Press Release

From Fiscal Strain to Energy Sovereignty: Change Initiative Unveils $32.8B Nature-Smart Renewable Energy Roadmap for Bangladesh (2026–2040)

March 30, 2026, Dhaka: Bangladesh has presented a roadmap to achieve energy sovereignty by 2040 through a **"zero agricultural land use", based projection**, mobilizing **$32.82 billion in decentralized renewable energy investment**, thereby safeguarding the economy from global market price volatility. Given the alarming decline in traditional foreign grant contributions, priority must be placed on ensuring community-driven energy security through **private investment, blended finance, and market-based financing mechanisms**, alongside continued efforts to mobilize grants.

On March 30, 2026, at the CIRDAP auditorium in Dhaka, the think-and-do tank Change Initiative presented its research findings at a roundtable discussion titled **"From Dependence to Sovereignty: Renewable Energy Investment Roadmap Towards a Just Energy Transition."** The study identified systemic challenges in the import-dependent energy sector and proposed an investment framework to accelerate both corporate and decentralized renewable energy transition between 2026 and 2040, with **at least 40% private sector participation**. It further projects that by 2040, energy demand in Bangladesh will **triple to 316,500 GWh**. The research warns that failure to scale up renewable energy capacity in a timely manner could undermine the country's prospects for building a prosperous economy. The study also highlights that Bangladesh's prevailing **"command-and-control" energy model has reached the limits of its financial and technical viability. The** research team was led by **M Zakir Hossain Khan**, Co-founder and Executive Director of Change Initiative, with **M Mofazzal Hossain**, **Samira Basher Roza**, and **Kazi Kareena Arif** working as co-researchers.

What the Research Puts on the Table: Fast Facts

- **Total Investment Need:** $32.82 billion is required through 2040 to fully transition the power sector. This is divided into two phases: $8.72 billion by 2030 to prove the model, followed by $24.10 billion for a national scale-up.

- **Total Capacity Target:** A goal of 21,514 MW of renewable energy by 2040. This includes 12,048 MW from industrial rooftops, 3,442 MW from solar irrigation for farmers, and 1,721 MW from floating solar on water bodies.
- **Economic Return on Investment:** The study identifies a significant economic multiplier effect, where every **$1 invested** in renewable energy generates an estimated **$17 in economic returns**. This suggests that a $32.82 billion investment could lead to a cumulative economic gain of approximately **$557 billion** for Bangladesh over the next 15 years.
- **Land Impact:** The plan requires no agricultural land. By using existing factory roofs and water reservoirs, the roadmap saves 60,000 acres of prime farming soil, ensuring that green energy does not compete with food security.
- **Grid Stability (Storage):** $7.85 billion is allocated specifically for Battery Energy Storage Systems (BESS). This "Stability Premium" is essential to store solar power generated during the day so it can be used during the critical evening peak hours.
- **Reducing Economic Waste:** Transitioning to renewables helps fix the current $20 billion annual drain on foreign reserves spent on energy imports. It also addresses the $5 billion in annual subsidies currently required to keep overpriced fossil fuel contracts afloat.

One of the biggest worries in Bangladesh is that big solar power plants might take up the precious land we need for farming. This study proves that we can meet our energy goals without taking away a single inch of our food-growing soil. By using a "decentralized" model, meaning we put the power plants exactly where the electricity is used, we can save nearly 60,000 acres of prime farmland.

The roadmap focuses on three clever ways to find space:

- **Industrial Rooftop Solar (12,048 MW):** Instead of building on fields, we can use the "wasted" vertical space on top of our massive garment factories and industrial buildings. This would provide the largest share of our clean power, turning our industrial zones into self-sufficient energy creators.
- **Solar Irrigation (3,442 MW):** We can transform **1.34 million** noisy, expensive diesel water pumps into clean "energy hubs." These solar panels sit right on the existing farm plots, giving farmers cheaper water and helping them sell extra power back to the grid when they aren't watering crops.
- **Floating Solar (1,721 MW):** We can place solar panels on the surface of Kaptai Lake and industrial ponds. This is a "double win": the panels don't use any land, and the natural cooling from the water makes them **5-10%** more efficient at making electricity than panels sitting on hot land.

Lead Researcher and Chief Executive of Change Initiative M. Zakir Hossain Khan claimed that "Bangladesh's energy transition is not a financing problem; it is a structural problem, inherited from a legacy of fossil fuel–based corruption. In the current crisis, renewable energy must be leveraged to build a system grounded in **trust, investment, and innovative financing mechanisms** that ensure the well-being of both people and nature.
In Bangladesh, solar energy is not merely a climate mitigation tool; it is a cornerstone of **climate resilience, food security, and the reduction of loss and damage to life and ecosystems**. Therefore, ensuring **at least 50% grant-based financing** to secure energy access for vulnerable populations in coastal, hilly, haor, and baor regions is not charity, it is a matter of **global climate justice responsibility**.

To mobilize the required $32 billion investment, Bangladesh must decisively move away from debt-driven financing and implement a robust model based on **grants, private investment, market confidence, and public-interest financing**. Energy sovereignty cannot be built on debt. Transforming existing high costs into full productivity will require **strong political will and accountability**, supported by the adoption of a **Natural Rights Led Governance framework**."

Why This Research Matters Now
Bangladesh's energy sector has reached a breaking point, shifting from a driver of growth to a primary source of national financial instability. This research arrives at a moment of "governance uncertainty," where the traditional model of relying on expensive, imported fossil fuels is no longer sustainable.
The urgency of this roadmap is driven by four critical pressures:

- **Extreme Import Vulnerability:** Bangladesh currently relies on imports for over 56% of its energy needs. In 2024 alone, the nation spent a staggering $20 billion on energy imports and related debt repayments. Global instability, particularly escalating conflicts in the Middle East, now threatens the supply chains for nearly two-thirds of the country's liquefied natural gas (LNG).
- **Crippling Industrial Disruptions:** This dependence has real-world consequences; recent gas shortages rendered 23% of power plants inoperable, forcing factories to run at only 30-40% capacity and draining precious foreign exchange reserves. With LNG imports alone costing $3.88 billion in 2025, the economy is constantly exposed to global price spikes.
- **Rising Debt Stress:** The nation's external debt has surged by 377% since 2009, reaching approximately $112 billion in 2025. As interest payments consume one-

fifth of national revenue, the country risks falling into a permanent "energy debt trap".

- **Climate Urgency as an Existential Priority:** As the 7th most climate-vulnerable nation in the world, the shift to renewables is not an "optional" environmental goal, it is a survival strategy. Failure to transition could lead to a permanent 1.3% loss in annual GDP growth by 2041 due to climate impacts.

Ultimately, this roadmap proves that transitioning to decentralized renewables is a macroeconomic necessity. It is the only way to shield the Bangladeshi economy from global inflation, secure industrial productivity, and restore fiscal sanity.

[Space for What Other Guests Said]

Speaking as the Guest of Honour,

Dr. A. K. Enamul Haque, Director General, Bangladesh Institute of Development Studies (BIDS), stated, "Bangladesh's energy transition must move from optimism to realism. Currently, installed capacity is not translating into actual generation due to poor maintenance, fragmented governance, and low efficiency. To achieve true sovereignty, we must shift from a centralized model to distributed village-level solar, eliminate regulatory overlaps, and prioritize strict accountability over adoption of simple technology.

Owais Parray, Country Economic Advisor, UNDP Bangladesh opined that "Energy transition in Bangladesh is not just about power; it is a green industrial revolution. To succeed, we must develop the bankable pipelines and financial innovations needed to leverage millions into billions, ensuring a future that is both energy-sovereign and economically resilient. All stakeholders must step forward to implement this roadmap."

Didarul Alam, Director (joint Secretary), Bangladesh Energy Regulatory Commission remarked:

"Our dependence on imported gas and coal leaves us exposed to global disruptions. True energy sovereignty requires more than just policy; it demands a total shift toward domestic resource mobilization and multi-buyer markets. Without this transformation, Bangladesh will remain trapped in a cycle of dependency despite clear opportunities for a sustainable transition."

Jahangir Alam Mollah, Director, Bangladesh Power Development Board (BPDB), stated:

"Bangladesh's transition to energy sovereignty is no longer a possibility. It is an urgent inevitability. With momentum building in solar and wind, our focus must now shift from

paper targets to real-world execution. We are committed to resolving bottlenecks and accelerating capacity on the ground."

Abu Alam, Additional Director, Bangladesh Bank:

"With a 0.73% default rate, our green financing foundation is rock solid. To move from targets to 3,500 MW of real-world capacity, we must now address the structural and funding constraints that limit our scale. Solar irrigation is a proven opportunity that is ready for takeoff."

Commenting on the mobilization of domestic capital, Alamgir Morshed Executive Director and CEO of IDCOL said:

"Renewables are now a commercial certainty, yet overall investment remains critically low compared to the massive, untapped opportunity. Our path forward requires expanding institutional capacity and leveraging domestic capital markets to reduce currency risk. By focusing on private sector participation and market-based financing, we can transition from policy targets to a scaled, nationwide energy reality."

Jahangir Alam Mollah, Director, Bangladesh Power Development Board (BPDB), stated:

"Bangladesh's transition to energy sovereignty is no longer a possibility. It is an urgent inevitability. With momentum building in solar and wind, our focus must now shift from paper targets to real-world execution. We are committed to resolving bottlenecks and accelerating capacity on the ground."

The Reform Outline: Bridging the Gap

To unlock this $32.82 billion investment and achieve energy autonomy, the roadmap outlines several vital institutional and financial reforms:

- **Market-Facilitator Model:** Shift the state's role from being a monopoly power provider to a regulator that empowers a diverse ecosystem of energy producers and industrial prosumers.
- **Single-Window Clearing House:** Establish a unified regulatory interface to streamline technical approvals, standardizing the process and drastically reducing transaction costs for private investors.
- **Innovative Social & Diaspora Finance:** Mobilize alternative capital by issuing "Probashi" Green Diaspora Bonds to capture remittance savings and utilize "Productive Zakat" funds to provide marginalized farming communities with debt-free equity in solar irrigation.

- **Fossil Fuel Sunset Fees:** Phase in a levy on industrial gas bills with specific exemptions for factories that install rooftop solar to recycle revenue into green grid upgrades.
- **Redirect LNG Capital:** Cap future LNG infrastructure expansion and rechannelling those funds into domestic renewable assets, moving the country from variable fuel dependence to fixed, infrastructure-led wealth.

This roadmap is not merely a technical proposal; it is a strategic necessity for safeguarding the nation's fiscal health. By shifting toward a resilient, self-sufficient power network, Bangladesh can anchor its future in localized economic dignity and long-term prosperity.

Media Contact:
Md. Sohan Ahmed
Communication Executive
Email: sohan@changei.earth
Mobile: +88 01671145802