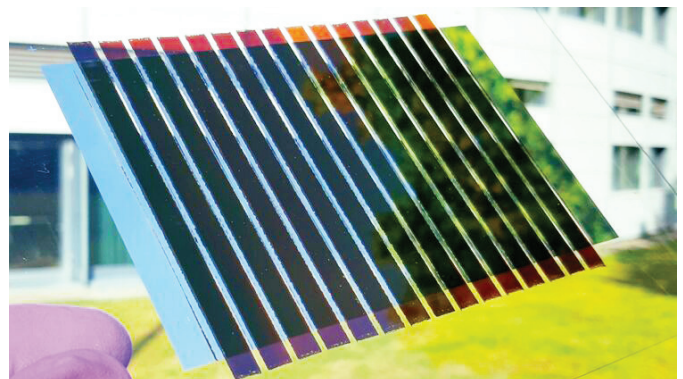


Image Credit: www.ecoticias.com

Water

SAUDI ARABIA LEVERAGES DANISH EXPERTISE TO TACKLE WATER SCARCITY AND SUSTAINABILITY CHALLENGES

As Saudi Arabia grapples with a growing population, limited natural water resources, and climate change, it is turning to international experts for solutions in water sustainability and treatment. Danish companies, known for their expertise in wastewater management, are playing a key role in supporting the Kingdom's water goals.

Partnerships with firms like Danfoss, Grundfos, and AVK are helping Saudi Arabia optimize its water resources, reduce wastage, and minimize environmental impacts. For instance, Grundfos has introduced solar-powered pumping systems to remote areas, while Danfoss emphasizes efficient water technologies that use less water and energy. Additionally, AVK International has provided essential wastewater solutions, including valves and hydrants.



Image Credit: www.arabnews.com

The Kingdom faces significant challenges in wastewater treatment, with only a portion of wastewater in major cities like Dammam, Riyadh, and Jeddah being treated and reused. Danish innovations, such as advanced filtration and reverse osmosis systems, are addressing these issues.

As Saudi Arabia advances its Vision 2030 goals, incorporating Danish expertise in sustainable water practices helps ensure a future with efficient, reliable water management. This collaboration will also aid the Kingdom in mitigating water scarcity and climate change while becoming a regional leader in water sustainability.

INNOVATIVE APPROACHES TO WATER MANAGEMENT FOR SUSTAINABLE URBAN DEVELOPMENT

Water is a critical resource for any city's growth and sustainable development. Managing water resources efficiently is key to balancing urban expansion and environmental preservation. Suzhou, a city in eastern China, faces challenges related to water management due to its rapid urbanization and complex water systems. Nearly half of Suzhou's area is covered by water, and it is an important industrial zone in the Yangtze River Delta.

A study by Xi'an Jiaotong-Liverpool University developed a system to assess the water quality challenges in Suzhou. The researchers calculated a water environmental carrying capacity score, which measures a city's ability to maintain water quality standards while supporting growth. Their findings show that since 2001, Suzhou's water capacity has increased, indicating



Image Credit: www.freepik.com

effective governmental actions, such as industrial optimization and wastewater recycling. However, challenges like fluctuating water resources and increasing urban water demand remain.

To improve water management, the researchers recommend protecting ecosystems, regulating sewage discharge, and maintaining key waterways. Additionally, cities should focus on cleaner industrial and agricultural practices, promote water conservation, and raise public awareness. These measures can help cities worldwide manage water resources more effectively as they grow sustainably.

HVAC and Cold Chain

CSAFE UNVEILS NEW TECHNOLOGIES FOR ENHANCED COLD CHAIN SHIPPING SOLUTIONS

CSafe, a provider of temperature-controlled shipping solutions for the biopharmaceutical industry, is launching three new technologies to enhance its portfolio. These innovations are designed to address key challenges in the cold chain industry by integrating real-time data tracking, ensuring maximum visibility throughout the shipping journey.

The first is the Multi-Use Dewars, part of the CGT Cryo Series, specifically designed for the growing cell and gene therapy market. These reusable cryogenic dewars maintain temperatures as low as -150°C using liquid nitrogen dry vapor units, and come with a built-in TracSafe RLT real-time tracking device.

The CSafe Connect Control Tower offers a white-glove shipment monitoring service, providing customers with real-time visibility into shipment data such as GPS location and cargo temperature. The service operates 24/7 to monitor shipments and escalate any issues.

Lastly, the Silverpod MAX RE, a reusable pallet shipper, provides over 120 hours of thermal protection and is made from recyclable components, ensuring safe storage and shipment with real-time tracking capabilities.



Image Credit: www.csafeglobal.com

REDUCING THE HVAC CARBON FOOTPRINT THE PATH TO SUSTAINABILITY

The HVAC industry plays a critical role in global energy consumption, particularly in the construction and industrial sectors, which account for around 30% of global energy use and 40% of carbon emissions. As governments focus on reducing emissions and sustainability, the HVAC sector must contribute to achieving net-zero goals.

With the rise of intelligent technology, smart HVAC systems are becoming more energy-efficient. These systems use sensors to monitor building conditions, integrating with automation systems to reduce energy waste and improve performance. Technologies like smart thermostats and remote-controlled HVAC devices enable efficient temperature regulation, reducing emissions by optimizing energy use.

As global temperatures rise, so does the demand for air



Image Credit: www.freepik.com

conditioning, which accounts for 10% of building electricity consumption. More efficient air conditioning units and systems like modular HVACs—adaptable, cost-effective, and easier to maintain—are key to reducing HVAC-related emissions.

In the pursuit of net-zero, incorporating smart systems, improving energy efficiency, and embracing modular designs are vital steps. With continued innovation, the HVAC industry can significantly reduce its carbon footprint and contribute to a more sustainable future. 🌱

UNDERSTANDING CARBON CREDITS

MECHANISMS, MEASUREMENT, AND OPPORTUNITIES FOR THE CONSTRUCTION INDUSTRY

The global effort to combat climate change has given rise to various mechanisms aimed at reducing greenhouse gas (GHG) emissions, with carbon credits emerging as one of the most prominent. Carbon credits are a key instrument in the world's effort to mitigate climate change, allowing entities to offset their

carbon emissions by investing in projects that reduce or capture an equivalent amount of CO₂. This article will explore the concept of carbon credits, how they are measured, and how the construction industry can adopt strategies to reduce emissions and participate in the carbon credit market.

WHAT ARE CARBON CREDITS ?

A carbon credit is a tradeable certificate that represents the reduction or removal of one ton of CO₂ or an equivalent amount of another greenhouse gas (GHG) from the atmosphere. These credits are issued by various organizations that adhere to international standards for measuring and verifying emissions reductions, including the Verified Carbon Standard (VCS), the Gold Standard, and the Clean Development Mechanism (CDM) under the Kyoto Protocol (Hahn, 2021).

Carbon credits are an essential part of carbon trading, a system that allows companies, governments, and other entities to offset their carbon footprints. If an entity exceeds its carbon emissions cap, it can purchase carbon credits from organizations that have successfully reduced or avoided emissions through specific projects. The funds generated are reinvested into further carbon-reducing projects, creating a cycle of emissions reduction and environmental protection.





Ai Generated Symbolic Photo. Source: www.freepik.com

HOW ARE CARBON CREDITS MEASURED ?

Carbon credits are measured based on the amount of CO₂ emissions avoided or captured by a specific project or initiative. The measurement process follows a rigorous methodology designed to ensure accuracy and transparency.

1. Baseline Calculation: The first step in the carbon credit creation process is calculating a baseline. This baseline represents the emissions level that would have occurred without the carbon reduction project. For instance, a wind farm generates carbon credits by reducing emissions that would have been produced by a coal-fired power plant.

2. Emission Reduction Quantification: After establishing the baseline, the project's emissions reductions are calculated. This includes accounting for direct reductions (e.g., energy savings) and indirect reductions (e.g., avoided deforestation).

3. Verification: The emissions reductions are then verified by independent third parties. Organizations like SGS, TÜV, and others ensure that the reported reductions meet the necessary criteria. This verification process is critical for ensuring that the carbon credits are genuine and that the project has contributed positively to emission reductions.

4. Issuance of Carbon Credits: Once verified, the carbon credits are issued and can be sold or traded on carbon markets. These credits can be used by companies or governments to offset their emissions, contributing to global carbon neutrality goals.

THE ROLE OF THE CONSTRUCTION INDUSTRY IN CARBON CREDIT GENERATION

The construction industry is a significant contributor to global carbon emissions, responsible for an estimated 39% of global CO₂ emissions, with buildings accounting for a large portion of these emissions (Global Alliance for Buildings and Construction, 2020). This creates both a challenge and an opportunity for the sector to actively engage in carbon credit generation and contribute to global emission reduction targets.

Carbon Credit Opportunities in Construction

1. Energy-Efficient Buildings: Constructing energy-efficient buildings can significantly reduce carbon emissions over the long term. By utilizing materials with low embodied carbon (e.g., recycled materials), implementing energy-efficient systems (e.g., HVAC, LED lighting), and designing passive building systems, construction projects can lower their operational energy use and carbon footprint.

CARBON CREDITS

2. Carbon Capture and Storage (CCS) Technologies: The construction industry can invest in CCS technologies that capture carbon during the production of materials like cement, which is one of the largest sources of industrial CO₂ emissions. Projects that integrate CCS could generate carbon credits by storing or utilizing the captured carbon.

3. Reforestation and Afforestation Projects: As part of their sustainability efforts, construction companies can partner with environmental organizations to support reforestation or afforestation projects, which sequester carbon dioxide. These projects can generate carbon credits that can be sold or used to offset emissions from construction activities.

4. Sustainable Materials Production: Sustainable practices in material production, such as using low-carbon cement or alternative materials like hempcrete or bamboo, can lower the carbon footprint of construction projects. Some of these initiatives may be eligible for carbon credits if they meet the required standards for emissions reduction.

Measuring and Mitigating Challenges in Carbon Credit Implementation

While the construction industry has significant potential to generate carbon credits, several challenges must be addressed:

1. Complexity of Measurement: Measuring the carbon footprint of construction activities can be difficult due to the diversity of materials, processes, and supply chains involved. Developing standard protocols and tools for calculating the carbon footprint of construction projects will be essential to overcoming this challenge. The use of Building Information Modeling (BIM) and Life Cycle Assessment (LCA) tools can assist in providing accurate emissions data.

2. Verification of Carbon Credits: The verification process for carbon credits can be resource-intensive and expensive. Construction firms must invest in transparent reporting and third-party verification to ensure that the carbon credits they generate are credible. Collaborating with experts in carbon accounting and working with recognized certification bodies will help streamline this process.

3. High Initial Investment: Many carbon-reducing technologies, such as renewable energy systems and sustainable materials, require significant upfront investment. To make these technologies more accessible, governments and private organizations could provide incentives, such as tax credits or grants, to encourage the adoption of sustainable practices in the construction sector.

4. Lack of Awareness and Expertise: Many construction companies lack the expertise and knowledge to participate in carbon credit programs effectively. There is a need for greater education and training within the industry on how to measure and reduce emissions, as well as how to generate and trade carbon credits.

MITIGATING THE CHALLENGES

To mitigate these challenges, the construction industry can adopt several strategies:

1. Collaboration with Experts: Construction companies should collaborate with environmental consultants and experts in carbon measurement and verification to ensure the accuracy of their carbon credit generation.

2. Adopting Best Practices: Companies should adopt best practices for energy efficiency, sustainable material sourcing, and waste reduction to reduce their carbon footprint from the outset of a project.

3. Investing in R&D: Investment in research and development for innovative low-carbon building materials, energy systems, and carbon capture technologies will help drive down the cost and improve the scalability of carbon credit-generating solutions.

4. Government Incentives and Policies: Governments can play a pivotal role by offering financial incentives, streamlining certification processes, and providing policy frameworks that encourage construction companies to engage in carbon credit programs.

CONCLUSION

Carbon credits present a unique opportunity for the construction industry to contribute meaningfully to global climate change mitigation efforts. By embracing sustainable practices, investing in green technologies, and adopting transparent measurement and verification processes, the sector can reduce its carbon footprint while generating valuable carbon credits. Overcoming the challenges of complex measurement, high initial costs, and lack of expertise will require collaboration, innovation, and strong policy support. With these efforts, the construction industry can play a pivotal role in achieving carbon neutrality and a sustainable future. 🌱

Source:

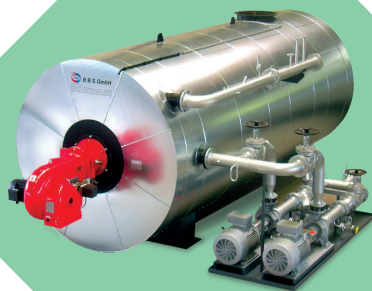
Hahn, R. (2021). Carbon Credits: Mechanisms and Market Opportunities. *Environmental Economics Journal*, 12(3), 45-60.
Global Alliance for Buildings and Construction. (2020). *Global Status Report for Buildings and Construction: Towards a Zero-Emission, Efficient and Resilient Buildings and Construction Sector*. United Nations Environment Programme.

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UPCOMING EXHIBITIONS

WORLD OF CONCRETE 2025

- **Dates:** January 20–23, 2025
- **Venue:** Las Vegas Convention Center, Las Vegas, USA
- **Details:** An international trade show dedicated to the commercial concrete and masonry industries, featuring indoor and outdoor exhibits, workshops, and training sessions.

BAU 2025

- **Dates:** January 13–17, 2025
- **Venue:** Trade Fair Center Messe München, Munich, Germany
- **Details:** A biennial trade fair aimed at the international community for planning, building, and designing buildings, showcasing the latest techniques, materials, and applications.

INTERNATIONAL ROOFING EXPO 2025

- **Dates:** February 19–21, 2025
- **Venue:** Henry B. González Convention Center, San Antonio, Texas, USA
- **Details:** The largest roofing and exteriors event in North America, offering insights into new products, equipment, education, and networking opportunities.

BIG 5 CONSTRUCT SAUDI 2025

- **Dates:** February 15–18 and February 24–27, 2025
- **Venue:** ROSHN Front, Riyadh, Saudi Arabia
- **Details:** A major construction event in Saudi Arabia, featuring a wide range of construction products, services, and technologies.

BUILD INTEC 2025

- **Dates:** April 18–21, 2025
- **Venue:** Coimbatore, India
- **Details:** A building and construction trade fair focusing on the latest materials, equipment, and technologies in the construction industry.

BAUMA 2025

- **Dates:** April 7–13, 2025
- **Venue:** Messe München, Munich, Germany
- **Details:** The world's leading trade fair for construction machinery, building material machines, mining machines, construction vehicles, and construction equipment.

CSPI-EXPO 2025

- **Dates:** June 18–21, 2025
- **Venue:** Chiba, Japan
- **Details:** International Construction & Survey Productivity Improvement Expo showcasing construction machinery, surveying equipment, and related technologies.

KYUSHU HOME & BUILDING SHOW 2025

- **Dates:** June 18–19, 2025
- **Venue:** Fukuoka, Japan
- **Details:** Exhibition featuring building materials, components, equipment, and systems for home and building construction.

BIG 5 CONSTRUCT SOUTH AFRICA 2025

- **Dates:** June 18–20, 2025
- **Venue:** Gallagher Convention Centre, Johannesburg, South Africa
- **Details:** A significant event contributing to the growth and transformation of Southern Africa's construction industry.

BUILDEXPO KENYA 2025

- **Dates:** July 16–18, 2025
- **Venue:** Nairobi, Kenya
- **Details:** The largest trade exhibition in East Africa, showcasing the latest technology in building materials, construction machinery, and heavy equipment.



CONCRETE SHOW SOUTH EAST ASIA 2025

- **Dates:** September 10–13, 2025
- **Venue:** Jakarta, Indonesia
- **Details:** An exhibition focusing on concrete, construction machinery, and related equipment, attracting industry professionals from Southeast Asia.

CONSTRUCTION INDONESIA 2025

- **Dates:** September 10–13, 2025
- **Venue:** Jakarta, Indonesia
- **Details:** An international construction, infrastructure, and building exhibition, showcasing the latest products and technologies in the industry.

PLANTWORX 2025

- **Dates:** September 23–25, 2025
- **Venue:** Newark Showground, Newark, UK
- **Details:** A construction machinery exhibition featuring the latest equipment, technology, and services, with live demonstrations and networking opportunities.

EP SHANGHAI 2025

- **Dates:** November 18–20, 2025
- **Venue:** Shanghai, China
- **Details:** International Exhibition on Electric Power Equipment and Technology, including building electrical installation systems and related technologies.

JAPAN BUILD TOKYO 2025

- **Dates:** December 10–12, 2025
- **Venue:** Tokyo, Japan
- **Details:** An international building and home week event covering building materials, smart building solutions, and housing equipment.

SMART HOME EXPO [TOKYO] 2025

- **Dates:** December 10–12, 2025
- **Venue:** Tokyo, Japan
- **Details:** Exhibition focusing on smart home technologies, including IoT devices, home automation, and related solutions.

AHR EXPO 2025

- **Dates:** February 10–12, 2025
- **Venue:** Orange County Convention Center, Orlando, Florida, USA
- **Details:** A leading event for HVACR professionals, showcasing the latest innovations and providing networking opportunities.

ISH 2025

- **Dates:** March 17–21, 2025
- **Venue:** Messe Frankfurt, Frankfurt am Main, Germany 🇩🇪



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THE TRANSFORMATIVE ROLE OF AUTONOMOUS EQUIPMENT IN THE CONSTRUCTION INDUSTRY GROWTH, CHALLENGES, AND MARKET DYNAMICS

The global autonomous construction equipment market is set to witness significant growth, with projections indicating an increase from **US\$4.43 billion in 2024 to US\$9.86 billion by 2030** (MarketsandMarkets, 2024). This rapid expansion reflects the construction industry's increasing reliance on automation, which is driven by several key factors, including labor shortages, safety improvements, cost efficiency, and the growing demand for environmentally sustainable solutions.

KEY DRIVERS

EFFICIENCY, SAFETY, AND SUSTAINABILITY

Automation has become a pivotal trend in construction, particularly as labor shortages continue to affect the industry. According to a report by McKinsey & Company (2023), the construction sector faces a significant workforce gap, which autonomous equipment can help mitigate by reducing the dependency on manual labor.

The efficiency gains from automation are not just about speeding up processes but also improving safety standards. With autonomous machines operating with high precision, the risk of human error on construction sites is minimized, leading to a reduction in accidents and fatalities.

Additionally, the environmental benefits of autonomous machines are garnering attention. The push toward sustainable construction is fueling demand for electric autonomous equipment, which offers a cleaner, more energy-efficient alternative to traditional diesel-powered machines. This is especially important in urban construction, where noise and emissions are critical concerns. The global drive for net-zero emissions has also accelerated the adoption of electric excavators, loaders, and haul trucks, which benefit from quieter operations and lower carbon footprints (International Energy Agency, 2024).

ELECTRIFICATION AND ADVANCEMENTS IN BATTERY TECHNOLOGY

The **electric autonomous construction equipment sector** is poised for rapid growth, fueled by significant advancements in battery technology. Electric-powered machines, such as excavators and haul trucks, are increasingly equipped with autonomous features like **automated digging** and **grade control systems**. The integration of these technologies is enabling longer operational ranges and faster charging times, addressing one of the primary challenges facing electric vehicles—battery efficiency.

As **solar energy** and **wind power** continue to emerge as sustainable energy sources, their integration into construction sites is becoming more common, further supporting the viability of electric autonomous equipment. The ease of integrating electric propulsion systems with autonomous software is a key factor in enhancing overall efficiency, reducing energy consumption, and improving machine performance.

MARKET DYNAMICS

THE AMERICAS AS A GROWTH HUB

The **Americas** are expected to hold the largest market share for autonomous construction equipment during the forecast period. The region is witnessing significant investments in **infrastructure development**, including large-scale projects such as **mining, urban development, and agriculture**. The need to address labor shortages, combined with favorable regulatory environments, is driving growth in autonomous equipment adoption. Major manufacturers like **Caterpillar** and **John Deere** are leading the way in integrating artificial intelligence (AI) and **machine learning** into their equipment, ensuring that the machinery not only operates autonomously but also learns and adapts to its environment over time.

The demand for mined materials such as **gold, copper, and lithium** further fuels the adoption of autonomous equipment in the mining sector, where efficiency improvements are crucial. **Strategic collaborations** between equipment manufacturers and technology giants like **Google** and **Tesla** are accelerating the integration of AI and autonomous technologies into construction and mining operations (GlobalData, 2023).

OPPORTUNITIES AND CHALLENGES

THE PATH TO WIDESPREAD ADOPTION

Despite the promising growth in autonomous construction equipment, there remain significant challenges to overcome. **High initial investments** in autonomous technology, coupled with **regulatory compliance hurdles**, are barriers that need to be addressed to ensure broader adoption. In the case of electric autonomous vehicles, issues like the **charging infrastructure** and **battery disposal** continue to hinder scalability in certain regions (World Economic Forum, 2023).

Furthermore, as the construction industry becomes increasingly reliant on AI and machine learning, there is a growing concern about **cybersecurity**. Autonomous systems are susceptible to potential breaches, and industry stakeholders must prioritize robust security measures to mitigate risks associated with hacking and data theft.

AI IN CONSTRUCTION

INDUSTRY LAGGING BEHIND

While the construction sector is embracing automation, it remains largely behind the curve when it comes to the widespread implementation of artificial intelligence (AI). A recent study by the British Standards Institution (BSI) revealed that the UK's built environment sector ranks low in AI readiness, scoring just 1.9 out of 5 in terms of its ability to adopt AI effectively. This highlights a critical gap

in the industry's capacity to implement AI-driven tools for project planning, site safety, and resource management (BSI, 2023).

AI is transforming industries such as manufacturing, healthcare, and finance, yet the construction sector lags in its integration. In particular, the use of AI for predictive maintenance, real-time monitoring, and automated site management offers significant potential for improving efficiency and reducing costs. However, the lack of skilled personnel, investment in technology, and reluctance to adopt new systems are limiting AI's impact in construction (Forbes, 2024).

LEADING MARKET PLAYERS AND INNOVATIONS

Key players in the autonomous construction equipment market include Deere & Company, Caterpillar, Komatsu Ltd, Volvo Construction Equipment, Liebherr Group, and Hitachi Construction Machinery. These companies are at the forefront of the autonomous revolution, consistently introducing innovative products and AI-driven solutions to cater to a range of industries, including mining, agriculture, and urban construction (Construction Equipment Guide, 2024).



Image Credit: www.freepik.com

A SUSTAINABLE AND EFFICIENT FUTURE

The adoption of autonomous construction equipment represents a major leap forward in the quest for sustainable, efficient, and safe construction practices. As artificial intelligence, machine learning, and electric propulsion technologies continue to evolve, the construction industry will see significant changes. However, for these changes to reach their full potential, addressing regulatory challenges, high costs, and infrastructure limitations will be crucial.

With the increasing focus on sustainable development and the growing need for labor-saving solutions, autonomous equipment will play an instrumental role in reshaping the future of construction, mining, and agriculture—ushering in a new era of innovation and growth. 🌱

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AN INT'L EXHIBITION ON
**SAFE BUILDING MATERIALS,
 EQUIPMENT, BUILDING
 SAFETY & SECURITY
 OF BANGLADESH**

10th
BUILDEX
2025

Shaping the Future of Sustainable Construction

BUILDEX 2025 is an exclusive B2B platform that brings together leaders in the construction, building materials, equipment, and real estate sectors. This event showcases the latest innovations and solutions focused on safe and sustainable construction methods, products, and infrastructure development.

Date: 29-31 May, 2025

Location: ICCB, Kuril, Dhaka, Bangladesh

Why It Matters: With increasing challenges from climate change, overpopulation, and limited natural resources, the construction industry must evolve to meet the demands of sustainable growth. BUILDEX 2025 provides a vital platform for both domestic and international organizations to present cutting-edge solutions that contribute to safe, sustainable, and innovative infrastructure development. As Bangladesh continues to experience significant growth, with key projects like the Padma Bridge and Payra Port, BUILDEX 2025 serves as a critical event to foster the future of construction in the country. It enables professionals to connect, share ideas, and explore technologies that will drive the next phase of economic growth while prioritizing sustainability.

10th
BPLX
BANGLADESH POWER & LIGHTING EXPO 2025

Driving the Future of Energy in Bangladesh

The Power & Lighting Expo (BPLX) is a premier event that brings together professionals from the power generation and lighting industries. The expo will focus on innovative solutions, technologies, and policies aimed at addressing the challenges facing Bangladesh's power sector. It provides a platform for industry leaders to meet, network, and collaborate on ways to ensure a sustainable and efficient energy future.

Date: 29-31 May, 2025

Location: ICCB, Kuril, Dhaka, Bangladesh

Why It Matters: Bangladesh's power sector faces significant challenges, including system losses, power shortages, inefficiencies in plants, and delayed project completions. With the country's demand for electricity expected to soar to 34,000 MW by 2030, the need for technological advancements and sustainable solutions has never been more urgent. The Power & Lighting Expo serves as a vital platform for addressing these issues by bringing together experts, policymakers, and innovators to discuss solutions and technologies that can transform Bangladesh's energy landscape. As the country works to achieve sustained economic growth and improve its energy infrastructure, BPLX plays a crucial role in shaping the future of power generation and lighting in Bangladesh.

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BANGLADESH POWER & LIGHTING EXPO 2025

A Premium Exhibition of
**SAFE & SMART POWER
 AND LIGHTING SOLUTIONS**





Accelerating Bangladesh's Renewable Energy Future

Renex 2025 is a premier event that brings together professionals and stakeholders from the renewable energy sector to explore solutions for the growing power crisis in Bangladesh. This event will focus on advancements in solar, wind, biomass, small hydro, geothermal, and energy efficiency, highlighting the critical role of renewable energy in shaping the future of power generation.

Date: 29-31 May, 2025

Location: ICCB, Kuril, Dhaka, Bangladesh

Why It Matters: Bangladesh's growing energy demand, fueled by rapid economic development and urbanization, makes it imperative to diversify the country's energy sources. Renewable energy, with its abundant sunlight, coastal wind, and geothermal potential, presents a viable solution to the power crisis. Renex 2025 offers a valuable platform for experts, industry leaders, and policy-makers to come together, share innovations, and collaborate on strategies to accelerate the country's renewable energy transition. The event provides exhibitors with the opportunity to engage with international and regional buyers, while attendees will gain invaluable insights and business opportunities in the rapidly evolving renewable energy sector. This event is a crucial step toward realizing Bangladesh's sustainable energy future.



Revolutionizing Water Management in Bangladesh

WaterEx 2025 is the 10th edition of a premier event focused on addressing the water management challenges in Bangladesh. This exhibition will provide a platform for national and international organizations in the water industry to come together and explore solutions for water scarcity, contamination, and sustainability. The event will feature innovations, technologies, and strategies aimed at improving water management, ensuring clean water access, and enhancing the country's water infrastructure.

Date: 29-31 May, 2025

Location: ICCB, Kuril, Dhaka, Bangladesh

Why It Matters: Water management is a critical issue in Bangladesh, where challenges such as contamination of groundwater with arsenic, seasonal water availability, and the increasing demand for water in agriculture, industry, and urban areas are pervasive. The government has prioritized improving water infrastructure, and WaterEx 2025 provides a vital platform for experts and organizations to showcase solutions and discuss future trends in the water sector. The event presents unique business opportunities for organizations to collaborate and innovate, ultimately contributing to the country's efforts to ensure safe and sustainable water access for all.





AN INTERNATIONAL EXHIBITION ON
INFRASTRUCTURE EQUIPMENT & MACHINERY



Shaping the Future of Infrastructure in Bangladesh

The Infrastructure Equipment & Machineries Expo (IEMX) is the premier event dedicated to professionals in the infrastructure, power equipment, industrial vehicles, and heavy machinery sectors. The expo provides a unique platform for top manufacturers, suppliers, and industry experts to showcase cutting-edge technologies and advancements in the field. It serves as a hub for networking, knowledge exchange, and business opportunities, helping drive growth and innovation within the industry.

Date: 29-31 May, 2025

Location: ICCB, Kuril, Dhaka, Bangladesh

Why It Matters: As Bangladesh continues its impressive infrastructure development, the **Infrastructure Equipment & Machineries Expo (IEMX)** plays a crucial role in facilitating the exchange of ideas, technologies, and solutions for the sector. The event brings together key stakeholders to explore the latest machinery and equipment innovations, vital for supporting the country's rapid urbanization and industrial expansion. For professionals and companies in these fields, IEMX provides unparalleled opportunities to stay ahead of trends, form partnerships, and contribute to the growth of Bangladesh's infrastructure landscape.



Driving Innovation in Bangladesh's Air-Conditioning, Refrigeration, and Cold Chain Sectors

The 10th Edition of SAFE HVACR & Cold Chain 2025 is the only dedicated exhibition in Bangladesh focused on Heating, Ventilation, Air-Conditioning, Air-Filtration & Purification, Refrigeration Systems, and Cold Chain Management Solutions and Services. The event will showcase the latest advancements and technologies from leading industry players, offering an invaluable platform for networking and business development.

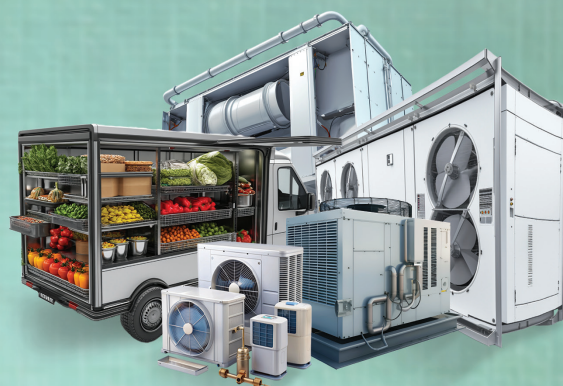
Date: 15-17 May, 2025

Location: ICCB, Kuril, Dhaka, Bangladesh

Why It Matters: As Bangladesh experiences rapid urbanization and significant investments in commercial, residential, and industrial projects, the demand for HVAC systems and cold chain solutions is soaring. With South Asia's highest GDP growth rate and a population of over 170 million, Bangladesh offers massive opportunities for the HVACR and cold chain industries. The government's strong focus on green construction and sustainable technologies further boosts the demand for smart HVAC systems. SAFE HVACR & Cold Chain 2025 provides an essential platform for industry professionals including factory owners, developers, engineers, contractors, and distributors—to meet, share innovations, and explore new business opportunities. This exhibition is a key event for anyone looking to expand their presence in Bangladesh's growing HVACR and cold chain markets.



THE LARGEST
INTERNATIONAL EXHIBITION ON
SAFE HVACR and COLD CHAIN





About Our Company

M.K Technology: Established in 2012 in Dhaka, Bangladesh, M.K Technology has grown to be a trusted in Online UPS & the renewable energy and power management industry. We specialize in importing and providing both wholesale and retail sales, offering comprehensive solutions for all your energy needs.

Our Solutions in Solar Systems

Expert Design and Engineering: We meticulously design installations to optimize performance and safety.

Customized Solutions: Tailored to meet the unique energy needs of homes, offices, factories, and government projects.

Quality Components: Using only the highest A grade quality solar panels, inverters, and components.

Professional Installation: Experienced technicians ensure precision, safety, and reliability in every installation.

Repair and Services: We provide top-notch repair and maintenance services for all types of inverters, including IPS, UPS, and online UPS. Our professional team ensures optimal performance and longevity for your power systems.

Our Products

- **Solar Panels:** High-efficiency panels designed to maximize energy production and reduce electricity costs.
- **Inverters:** Both offline and online inverters that ensure seamless power conversion and energy management.
- **UPS/IPS Systems:** Reliable power backup solutions that guarantee uninterrupted power supply.
- **Automatic Voltage Regulators (AVR):** Advanced devices that stabilize voltage, protecting sensitive electronic equipment.

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BIG 5 GLOBAL 2024

REDEFINING CONSTRUCTION, URBAN DEVELOPMENT, AND SUSTAINABILITY



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Proximity to
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Customizable
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Image Credit: www.big5global.com

The 45th edition of **Big 5 Global**, hosted at the Dubai World Trade Centre from November 27-29, 2024, reaffirmed its position as the leading platform for innovation and collaboration in the construction and urban development industries. With over \$9 trillion worth of construction projects in the pipeline across the Middle East, Africa, and South Asia (MEASA) region, the event spotlighted transformative ideas, groundbreaking technologies, and strategic partnerships shaping the future of urban living.

STRATEGIC SUMMITS

ENVISIONING THE FUTURE OF CITIES

This year's Big 5 Global featured three co-located summits- **LiveableCitiesX**, **Future FM**, and **GeoWorld**- designed to address key challenges and opportunities in urban development, facility management, and geospatial technologies.

At LiveableCitiesX, Prof. Carlos Moreno, the visionary behind the "15-Minute City" concept, captivated attendees with his call for a paradigm shift in urban planning. "It is time to reflect on the future of cities and offer new generations a 21st-century urbanism," Moreno said. His vision of "proxilience," or proximity as resilience, emphasized creating walkable, inclusive communities in the Middle East to reduce car dependency and enhance climate resilience.

GeoWorld delved into the transformative potential of geospatial technologies. **YellowScan** showcased its CloudStation software, which provides scalable, user-friendly solutions for seamless data generation. This innovation underlined the importance of geospatial insights in addressing challenges like extreme weather impacts and urban planning.

Future FM spotlighted innovations in facility management, with Planon unveiling its IoT-enabled Field Services **Platform** through a major contract with **Tamimi Global (TAFGA)**. This partnership promises to streamline field services operations, covering everything from space management to sustainable building solutions.

GROUNDBREAKING PARTNERSHIPS AND PROJECTS

Big 5 Global continued to serve as a hub for fostering strategic collaborations. In one of the event's most significant announcements, the Ministry of Construction, Housing, and Urban Development of Côte d'Ivoire signed MoUs with **Royal Gulf Contracting**, **ZDS Development Consortium**, and the **Abu Dhabi Fund** to construct 17,000 housing units via public-private partnerships. This initiative reflects Côte d'Ivoire's commitment to addressing its housing deficit while leveraging sustainable construction practices.

Saudi Arabia's **WhiteHelmet** signed a transformative MoU with India's SB Scaffolding, introducing 360-degree

documentation and communication solutions to India's construction sector.

Germany's **BAUER Maschinen GmbH** sealed a multi-million-euro deal with UAE-based Pinnacle International Piling for the BAUER BG36 piling rig, showcasing the event's role in driving high-value deals.

Adding to the buzz, **Deyaar Development** announced the launch of **Park Five**, a \$408.4 million luxury residential community in Dubai Production City. The wellness-centric project reflects Dubai's vision for sustainable, innovative urban spaces, focusing on enhancing residents' quality of life.

INNOVATIVE TECHNOLOGIES STEALING THE SPOTLIGHT

Big 5 Global has always been at the forefront of showcasing cutting-edge technologies, and this year was no exception.

PropTechBuzz signed an MoU with the Dubai PropTech Business Group (DPBG), positioning Dubai as a global hub for PropTech innovation. This partnership aims to connect global PropTech companies with Dubai's thriving real estate market, fostering growth through events, community engagement, and resources.

At LiveableCitiesX, **Pavagen** launched its revolutionary **Solar+ tile**, which combines solar and kinetic energy to generate up to 30 times more power than its predecessor. This groundbreaking product enables city developers to gather valuable data while creating sustainable, dynamic spaces that reduce carbon footprints.

The event's focus on technological advancements extended to GeoWorld, where innovations like YellowScan CloudStation emphasized adaptability and scalability in geospatial data management.

GLOBAL COOPERATION AND CULTURAL EXCHANGE

Big 5 Global 2024 celebrated international collaboration with vibrant country pavilions from Saudi Arabia, China, Turkey, and other nations. Saudi Arabia's "Made in Saudi" program featured 55 companies showcasing the nation's craftsmanship and innovation, aligning with Vision 2030's mission to drive sustainable growth.

Thamer Almishrafi, General Manager of Marketing and Events for Saudi Exports, remarked, "This event provides a unique opportunity to connect with international partners and highlight Saudi Arabia's strengths in sustainable construction and development."

REFLECTIONS AND FUTURE IMPACTS

As Big 5 Global 2024 drew to a close, it marked the conclusion of its co-located events, LiveableCitiesX, Future FM, and GeoWorld. The insights shared and partnerships forged at these summits are poised to shape the future of urban development.

Reflecting on the event's success, Josine Heijmans, Senior Vice President at dmg events, stated, "Big 5 Global 2024 continues to be a beacon of progress for construction and urban development. The ideas and innovations showcased here will undoubtedly influence how we design, build, and manage cities to be more sustainable and liveable." 🌱



Image Credit: www.big5global.com

SOLAR POWER SET TO SURGE 400% BY 2030, LEADING THE TRANSITION AWAY FROM COAL

The International Energy Agency's (IEA) World Energy Outlook 2024 presents a striking vision for the future of global energy, with solar power playing a pivotal role in reshaping the energy landscape. According to the report, solar electricity generation is projected to grow by a staggering 400% by 2030, positioning it as a dominant force in the global energy mix. This rapid expansion is set to accelerate the decline of coal and other fossil fuels, marking a defining shift toward cleaner, renewable energy sources.

particularly in developing and emerging economies.

Solar power's growth is not just a matter of numbers; it's a transformative force reshaping how the world produces and consumes electricity. Under the Stated Policies Scenario (STEPS), solar energy is expected to surpass nuclear, wind, hydro, and natural gas by 2033. What's even more remarkable is that, by 2035, solar could overtake coal as the largest single source of electricity worldwide, further cementing its role as a cornerstone of the future energy system.

THE DECLINE OF COAL AND THE RISE OF RENEWABLES

Coal, which has long been the backbone of global electricity production, is on track for a sharp decline by 2025, particularly as solar and wind power begin to dominate, especially in Asia, where coal has traditionally held strong. This shift is seen as a critical step in the fight against climate change, as



Image Credit: www.freepik.com

A NEW ERA FOR SOLAR POWER

Solar power's rise is a central element of what the IEA describes as the "age of electricity." The 2024 report details how global energy demand stabilized in 2023, with natural gas prices dropping after a spike in 2022, while energy consumption grew by 2.1%, aligning with pre-pandemic averages. As we look to the future, the IEA's projections highlight a slowdown in demand growth—estimated to drop to 0.7% annually until 2030. This trend reflects a broader shift in the energy landscape, where the transition to renewable energy sources such as solar and wind is already gaining momentum,

reducing the reliance on coal is essential for lowering carbon emissions and improving air quality in rapidly growing urban areas.

The rapid rise of solar power, coupled with the increasing adoption of electric vehicles (EVs) and the need for data centers, will drive a surge in electricity demand. The IEA estimates that by 2035, electricity's share of global consumption will grow to between 26% and 36%, depending on the scenario. This shift will be especially pronounced in countries like China, where electricity demand is set to surpass that of advanced economies by 2030.

A PATH TO NET-ZERO BY 2050

While the growth of solar power is essential for a cleaner energy future, the IEA warns that the transition alone will not be enough to meet the ambitious goals of the Paris Agreement. Despite the increasing share of renewable energy, global carbon dioxide (CO₂) emissions are expected to peak around 2025, with a projected 4% decrease by 2030. However, this is still not enough to limit global warming to well below 2°C, with temperatures expected to rise by around 2.4°C by 2030, surpassing the target set by the Paris Agreement.

To achieve the critical 1.5°C target, the IEA outlines a three-pronged approach: a rapid shift to clean energy technologies, faster adoption of electric systems, and a reduction in emissions by 33% by 2030. These goals will require strong policy support, substantial investments in renewable energy infrastructure, and a concerted effort to improve energy efficiency across the board.

THE ROAD AHEAD FOR SOLAR AND RENEWABLES

The growth of solar power, fueled by falling costs and technological advancements, is poised to drive a significant transformation in the global energy system. By 2050, solar and wind could account for nearly 60% of global electricity



Image Credit: www.freepik.com

generation, drastically reducing the world's reliance on fossil fuels. However, the IEA stresses that more investment in clean energy and robust policies to support the energy transition are essential to achieving net-zero emissions by 2050.

As the cost of solar and wind continues to fall, the integration of battery storage technology will play a critical role in balancing intermittent renewable energy sources, ensuring a stable and reliable energy supply. The IEA's updated forecasts for battery storage show increasing optimism about its role in making renewable energy systems more viable and efficient.

The transition to a cleaner energy future is within reach, but it will require coordinated efforts from governments, businesses, and individuals to accelerate the adoption of solar power and other renewable technologies. The solar boom projected for the next decade could help push global energy markets to a tipping point, where fossil fuels give way to cleaner, more sustainable sources of energy. The world is on the brink of a new energy era—one that promises a cleaner, greener, and more secure energy future for generations to come. 🌱

Table: How five technology can change solar power

Technology	Impact on Solar Power
Artificial Intelligence (AI)	AI enhances solar energy by predicting weather patterns and optimizing energy generation to match demand. By analyzing real-time weather data, AI can adjust solar power output, improving efficiency and reducing waste. For example, Iberdrola's AI system MeteoFlow uses machine learning for better forecasting, enabling plants to align production with demand.
Predictive Maintenance	Predictive maintenance helps solar power plants reduce downtime and improve efficiency by anticipating potential equipment failures before they happen. Using sensors and analytics, solar plants can predict when components like inverters or panels need attention, ensuring smooth operations and extending equipment life.
Cloud Technologies	Cloud computing allows for the real-time monitoring and management of solar power systems. With cloud-supported platforms, energy providers can optimize power supply forecasting, control solar asset performance, and improve grid reliability by adjusting to changes in solar power production dynamically.
Energy Storage Solutions	Energy storage systems, such as lithium-ion batteries and emerging technologies like sodium-ion, help manage the intermittent nature of solar power. These storage solutions provide a buffer for excess energy generated during the day, ensuring it's available during peak demand times or at night, stabilizing the grid and enabling more widespread use of solar power.
Digital Twins	Digital twins create virtual replicas of solar energy systems, enabling better design, testing, and optimization. For example, digital twin technology allows solar farms to be modeled and monitored in real-time, improving performance by predicting and addressing issues before they arise. This reduces costs and maximizes energy output.

SAFECON AND EXHIBITION INDUSTRY OF BANGLADESH



MD. FAIZUL ALAM
MANAGING DIRECTOR
SAVOR INTERNATIONAL LIMITED

SAVOR International Limited is an exhibition organizer that provides the industry with platforms that bring together buyers and sellers from around the world, through a portfolio of exhibitions, content led conferences & seminars. SAVOR is an interface between Government, business, academia, society and media etc. SAVOR hosts large scale exhibitions and conferences across the country every year; thereby enabling trade across multiple industry verticals.

Backed by an experienced team of professionals, SAVOR has been organized SAFECON for 6 years to create a comprehensive showcase on Safe & Sustainable Construction, Building Materials, Method, Equipment & Real Estate Sectors as well as Power-Gen, Renewable Energy, Safe HVACR, and Water Management.

Md. Faizul Alam, Managing Director of Savor International Limited, is the mastermind behind SAFECON. He shared his view on SafeCon and Exhibition Industry of Bangladesh in this segment for the readers of GreenScape Bangladesh.

WHAT IS THE IDEA BEHIND SAFECON?

The main idea behind SAFECON is to showcase of the Safe & Sustainable Construction & Building Materials, Method, Equipment & Real Estate sectors in Bangladesh. SAFECON is an exclusive business platform where different organization from domestic and international market will gain access to demonstrate their products and solutions that will help to design and build safe and sustainable infrastructures.

WHAT ARE THE CO-RELATED SEGMENTS OF SAFECON AND WHY THESE ARE CORRELATED WITHIN THIS EXPOSITION?

The Correlated Segments of SAFECON are, Power-Gen, Renewable Energy Show, Water Management Show and Safe HVACR. All these topics and cores are directly related with Construction, Infrastructure and Development. This is one of the reasons why these segments are concurrent with SAFECON. Besides, another most important reason of co-locating these segments is to get common visitors and make the exposition more worthy to the visitors. For an example, a buyer coming from RMG industry in procurement side, beside particular requirement, there might have a scope to get some more relevant products together that may require in near future.

HOW SAFECON CREATES IMPACT ON THE INFRASTRUCTURE AND DEVELOPMENT INDUSTRY OF BANGLADESH?

Efficient infrastructure is a prerequisite and critical in the support of development and it becomes the prime concern for the development of Bangladesh. Like many other developing countries, Bangladesh is in need of safe, sustainable, energy efficient materials to fulfill the increasing demand of infrastructural development.

SAFECON assimilates the finest global brands, private and government bodies, engineers, construction companies, developers, architects, and designers, on one platform to display and source products and services pragmatically and unleashed multiple business opportunities to the national and international participants of different countries. SAFECON is a platform with the primary objective to exchange and share information on techno-commercial advancements, industry trends and innovative concepts related to materials, machinery, methods, and projects.

This exhibition helps to create the Industry Transformation Map (ITM) with the related industry community as it brings all the renowned companies under one umbrella .It serves as a blueprint that encompasses strategies for productivity improvement, innovation and the right skills to drive future industry growth.



Image Credit: Safecon 2024

DO YOU HAVE ANY PLAN TO EXPAND SAFECON TO OTHER COUNTRIES?

Yes, we already have similar exhibition in Nepal and Myanmar, not SAFECON, in different names but representing the same industry. We have our plan to bring SAFECON to Sri Lanka and Bhutan very soon. As Savor is originated from Bangladesh, We would prefer to flourish to the countries where Bangladeshi manufacturers have got the scope to penetrate to those markets. And definitely we would like to have an expansion.

CAN YOU SHARE FROM WHICH PART OF THE WORLD THE EXHIBITORS ARE JOINING MOST IN SAFECON?

Mostly from India, China, Singapore, Taiwan, Thailand, Malaysia etc. I mean from South East Asia. Besides, we also get exhibitors from UAE, Korea, Italy, Germany, France, UK, Japan and other regions of the world as well. Generally, any relevant organization that has got the interest to flourish in Bangladesh market can join in SAFECON.

HOW DO THEY STAND OUT IN THE MARKET AND COMPETITION?

Our Integrated Marketing Communication approach for any Exhibition is totally distinctive and in detail, to get more visitors from industry and buying community. We try to do the communication very much target audience oriented. We strongly believe, getting right visitors is the most important part of any exhibition. Therefore, we are very uncompromising on that particular issue.

We have a dedicated B2B team that helps our National & International Exhibitors to arrange fruitful B2B Meetings. Before the Exposition, we prepare B2B meeting chart for every individual exhibitor and send it to them. That is the USP of SAFECON I must say.

We keep multiple relevant seminars, bringing top personalities and panelist as speaker. These seminars are mostly pre-registered and we get houseful audience of Every session. Basically people from the industry enroll there as participant. All there seminars are free, no charge to attend but pre-registration basis.

Starting from a digital registration process to the show and session, we always try to make it a very much industry oriented platform with a high gathering and traffic of all the stakeholders of the industry.



Image Credit: Safecon 2024

WHERE DO YOU SEE BANGLADESH EXHIBITION INDUSTRY IN THE COMING YEARS?

Bangladesh is a developing country with emerging economy and high potential. The economic growth is significantly high for Bangladesh now. And Bangladesh is a country of large number of workforce, a desired manufacturing hub for the world. Apart from RMG, Pharmacy, Jute, Leather etc. Bangladesh is doing very well in other manufacturing sectors like, Agro Processing, Electronics Manufacturing, Shipbuilding and entire Maritime Industry and many more. Therefore, exhibition industry in Bangladesh is getting big to bigger every day. New expositions and organizers are coming with new shows. I believe Bangladesh will be noticeably important place for doing exhibitions among Southeast Asia region.

WHAT IS YOUR SUGGESTION FOR THE NEWCOMERS WHO WANTS TO START EXHIBITION BUSINESS?

Patience is very important for this industry. A new organizer can't flourish overnight. It's all about getting trust and loyalty from National & International exhibitors and associate partners. And moreover, it's a very creative industry. Continues value innovation is must for this industry. If anyone can keep these issues in mind and try to become organizer, enough room to play! 🌱



Image Credit: Glimpses Of Safecon 2024



Image Credit: www.scube.com.bd

SCUBE TECHNOLOGIES

ENERGIZING BANGLADESH WITH RENEWABLE SOLUTIONS

A VISION BORN FROM NECESSITY

In 2015, two engineers in Bangladesh recognized the growing strain on the nation's energy resources and envisioned a cleaner, more sustainable alternative. This vision gave rise to SCUBE Technologies Limited, a company committed to revolutionizing the renewable energy landscape. Nearly a decade later, SCUBE has become the leading name in industrial clean energy solutions, with an impressive portfolio of projects generating over 268 MW of renewable energy capacity.

FORGING A PATH TO SUSTAINABILITY

SCUBE's journey began with a clear goal: to meet Bangladesh's industrial energy needs using environmentally friendly technologies. This mission is reflected in their projects, which range from rooftop solar plants to hybrid systems incorporating solar, battery, and diesel power. By

combining innovation with global best practices, SCUBE has installed advanced systems in industries like textiles, steel, poultry, and cold storage.

Their commitment to sustainability is also visible in their work on LEED-certified projects, demonstrating an alignment with international standards of energy efficiency and green building.

BUILDING ON A FOUNDATION OF EXCELLENCE

SCUBE's success is built on its unwavering focus on quality, innovation, and partnerships. Collaborations with industry giants such as SMA Solar Technology AG, Huawei, Trina Solar, and Jinko Solar have enabled the company to access cutting-edge technologies. These partnerships have allowed SCUBE to deliver solutions like:

Tier-1 PV modules that optimize energy output.

SMA and Huawei inverters, which ensure efficient energy conversion and system longevity.

SCADA systems that provide real-time monitoring and control for seamless operations.

Each project is meticulously designed by SCUBE's expert engineers to maximize efficiency while minimizing environmental impact.

PEOPLE AT THE HEART OF PROGRESS

At SCUBE, the human element is pivotal. The company boasts a multidisciplinary team of engineers, business professionals, and project managers from leading universities and institutions. SCUBE's investment in continuous training ensures that its team remains at the forefront of technological advancements, while fostering a culture of collaboration and innovation.

Their dedication extends beyond internal operations. SCUBE builds long-term relationships with clients by offering hands-on training for their teams, ensuring the effective operation and maintenance of installed systems. SCUBE's technology can generate up to 30 times more power than its predecessor. This groundbreaking product enables city developers to gather valuable data while creating sustainable, dynamic spaces that reduce carbon footprints.

MILESTONES THAT MATTER

SCUBE's portfolio is a testament to its versatility and capability. Notable achievements include:

- **Meghna Group of Industries' 11.7 MW solar power plant**, which powers one of Bangladesh's largest industrial operations.
- **BRB Cable Industries' 8.4 MW project**, enhancing energy efficiency in manufacturing.
- **Over 213 completed projects**, spanning all eight divisions of Bangladesh.

Through these projects, SCUBE has helped clients collectively reduce over 393,000 tons of carbon emissions—a significant step toward a greener Bangladesh.



Solar Power Project: Meghna Group of Industries

RECOGNIZED EXCELLENCE

SCUBE's contributions have not gone unnoticed. The company was honored with the **Bizz Award** in 2022 for its excellence in business operations and leadership. Additionally, certifications such as **ISO 9001:2015**, **ISO 14001:2015**, and **ISO 45001:2018** affirm its commitment to quality, sustainability, and safety.

MEETING CHALLENGES WITH INNOVATION

Operating in the renewable energy sector is not without challenges. Fluctuating policies, high initial costs, and industry skepticism require resilience and adaptability. SCUBE meets these obstacles head-on by:

- Innovating cost-effective solutions that maximize energy output.
- Offering financing support for eligible projects to ease client adoption.
- Proactively adopting new technologies to stay ahead of market demands.

Their forward-thinking approach positions them as key players in Bangladesh's push toward achieving its goal of 10% renewable energy generation by 2030.



Solar Power Project: BRB Cable Industries Ltd.



Solar Power Project: Akij Food & Beverage Ltd.

THE ROAD AHEAD: SHAPING THE ENERGY LANDSCAPE

As global energy demands shift toward renewable sources, SCUBE remains steadfast in its mission to lead this transition in Bangladesh. With a proven track record of success, a robust network of partnerships, and an unwavering commitment to sustainability, SCUBE is set to expand its influence in the coming years.

From floating solar systems to large-scale hybrid plants, SCUBE is ready to meet the energy challenges of tomorrow. Their efforts are not just about powering industries—they are about empowering a nation toward a greener, more sustainable future.

The event's focus on technological advancements extended to GeoWorld, where innovations like YellowScan CloudStation emphasized adaptability and scalability in geospatial data management.

WHY SCUBE STANDS OUT

The company's distinct edge lies in its comprehensive approach. Clients choose SCUBE for:

- **Expert Design:** A dedicated team of engineers ensures optimal energy yield.
- **World-Class Equipment:** Partnerships with global leaders bring the best technology to every project.
- **Exceptional After-Sales Service:** Extended warranties, IoT-based monitoring systems, and client training ensure long-term satisfaction.

A LEGACY OF IMPACT

SCUBE Technologies Limited is more than a company; it is a catalyst for change in Bangladesh's energy sector. By blending technology, expertise, and a commitment to sustainability, SCUBE continues to light the way forward for industries, communities, and the nation as a whole. 🌱



Solar Project: BSRM Wires Ltd.



বাড়ি ও শিল্পপ্রতিষ্ঠানের নিরাপত্তায় শতভাগ নিশ্চয়তা



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Image Source: www.ncronline.org

ADDRESSING THE WATER CRISIS IN MYMENSINGH

THE ROLE OF THE SISTERS OF CHARITY OF ST. VINCENT DE PAUL

In Bangladesh, access to safe drinking water remains a significant challenge, particularly in the remote areas of Mymensingh. The Sisters of Charity of St. Vincent de Paul, in collaboration with the local Catholic Church, have taken proactive steps to address this persistent issue. Sr. Maria Josephina, a key figure in this initiative, has shared insights into the program's development, its impact, and the ongoing efforts to provide clean water to underserved communities.

PROBLEM

LIMITED ACCESS TO CLEAN DRINKING WATER

Mymensingh, located in the northern part of Bangladesh, is characterized by its hilly terrain and deep groundwater, which make it difficult for residents to access safe drinking water. The region's geographical features complicate the installation of water infrastructure, leaving many communities without reliable sources of clean water. For years, local residents, particularly those in rural and tribal areas, have faced

health risks due to contaminated water, with illnesses such as typhoid being prevalent. The lack of financial resources to install proper water systems further exacerbates the situation.

Sr. Maria Josephina, who has worked extensively in Mymensingh, recounted her personal experience with unsafe drinking water. "I fell ill multiple times from drinking water sourced from the hills. I contracted typhoid twice, which made me realize the urgent need for change," she explained. This personal encounter with waterborne illness was the catalyst for the Sisters of Charity's involvement in addressing the water crisis.

SOLUTION

TUBE WELLS AND COMMUNITY ENGAGEMENT

In response to the water scarcity problem, Sr. Maria Josephina and her congregation initiated a project to install tube wells in the region. Tube wells, which are deep groundwater extraction systems, are particularly suited to the hilly and water-deficient landscape of Mymensingh. These wells provide access to cleaner and safer water compared to the surface sources traditionally relied upon by the local population.

The project began in 2013 with the installation of basic tube wells in collaboration with local priests and donors. By October 2024, 485 tube wells had been installed, primarily in Garo tribal areas, where a large portion of the local Catholic community resides. These tube wells serve not only Catholics but also members of other religious groups, including Muslims and Hindus, demonstrating the initiative's inclusive nature.

IMPACT ARTICLE

A tube well consists of an iron pipe fitted with a solid steel point and lateral perforations near the tip. The pipe is driven deep into the ground until it reaches a water-bearing layer, after which a suction pump is attached to extract water. These wells are designed to provide a reliable and clean source of drinking water.

CHALLENGES AND FUNDING

While the installation of tube wells has had a positive impact, several challenges persist. The high cost of installing deep tube wells, which can range from 15,000 taka (\$125) for a light tube well to 30,000 taka (\$250) for a deep tube well, remains a significant obstacle. Many communities in Mymensingh are unable to afford the installation of such wells independently.

Moreover, while some older tube wells have ceased functioning due to the lack of maintenance or technological limitations, the Sisters of Charity have been focused on providing high-powered submersible pumps to replace or supplement these systems. The demand for new tube wells is particularly high in areas with dropping groundwater levels, further complicating the water access situation.

Fr. Torun Bonwary, the parish priest of Baromari, emphasized the growing concern regarding groundwater depletion, especially in areas near the Bangladesh-India border. "The groundwater levels are dropping, making it more difficult to access safe water," he stated. Despite these challenges, the Sisters of Charity's efforts continue to make a significant difference.

IMPACT

TRANSFORMING COMMUNITIES

The installation of tube wells has had a profound impact on local communities. Residents who once relied on unsafe water sources, such as streams and contaminated fountains, now have access to clean and safe drinking water. This improvement has had a direct effect on public health, reducing the prevalence of waterborne diseases like typhoid and dysentery.

Shima Dafo, a 45-year-old Garo Catholic woman from the Baromari Parish, shared her gratitude for the tube well installed in her community. "We can now drink clean water, and this well serves the needs of my entire family of ten," she said. "We received it just before Christmas, which made the holiday even more special."

Similarly, Khakon Sangma, 50 years old, another beneficiary, expressed his appreciation. His family of twelve had been struggling with water that was contaminated with high levels of iron. "The nuns provided us with a solution—a deep tube well with a submersible pump. It has been a blessing," he remarked. The installation of these wells has not only improved the water quality but also alleviated the strain on local resources.



Image Source: www.ncronline.org

EXPANSION OF THE INITIATIVE

The initiative has continued to grow, with additional tube wells installed in 2023 and 2024. In particular, the Baromari Parish, home to the Marian pilgrimage site of Mary, Queen of Fatima, has benefited from the installation of four high-powered submersible pumps. These pumps ensure a reliable water supply for the tens of thousands of pilgrims who visit the site annually.

"Over the past two years, I have seen a significant improvement in the water supply during the pilgrimage," said Ashim Mankhin, a regular visitor. Fr. Bonwary, the local parish priest, also acknowledged the importance of these efforts, stating, "The additional pumps have made a tremendous difference, ensuring a sufficient water supply for all the pilgrims."

FUTURE PLANS AND SUSTAINABILITY

The Sisters of Charity's water project is not only focused on immediate relief but also on long-term sustainability. The organization has allocated funds for six additional deep tube wells, which will further expand access to clean water in the region. Moreover, the success of this initiative has inspired other parish priests in the area to implement similar projects, benefitting both Catholic and non-Catholic communities.

Fr. Simon Hacha, the parish priest of Dorgachala in Mymensingh, echoed this sentiment, highlighting the urgency of the situation. "The people in my parish face severe water scarcity. We need to install more deep tube wells, but funding remains a critical issue," he said.

The Sisters of Charity of St. Vincent de Paul have significantly improved access to safe drinking water in Mymensingh, Bangladesh. They have addressed a critical need in remote communities by installing tube wells and collaborating with local parishes. While challenges related to funding and groundwater depletion remain, the initiative has had a profound and lasting impact on the health and well-being of residents, providing a model for future efforts to ensure access to clean water in underserved regions. 🌱

Based on the original article by Sumon Corraya for ncronline.org.

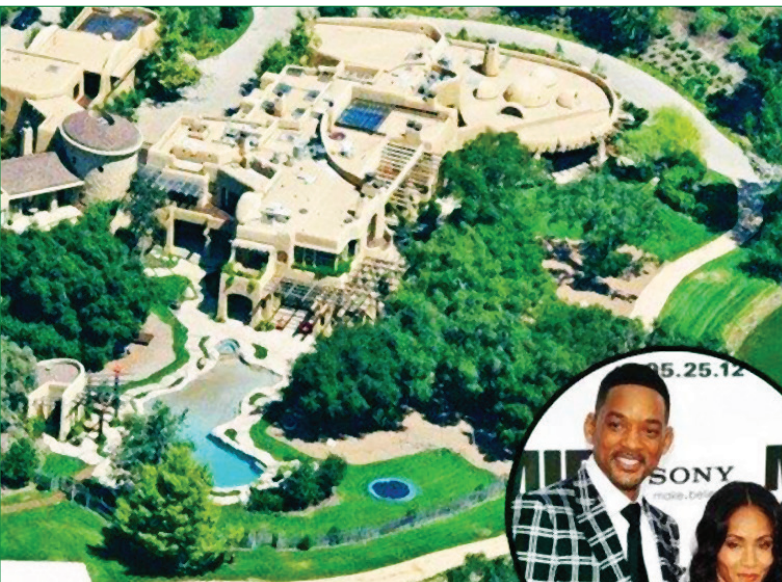
CELEBRITY HOMES



JENNIFER LOPEZ - \$40 MILLION

The 13,000 square-foot establishment was bought in August 2016. It is a 13 bathroom, 7-bedroom home that was bought at 28 million dollars. From the time she bought the estate, it has increased in value to \$40 million. It is located in the depths of Bel-Air. The singer ensured that her wonderful property was enough to accommodate people who are important to her.

It comes with a cinema room that can accommodate up to 30 people. Other luxuries such as a massage room, a three-sided infinity pool, and a library are also included. After finishing her performances, she can wind down at her private beach straight in her backyard. Jennifer Lopez net worth is \$400 million.



WILL AND JADA PINKETT SMITH- \$42 MILLION

Will and Jada Pinkett have built themselves a custom spectacular home in Malibu, CA. The home spreads on no less than 25,000 square feet and was constructed completely by hand, which is quite a feat. There are 9 bedrooms, a meditation room, a recording studio, secret nooks, a full basketball court and a huge pool which looks more like a pond. A separate tennis court, three golf courses, a large pasture and lake and gazebo make the house seem more like a relaxation resort than a real home. The price they paid for it was a good \$42 million.

HOWARD STERN — \$52 MILLION

Howard Stern net worth is \$650 million, and his house was bought in 2013. It is a Palm Beach 18,673 sq. ft. mansion that sits on a 3.25 acres land, overlooking the Atlantic Ocean. The 12-bedroom home has seen its fair share of renovations over time. It includes an addition of a 1,000 sq. ft. closet belonging to the wife.



CINDY CRAWFORD — \$50 MILLION

The house is on the market for \$60 million. Cindy Crawford's beachfront Malibu home goes for \$50 million. It is located on 3 acres of land that opens up to the Pacific Ocean. It is a 4- bedroom, 5 1/2-bathroom Hacienda-style villa with a rustic feel to it since it was built in 1944. However, Cindy and Rande Gerber, her husband, have done

some renovations on the property. The walls have sliding glass doors. It also has a wraparound deck that has a fire pit as well as a pool that draws in the outdoors. In addition to the 5,500 sq. ft. home as well as pool, this park-like property has a tennis court. You will also love the private path that leads you to the beach. Cindy Crawford net worth is \$100 million. 🌿



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