

PRESS RELEASE

14 Million Tons at Stake of BSCIC: Change Initiative Study Unveils Solar Roadmap to Slash SME Costs by 50% and Elevate Exports and Employments

28 March, 2026 Dhaka: A Change Initiative study revealed that Bangladesh's small and medium enterprises (SMEs), center of the country's climate and industrial future, targeted interventions in BSCIC industrial estates could unlock **over 14.09 million tons of CO₂ emission reductions and generate upto 0.40 million USD revenue through carbon credit annually**, by *leveraging the achievements of China, India, and Vietnam, Bangladesh's SMEs can achieve a 30%–50% reduction in operational costs through decentralized rooftop solar while securing long-term export competitiveness by meeting environmental and natural standards.*

Presented at a press conference in Dhaka, the study provides a detailed, factory-level assessment of energy use and emissions across selected SME clusters. SMEs account for **more than 90% of industrial units**, employ **around 85% of the industrial workforce**, and generate **25%-30% of GDP**, yet operate within an energy system where **approximately 95% of electricity is fossil-fuel based**, which is highly exposed to global volatility.

Against this backdrop, Bangladesh's NDC 3.0 targets a reduction of **69.84 MtCO₂e from the energy sector by 2035**, placing immediate need on industrial energy systems to transition.

The research focuses on four high-impact sectors within BSCIC industrial estates, **tannery, plastic manufacturing, plastic packaging, and light engineering**, which together are estimated to emit **46.99 MtCO₂e annually**, with a technically feasible reduction potential of **14.097 MtCO₂e per year**.

Sectoral Analysis reveal significant efficiency gaps and intervention opportunities:

- **Tannery: up to 19-33% emission reduction potential**
- **Light engineering: 19-31% reduction potential**
- **Plastic manufacturing: highest potential at 33-49%**
- **Packaging: 15-28% reduction potential**

The key finding highlights the transformative potential of estate-scale solar deployment. Allocating just **10% of BSCIC estate space** could install approximately **57 MW** of installed solar capacity, generate **82,968.88 MWh annually**, and reduce emissions by **51,440.71 tCO₂e**

per year. Expanding to 20% allocation could scale this to 114MW installed capacity, 165,937.76 MWh annual electricity generation, and avoid 102,881.41 tCO₂e emissions annually.

Financial analysis reinforces the economic case for transition. A typical **20 kW rooftop solar system** can generate approximately **79 units per day**, achieve payback in **around 4.2 years**, and deliver a **23% internal rate of return (IRR) under** a CAPEX model. Under an OPEX model, SMEs can adopt solar with **zero initial investment** while still achieving immediate savings on electricity bills.

Speaking at the event, **M Zakir Hossain Khan**, Lead Researcher, emphasized the structural implications of the findings:

“While global conflicts threaten to turn out our lights and air pollution steals years from our lives, our factory rooftops sit idle. BNP’s renewable energy vision must move beyond targets to ensure energy sovereignty, by reducing import dependence and delivering reliable, affordable power to SMEs, which drive Bangladesh’s economy and employment. We don’t just want to “survive” the 2026 energy crisis; we want to lead the region. Renewable energy transitions in China, India and Vietnam we can turn to a Nature-Smart, Sovereign Bangladesh by securing energy independence or sovereignty, insulating CMSMEs from grid instability and the price volatility of imported fossil fuels without losing competitiveness or employments.”

The press conference was led by M Zakir Hossain Khan, while the keynote presentation was delivered by **Co-Researchers Sabrin Sultana and Najifa Alam Torsa**, who presented the key findings of the research. The study combines machine-level energy assessments, production mapping, and verified electricity data to build a robust emissions baseline.

Beyond technical solutions, the study identifies structural barriers limiting adoption, including limited access to concessional finance, high initial investment, lack of technical expertise of relevant stakeholders, and absence of standardized energy auditing systems.

To address these constraints, the study proposes a cluster-based decarbonization pathway built on three pillars:

- **Shared renewable energy systems at estate level**
- **Innovative financing models, including OPEX and concessional renewable energy finance**
- **Strengthened institutional coordination through BSCIC and related agencies**



Mr. Khan, an Independent Observer of Climate Investment Fund (CIF), MDB's Trust Funds, strongly urged the government that -

“In the current crisis, meeting government’s target to achieve 20% share of renewable energy by 2030 and reducing energy inequity, renewable energy sovereignty for the SMEs is not just a climate issue, it is an economic survival strategy. We have 14 million tons of carbon at stake and a 50% cost-saving opportunity at hand. We must stop importing our energy and start generating our sovereignty. Tax breaks, incentives and innovative financing tools like progressive carbon tax and philanthropy grants can play vital role in reducing fiscal burdens and debt trap risks.”

The findings position SME decarbonization not only as an energy plan but also as a high-impact economic priority. Reducing fossil fuel-based energy consumption directly lowers production costs, increases profit margins, and enables expansion of industrial capacity by technological upgradation - creating conditions for employment growth while aligning with climate commitments.

The launch event brought together policymakers, financial institutions, development partners, and industry stakeholders to explore pathways for scaling low-cost, high-impact decarbonization solutions across Bangladesh’s industrial sector.

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