

NDC 3.0 for the Power Sector *Is Bangladesh Setting 'Ambitious' Targets?*

Date: 24 August 2025

Study Team

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1. Background

- The government of Bangladesh is preparing the **Nationally Determined Contributions (NDC) 3.0** for 2025
 - The **Department of Environment (DoE)** is vested with the responsibility to draft it
- According to the UNFCCC, the parties need to set **more ambitious targets for carbon emission reduction in NDC 3.0** compared to that in NDC 2.0
 - Hence it is important to ensure that DoE is consulting with different concerned ministries and stakeholders to set their targets for 2030 and 2035
- Among all the five major sectors, **major responsibility goes to the power sector** as it is **the highest carbon emitting sector**
 - In NDC 3.0 Bangladesh needs to set more ambitious GHG reduction target for the power sector by 2030
- This target needs to be achieved through conditional and unconditional measures including **phasing out fossil fuel and expanding renewable energy**
- Targeting for NDC 3.0 needs clarity regarding **projection of electricity demand** for 2030-2040, **energy mix** including fossil and different non- fossil sources and **investment required** to attain that fuel mix
- Bangladesh is already determined to transition away from fossil fuels by generating 20% of the power from renewable energy by 2030 and 30% of the power from renewable energy by 2040
 - Achieving those targets need substantial investment from both domestic and international sources
- Against this backdrop, Centre for Policy Dialogue (CPD) has undertaken two studies, and the objective of this presentation is to present the major findings of these two studies
- This presentation is divided into 2 parts

Part A: Revisiting Targets Set for Renewable Energy-based Power Generation by 2040: Projection of ‘SMART’ Target and Required Investment

Part B: Nationally Determined Contributions (NDC) for the Power Sector: Tracking Progress of NDC 2.0 and Proposed Redesigning of NDC 3.0

PART A

Revisiting Targets Set for Renewable Energy-based Power Generation by 2040: Projection of 'SMART' Target and Required Investment

2. Context

- Bangladesh's policy documents set **multiple and conflicting RE targets**: IEPMP 2023 (**40% by 2041**), MCPP (**30% by 2030**)
 - Despite ambitions, RE progress is slow with **major contribution from solar** and other sources minimal.
 - Also, the **electricity demand projections** in **policy documents** are often **faulty** and **misguiding** the **future plans**.
- The Renewable Energy Policy's **30% by 2040** target lacks a **source-wise breakdown, capacity roadmap, and retirement plan** for fossil fuels
 - This absence of clarity **undermines investor confidence**, as financiers need **clear signals and source-specific targets** for long-term commitments.
 - Lack of a clear **fossil fuel phase-out timeline** risks inefficiencies, as new RE capacity may run alongside outdated fossil plants
- A **major knowledge gap** exists on the **source-wise fuel mix for RE and required investments** for 2030, 2035, and 2040
- Against this backdrop, CPD's study seeks to:
 - Re-estimate the **renewable energy-based electricity target for 2030, 2035 & 2040** with a realistic source-specific mix
 - Estimate the **investment requirements** for achieving the revised targets for 2030, 2035 & 2040
 - Provide **financing suggestions** for MDBs (ADB, AIIB) to support RE sector investment

3. Methodology: Fuel Mix & Investment Estimation

The study develops a methodology to calculate the **required renewable energy fuel mix and investment** for Bangladesh to meet its 2030, 2035 & 2040 targets

- This approach **evaluates the potential of each renewable energy source** solar, wind, biomass, waste-to-energy, and hydro and **estimates their contributions to the overall power generation mix**
- **Investment requirements are projected using “thumb rules,”** based on the average cost per megawatt (MW) of installed capacity for each renewable technology.
- The first step is to **determine Bangladesh’s total electricity demand in 2030, 2035, and 2040**, using econometric forecasting techniques, particularly the Vector Error Correction Model (VECM).
- The methodology then **scales renewable contributions to match target percentages** of total electricity demand for each milestone year.
- **Equations used for Investment Estimation**
 - $Total\ Solar\ Investment\ (MW) = Installed\ Capacity\ (MW) \times Cost\ per\ MW\ (Solar)$
 - $Total\ Wind\ Investment\ (MW) = Installed\ Capacity\ (MW) \times Cost\ per\ MW\ (Wind)$
 - $Total\ Biomass\ Investment\ (MW) = Installed\ Capacity\ (MW) \times Cost\ per\ MW\ (Biomass)$
 - $Total\ Waste\ to\ Energy\ Investment\ (MW) = Installed\ Capacity\ (MW) \times Cost\ per\ MW$
 - $Total\ Hydro\ Investment\ (MW) = Installed\ Capacity\ (MW) \times Cost\ per\ MW\ (Hydro)$
 - $Total\ Investment\ Required\ (MW) = Scaled\ Solar\ Investment\ (MW) + Scaled\ Wind\ Investment\ (MW) + Scaled\ Biomass\ Investment\ (MW) + Scaled\ Waste\ to\ Energy\ Investment\ (MW) + Scaled\ Hydro\ Investment\ (MW)$

Table 1: Fuel Mix for Electricity Generation, Including Renewable Energy

Sources	Base case	Target			
	2025	2030	2035	2040	
Coal	5,683	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	
Gas (including LNG)	11,947	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	
HSD	626	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	
HFO	5741	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	• Continuing • Phase out • Addition	
Solar	700	• Continuing • Addition	• Continuing • Addition	• Continuing • Addition	
Wind	62	• Continuing • Addition	• Continuing • Addition	• Continuing • Addition	
Hydro	230	• Continuing • Addition	• Continuing • Addition	• Continuing • Addition	
Biogas	0	• Continuing • Addition	• Continuing • Addition	• Continuing • Addition	
Biomass	0	• Continuing • Addition	• Continuing • Addition	• Continuing • Addition	

4. Electricity Demand Projections up to 2040

- **Accurate demand projections are vital to avoid overcapacity**, which risks stranded assets, or undercapacity, which risks shortages and economic losses
 - Policy documents — **MCPP (2022–2041)**, **IEPMP (2023)**, and **Renewable Energy Policy (2025)** — all provide guidance, but with **varying approaches and targets**.
- **Mujib Climate Prosperity Plan (MCPP)** sets a **30% renewable target by 2030** and **40% by 2041**, emphasizing solar, wind, and decentralization
 - However, the plan **does not provide detailed electricity demand projections**, making implementation more challenging.
- Integrated Energy and Power Master Plan (IEPMP 2023) **projects 58,680 MW capacity by 2041 with a 25% reserve margin, targeting 40% clean energy**.
 - However, **only 9% (5,280 MW) of this is from traditional renewables**; the rest comes from nuclear, CCS, hydrogen, and ammonia co-firing.
 - **Demand projections are seen as inflated**, and the definition of “clean energy” is too broad, diluting the role of renewables.
- **Renewable Energy Policy (2025)** sets updated targets of **20% renewables by 2030 and 30% by 2040**
- **CPD’s Demand Projections (Alternative Forecast)** uses an **econometric VECM model** with GDP, population, energy prices, and CO₂ emissions to forecast demand. Key assumptions:
 - **25% reserve margin** for peak demand (higher than global benchmark to account for variability).
 - **Capacity factor of 0.25 for renewables and 0.61 for fossil fuels**.
 - **Exponential growth model** sets an **interim 2035 target of 24.5% renewables**.
 - Captive power (~2,800 MW) and off-grid renewables (~554 MW) are treated as **constant**.
- **By 2040**, total projected electricity demand (on-grid + captive + off-grid) reaches **29,761 MW**, up from **22,702 MW in 2030** and **26,277 MW in 2035**
 - These projections reflect a **more realistic and technically grounded estimate** compared to inflated official figures.

5. Required Installed Capacity for RE to Meet Target

- **Renewable Requirements**

- To reach Bangladesh’s renewable energy targets, the **installed generation capacity must be calculated using projected demand**, reserve margins, and the plant factor of renewable technologies
- In **2030**, projected demand is **22,702 MW**, and meeting the **20% renewable target** requires **4,540 MW** of renewable generation, which translates into **18,162 MW of installed capacity** due to the low plant factor of 0.25
- By **2035**, demand rises to **26,277 MW**, and the **24.5% renewable target** requires **6,438 MW of renewable supply**, necessitating **25,751 MW of installed renewable capacity**
- In **2040**, demand is projected at **29,761 MW**, and achieving the **30% renewable target** requires **8,928 MW of renewable generation**, which calls for **35,713 MW of installed renewable capacity**
- These results highlight that the **low-capacity factor of renewables** means a much larger installed capacity is required compared to fossil fuels to deliver the same share of electricity.
- The share of renewable energy has been expressed in **MW instead of MWh** because the **operational hours of renewable systems cannot be predicted with certainty**. In this context, “demand” refers to **installed capacity demand**.
- In our analysis, **demand in MW** specifically denotes the **system peak demand**, which represents **the maximum system requirement** rather than the average or variable daily demand.
- A **25% capacity factor** has been adopted as an **average across renewables** (solar, wind, hydro, biomass) based on global literature.
 - However, the **practical capacity factor may be lower** (e.g., for solar PV in Bangladesh).
 - Literature also indicates that **advances in renewable technologies will enhance efficiency**, suggesting that future **installed capacity demand could reflect higher** capacity factors than at present.

Table 2: Required RE Generation Capacity to fulfil 30 per cent by 2040 Renewable Target

Year	Total projected demand (on grid and off grid)	Expected share of renewable electricity (per cent)	Expected electricity demand from renewables in MW (calculated)	Required renewable capacity (plant factor 0.25)
2030	22,702	20	4,540	18,162
2035	26,277	24.5	6,438	25,751
2040	29,761	30	8,928	35,713

Source: Author’s Calculation

5.1 Re Fuel Mix Scenario in 2030, 2035 and 2040

- **Renewable Energy Potential by Source**
- According to SREDA, solar energy has the largest potential, with utility-scale solar parks, rooftop solar, irrigation pumps, and mini-grids projected to deliver over **17,229 MW by 2040**.
- Wind energy, particularly in coastal and offshore zones, is expected to contribute **13,625 MW by 2040**, requiring significant new infrastructure and investment.
- Hydropower has a smaller role due to resource constraints but is projected to reach **3,567 MW by 2040**, mainly from regional expansion and upgrades.
- Biogas and biomass will remain niche contributors but provide important diversification, with **10.38 MW from biogas** and **46.4 MW from biomass** by 2040.
- To supplement domestic supply, renewable imports from India, Bhutan, and Nepal may play a transitional role, especially in the early years.
- Altogether, these projections imply a **threefold increase in renewable capacity between 2030 and 2040**, which will require regional cooperation and major private sector involvement.

Table 3: Scaled Renewable Energy Source Contribution

Renewable energy source	Technology	2030 MW	2035 MW	2041 MW
Solar	Solar Park	4742.11	6843.90	10299.92
	Rooftop Solar with & without NEM	890.16	2857.51	4300.51
	Solar Irrigation	290.51	492.09	740.69
	Solar Minigrid	32.36	54.73	82.62
	Solar Microgrid	0.00	0.00	0.00
	Solar Nanogrid	0.00	0.00	0.00
	Solar Charging Station	1.53	2.66	3.87
	Solar Street Light	95.41	161.52	243.02
	Solar powered Telecom BTS	44.88	76.00	114.57
	Solar Drinking Water System	0.46	0.89	1.29
Total Solar		6332.43	12023.91	17229.17
All Wind Projects		4520.17	9508.75	13625.11
All Hydro Projects		1504.87	2489.51	3567.07
All Biogas projects		4.48	7.38	10.38
All Biomass projects		42.9	44.6	46.4
Off-Grid renewable energy		554.00	554.00	554.00
Import		5243.15	1162.86	720.86
Total		18202	25791	35753

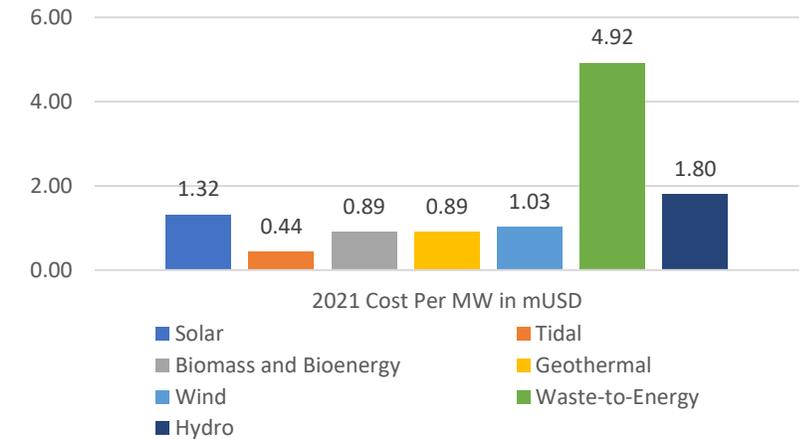
Source: Author's analysis based on BPDB & SREDA

5.2 Cost Trend for Different Years by Renewable Sources (2021–2040)

Figure 1 shows the **per MW cost of various renewable energy sources in Bangladesh**, incorporating technology-specific cost reductions.

- The baseline 2021 costs are sourced from Alam (2021), **while projected declines up to 2030, 2035, and 2040 follow global trends** from GIZ (Reis, 2011) and BloombergNEF (2025).
- Unlike inflation-based models, **these projections assume realistic market-driven cost declines** for solar and wind technologies, reflecting global competitiveness and learning curve effects.
- In 2021, **solar PV cost USD 1.32 million per MW, wind USD 1.03 million per MW, biomass and geothermal USD 0.89 million per MW, and tidal energy USD 0.44 million per MW.**
- Waste-to-energy and hydropower **were more capital-intensive at USD 4.92 million and USD 1.80 million per MW respectively.**

Figure 1: Power Plant Cost per MW for Different Renewable Energy Sources in 2021 (in million USD)



Source: Alam, 2021

- **A declining trend-based model is adopted to generate realistic, cost-adjusted investment estimates for all key renewable energy technologies.**
 - Reis (2011) **projected a 16.67% reduction in PV costs, 26.67% for CSP with storage, 2.22% for onshore wind, and 9.09% for offshore wind by 2030.**
 - BloombergNEF (2025) **anticipates a 5% cost decline every five years for major renewable technologies beyond 2030.**
 - Solar PV is projected to **fall from USD 1.32 million/MW in 2021 to USD 1.05 million in 2030, USD 1.00 million in 2035, and USD 0.95 million in 2040.**
 - Wind energy is expected to **decline from USD 1.03 million/MW in 2021 to USD 0.98 million in 2030, USD 0.93 million in 2035, and USD 0.88 million in 2040.**
 - Biomass, bioenergy, and geothermal costs remain **stable at USD 0.89 million/MW** throughout the period. Tidal energy decreases **from USD 0.44 million/MW in 2030 to USD 0.04 million** in 2035 and 2040.
 - Waste-to-energy remains the most expensive at **USD 4.92 million/MW, and hydropower stays at USD 1.80 million/MW.**

6. Investment Requirements Analysis for Different Years by Renewable Sources

Investment Requirements for Different Years by Renewable Sources (MW Scale) in Bangladesh for 2030, 2035, and 2040, incorporating technology-specific cost reductions and anticipated capacity additions.

- **Table 4 shows the additional renewable energy capacity (in MW) required for Bangladesh across three periods: 2025–2030, 2031–2035, and 2036–2040.**
- Solar and wind **dominate the expansion**, while hydro, biogas, biomass, and imports provide supplementary contributions to meet overall renewable targets.
- The total additional capacity required decreases over time, from **16,654.9 MW in 2025–2030 to 12,832.2 MW in 2031–2035, and further to 11,124.8 MW in 2036–2040.**

Table 4: Period wise Requirement of Additional Renewable Energy based Electricity Generation Capacity

Renewable energy source	Between 2025-2030	Between 2031-2035	Between 2036-2040
Total Solar	5630.4	5691.5	5205.3
All Wind Projects	4460.17	4988.58	4116.36
All Hydro Projects	1274.87	984.64	1077.56
All Biogas projects	3.79	2.9	3
All Biomass projects	42.5	1.7	1.8
Off-Grid renewable energy	0	0	0
Import	5243.2	1162.9	720.86
Total	16,654.9	12,832.2	11,124.8

Source: Authors' Calculation based on Available Data

6. Investment Requirements Analysis for Different Years by Renewable Sources

- Solar remains the largest source, with **investments of USD 5.9 billion by 2030, USD 5.7 billion in 2031–2035, and USD 4.9 billion in 2036–2040.**
- Wind energy follows, requiring **USD 4.4 billion by 2030, USD 4.6 billion in 2031–2035, and USD 3.6 billion in 2036–2040,** supporting grid resilience.
- Hydropower investments are **USD 2.3 billion by 2030, USD 1.8 billion in 2031–2035, and USD 1.9 billion in 2036–2040, aiding base-load generation and diversification.**
- Smaller but important contributions come from biogas and biomass: **Biogas: USD 3.4 million (2030), USD 2.6 million (2031–2035), USD 2.7 million (2036–2040); Biomass: USD 38 million (2030), USD 1.5 million (2031–2035), USD 1.6 million (2036–2040)**
- No off-grid renewable investment is assumed. Waste-to-energy is included under biomass/urban strategies.
- “Import/Additional Needs” represents projected costs for imported systems, capacity upgrades, or unforeseen expansions, starting at **USD 5.53 billion by 2030, declining to USD 1.2 billion in 2031–2035 and USD 0.686 billion in 2036–2040.**
- Total domestic-level investment for renewable energy-based power generation ranges **between USD 35.2–42.6 billion, with the majority concentrated in 2025–2030 (USD 12.4 billion) and 2031–2035 (USD 12.1 billion).**

Table 5 : Period wise Investment Requirement for Renewable Energy

Sources	Between 2025- 2030	Between 2031-2035	Between 2036-2040
Solar	5938.4	5702.7	4954.7
Wind	4357.7	4630.3	3629.7
Hydro	2299.9	1772.4	1939.6
Biogas	3.4	2.6	2.7
Biomass	38.0	1.5	1.6
Off-grid renewable energy	0.0	0.0	0.0
Import	5530.0	1165.1	686.2
Total (million USD)	18167.4	13274.6	11214.5
Total (without import) (million USD)	12637.4	12109.5	10528.3
Total (without import) (billion USD)	12.6	12.1	10.5

Source: Authors' Calculation based on Available Data

7. Conclusion and Recommendations

- Bangladesh is at a **turning point in its energy transition**, with ambitious targets but slow implementation.
- Achieving a **30% renewable share by 2040** is essential for **energy security, resilience, and sustainability**, requiring about **35,753 MW capacity and USD 35.2–42.6 billion investment**.
- Strategic Priorities
 - **Set a Legally Binding 30% RE Target by 2040** to ensure policy certainty, attract large-scale **investment**, and guide Bangladesh's **energy transition**.
 - **Prepare a SMART RE Roadmap** with clear milestones, technology mix, and **grid–storage readiness** to meet future energy needs.
 - **Strengthen Regional Power Trade** with India, Nepal, and Bhutan to secure **low-cost clean electricity** and reduce domestic supply gaps.
 - **Commit to a Fossil Fuel Phase-Out** by halting new plants, retiring inefficient units, and aligning with **Just Transition policies**.
 - **Mobilise USD 35.2 Billion from MDBs and Climate Finance** through **concessional loans, blended finance, and risk-sharing** mechanisms.
 - **Create a Renewable Energy Financing Facility** under SREDA/IDCOL to provide **affordable loans and guarantees** for solar, wind, and waste-to-energy projects.
 - **Modernise Grid and Deploy Storage** with **smart grids, digital monitoring, and large-scale storage** for stable RE integration.
 - **Expand Distributed RE Systems** such as rooftop solar, irrigation pumps, and **EV charging hubs** via net-metering and SME/household incentives.

PART B

Nationally Determined Contributions (NDC) for the Power Sector: Tracking Progress of NDC 2.0 and Proposed Redesigning of NDC 3.0

8. Background for the Study of NDC 3.0

- The Paris Agreement is supported by Nationally Determined Contributions (NDCs), where Parties outline their plans to contribute to the Agreement's long-term temperature target
- The next round of NDC submissions was **due by early 2025**, taking into account the first global stocktake (GST)
 - However, as of 31 March 2025, **only 19 countries** have submitted their Nationally Determined Contributions (NDCs)
- There is total 9 sectors under the NDC 2021 targets and 5 major sub sectors Power, Transport, Industry, Households and Brick Kilns in the base year (2012)
- The share of power sub sector is the **highest 20.98 million Ton CO₂e or 12.41% of the total emission**
 - In the BAU scenario (2030), the second highest contribution of **GHG emission is found for power sector (23.24%)**
 - As a result, the combined GHG reduction target has been set at **48.9% for the power sector by 2030**, which is highest and more ambitious than any other sub- sector
- In addition to the ambitious target, it is also comparatively **more feasible to reduce the GHG emission of power** sector by phasing out fossil fuel and expanding renewable energy
- As the emission target is widely related to the power and energy demand estimation so it is important to **assess the benchmarking** of power sector in the previous NDC, **track the progress** against the targeted sectoral conditional and unconditional emission reduction and **designing the NDC 3.0** of Bangladesh
- Against this backdrop, CPD has decided to take up study titled *Tracking and Redesigning the Power Sector of Bangladesh's NDC 3.0*
- The objective of the study is to-
 - To **benchmark the emission scenario and targets** of the power sector in NDC;
 - To **review and track progress** against the power sector targets set in NDC 2021; and
 - To **design and if needed redesign the targets**, goals and methods of the power sector Net Zero Emission targets in the NDC 3.0

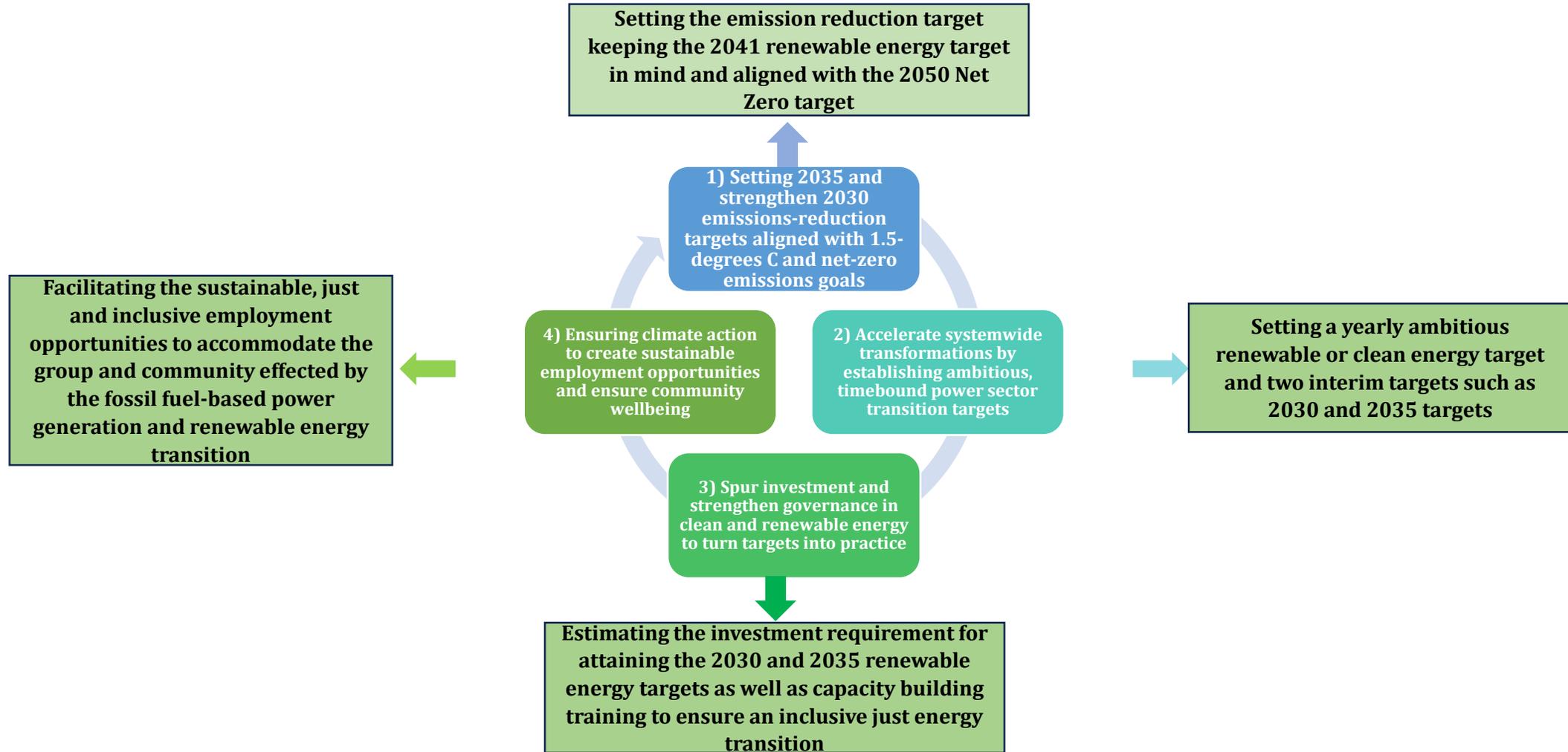
8. Background for the Study of NDC 3.0

8.1 Assessment Tools for Tracking Progress of NDC 2.0

- As the decade has passed by the signing of Paris Agreement, parties urgently need to track the progress made against the commitment made in the NDC
- It's almost halfway since parties submitted their NDC 2.0 in 2021 with their specific commitments for reduction of carbon emission by 2030
- As per the updating rule, the parties needs to now submit their NDC 3.0 based on the progress of NDC 2.0
- Main four assessment criteria are identified for tracking progress of NDC 2.0
 - **Assessment based on 'Ambition Enhancement'** in the 4 categories advancements in economy-wide commitments, scope of sectoral and GHG coverage within a country's NDC commitments and plans, the establishment or enhancement of sector-specific targets, setting or enhancing policies and actions aimed at reducing GHG emissions
 - **Readiness for Implementing NDC** using four enabling factors/categories. The four anchors are: (a) mainstreaming of climate change in public policy; (b) coordination mechanism; (c) allocation of financial resources; and (d) monitoring capacity
 - **Future Structure of Decarbonization** based on five indicators – (a) GHG targets, (b) GHG coverage, (c) time frame, (d) conditionality elements and (e) targets by mitigation sectors.
 - **Modalities, Procedures and Guidelines for Monitoring NDC Implementation**

8. Background for the Study of NDC 3.0

Figure 2: Framework for Redesigning NDC 3.0 for the Power Sector



8. Background for the Study of NDC 3.0

Step 1: Setting 2035 and strengthen 2030 emissions-reduction targets aligned with 1.5-degrees C and net-zero emissions goals

- Less ambiguous than the collective 1.5- degrees C goal are the net-zero emissions targets that 104 countries have now adopted
- Those countries should ensure that their **2030 and 2035 targets put them on a realistic path to phasing out emissions entirely by their net-zero target**
- Setting the power sector decarbonisation goals, targets and roadmap is crucial to achieve the overall net zero target of the parties as in most cases this is the highest emitting sector

Step 2: Accelerate systemwide transformations by establishing ambitious, timebound sectoral targets

- To ensure such far-reaching changes, countries should set sector-specific targets that underpin their topline emissions-reduction goals, as well as jumpstart a process with ministries to integrate these targets into their strategic planning
 - Doing so can help guide domestic policymaking across the whole of government to phase out the fossil fuel power plants and emphasise the renewable energy-based power generation
- The NDC 3.0 must include **such targets and directives to massively scale down fossil fuel** and speed up renewable energy
 - Most NDCs currently commit to reducing GHG emissions targeting sector specific goals
 - However, not all the countries do not need to progress at the same pace or reach the same target to achieve these global benchmarks.
- Finally, **NDCs should lay the groundwork for Party's just and equitable energy transition**
 - By committing to extend affordable, reliable electricity access to those currently living without it, provide safe and accessible mobility for all, and support those negatively impacted by the shift to zero-carbon energy, such as fossil fuel workers

8. Background for the Study of NDC 3.0

Step 3: Spur investment and strengthen governance in clean and renewable energy to turn targets into practice:

- To start with, implementing NDCs will require a whole-of-government effort
- The process can also help facilitate consensus-building and integrate climate issues into mainstream planning, policy, finance, regulatory and legislative decisions
- Implementation of the new and more **progressive NDCs will also depend on investment and finance**
- This signal is even stronger if NDC targets, policies and institutional measures are integrated into core national and sectoral plans. This can help to mobilise the finance and investment to carry out national commitments.
- It can also delineate the actions countries could finance domestically and those which would be conditional on international finance
- NDC investment strategies can also provide a rallying point that enables developing country governments to bring together public financing partners (e.g. **Multilateral Development Banks, Development Finance Institutions, Climate Funds, donors, philanthropists**) and the private sector to coordinate how they will support countries' targets
- *Step 4: Ensuring climate action to create sustainable employment opportunities and ensure community wellbeing:*
- Given the widespread ramifications of climate change and the many potential benefits of tackling it, the next generation NDC will need to draw clear linkages to a wide range of issues that are critical for peoples' lives – from employment to health to local economies and beyond
- The new NDC must be gender responsive and youth inclusive
 - UNDP found that **45% of second generation NDCs** reviewed include gender-responsive targets
- A recent study by the International Union for Conservation of Nature (IUCN) found that of 89 updated or new NDCs reviewed, **69 (78%) include at least one mention of gender**
- The new NDC of Bangladesh must be gender responsive and youth inclusive specially from the perspective of green jobs to be created in the renewable energy sector

9. Critical Review of the NDC 2021

9.1 Brief Structure of NDC2.0 on Power and Energy Sector

- In NDC 2.0, four sectors with 13 sub-sectors are targeted for emission reduction
 - Table 6 presents the targeted emission reduction under the power sector in three different scenarios: unconditional contribution, conditional contribution and combined contribution
- According to NDC2.0, power sector's commitment by **2030 is to reduce 43.74 MtCO_{2e} (48.9% of total emission reduction target)**
- These carbon emissions targets are to be achieved through **different unconditional and conditional measures**
- Unconditional measures or contributions indicate activities which the government will implement without depending on external assistance
- These unconditional contributions include **three types of activities** – (a) Implementation of renewable energy projects; (b) Enhanced efficiency existing power plants; and (c) Use of improved technology for power generation
- Conditional contributions, on the other hand, include activities which the government is committed to implement provided necessary technical and financial support from external sources are available
- Similar to the unconditional ones, **three types of activities are identified** - (a) Implementation of renewable energy projects; (b) Enhanced efficiency existing power plants; and (c) Use of improved technology for power generation Power.

Table 6: Power Sector in the NDC2.0

	GHG Emission Scenario (BAU 2030)			Unconditional		Conditional			Combined	
	MtCO _{2e}	In %	MtCO _{2e}	Reduction of MtCO _{2e}	In %	MtCO _{2e}	Reduction of MtCO _{2e}	In %	Reduction of MtCO _{2e}	In %
Power	95.14	23.24	87.13	8.01	29.06	51.4	35.73	57.72	43.74	48.9
Total Emission	409.41		381.85			319.94				
Total reduction				27.56	6.73		61.9	15.12	89.47	21,85

Source: NDC 2.0

9. Critical Review of the NDC 2021

9.2 Assessing the targets of NDC 2021

Scope and coverage: General description of the NDC target includes economy-wide absolute targets of emission reduction by 2030 in the respective sectors

- In terms of the selected gases of the emission reduction CO₂, CH₄, N₂O, and hydro fluorocarbons (HFCs) were included
- Bangladesh has **expanded the coverage of NDC by including more sectors than in INDC**. The number of selected sectors apparently seems okay; however, the target of power and energy sector seems less ambitious
- **Small-scale renewables are included**, such as solar home systems or use of solar to power irrigation. Emphasis on energy efficiency measures are also mentioned as a tool for managing demand for electricity but are not explicitly covered by the action plan
- **So, there are several ways and scopes of making the NDC more specific, comprehensive and target oriented.**

Time frames and/or periods of implementation: The document only targets the emission reduction by 2030 and mentions the possible revision to be done in 2025

- However, the NDC action plan covers the period from 2016 to 2019 and from 2020 to 2025 and describes what needs to be done over this timeframe, by whom and by when, to deliver the required GHG emissions reductions in the power sector
- **The timeframe and period of the NDC seems okay; however, inclusion of yearly targets would have helped achieve the final 2030 emission reduction target**

Assumptions and methodological approaches, including for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:

- according to the NDC 2021 Bangladesh hasn't **used any other assumptions or methodological approaches**. NDC also quotes that Bangladesh will also apply specific assumptions and methodologies, when appropriate, when assessing progress made under the policies and measures related to the implementation of its NDC in its National Communications and Biennial Update Reports
- The upcoming Biennial Report is likely to report to what extent the specific assumptions are used for setting/estimating targets.

9. Critical Review of the NDC 2021

9.2 Assessing the targets of NDC 2021

Mitigation co-benefits resulting from adaptation action and/or economic diversification plans: In the unconditional part of NDC, only those mitigation measures were considered which would be implemented based on current local-level capacity, and financed through internal resources

- Contingent upon international funding and technological support, the conditional emission reduction will be implemented. The following sections present the updated unconditional and conditional contributions
- The targeted GHG emission reduction for unconditional contributions will be **implemented through a set of mitigation actions**
 - Such as implementation of renewable energy projects, enhanced efficiency of existing power plants and use of improved technology for power generation etc.

Fairness and ambition in the light of national circumstances: The NDC 2021 represents an enhanced ambition for mitigation with a substantial increase from the INDC 2016.

- In selecting the actions set out above, Bangladesh has prioritised those which fit with the growth priorities set out in our national development plans
 - In addition, Bangladesh has captured the **synergies between mitigation and adaptation**. The INDC suggested measures have already been taken forward by the country's own resources
- **However, the NDC 2021 lacks fairness as it fails to mention some of the key issues related to the employment, gender and marginal group and youth**

9. Critical Review of the NDC 2021

9.2 Assessing the targets of NDC 2021

Implementation and monitoring mechanism of NDC 2021: While submitting the previous NDC, Bangladesh has already prepared an NDC implementation roadmap and action plan for transport, power and industry sector which suggests governance arrangements for **the NDC-NAP implementation framework**

- This action plan describes how Bangladesh intends to deliver the GHG emissions reductions in the power sector, to support the overall targets described above
- The NDC implementation action plan covers the period from **2016 to 2019 and from 2020 to 2025** and describes what needs to be done over this timeframe, by whom and by when, to deliver the required GHG emissions reductions in the power sector
- **The lack of monitoring mechanism has slowed down the implementation of the NDC.** Neither the NDC 2021, nor the action plan has chalked out any specific monitoring mechanism for regulating the implementation of the GHG emission reduction plan.
 - Such as efficient use of electricity and primary energy uses in industry, raising awareness of efficient use of electricity, for businesses and the public
- Introduction of different incentive schemes to **promote industrial Energy Efficiency measures**
 - Energy efficient and zero carbon homes, introduction of a market-based incentive scheme to promote renewable energy generation mainly by the private sector, rationalisation of import tax and all applicable duties to promote energy efficient appliances and imported energy efficient building materials
- Having a dedicated action plan for the successful implementation of the NDC puts Bangladesh in a higher position, however, it is also important to regularly update and improve the implementation strategy to make it more relevant and up to date

9. Critical Review of the NDC 2021

9.3 Tracking Progress of Power Sector Targets of the NDC 2021

- It is vital to track the progress of the indicators of NDC2.0 before starting the designing the targets of different power sector indicators of NDC 2025
 - Biennial report will delineate the tracking progress of NDC. The countries are expected to submit their **biennial transparency report (BTR) every two years**
- DoE has already prepared the first BTR report in June 2023 and now preparing the second BTR report to submit to UNFCC along with NDC tracking report
- The target for renewable energy for 2030 is set to be **12.5% according** to NDC 2021
 - Against that target the progress made in **2024 is not much of significant** (table 7)
- According to the DoE the progress against the targeted indicators is significant, as the ambition was moderate, even low in some cases, so significant progress has been made
- However, this study finds **the progress rather to be slow given the less ambitious target setting in the NDC a speedier progress** against the targets could have been achieved

Issues	2021	2024	NDC Target 2030
Share of renewable energy generation and usage	1.01%	3.57%	12.5% (5026 MW including both conditional and unconditional contribution by 2030)
Share of fossil fuel in primary energy consumption	98.99%	96.43%	Not mentioned
Net GHG emissions and removals in power sector		N/A	48.9%
Rate of energy efficiency, carbon neutrality		N/A	10%

Source: BPDB, SREDA

9. Critical Review of the NDC 2021

9.4 Reporting the National Circumstances and Institutional Arrangements

➤ Misalignment with the National Policies, Plans and Actions

- There is **lack of coherence in the national plans, policies** and acts
- Moazzem and Hridoy 2023 concluded that when compared to the other relevant energy-related acts, plans and policies of the country, the revised draft has many deviations though for most of them, the lack is in the prior policy rather than in the revised draft
- As the NDC was submitted in 2021, there are **few significant policies that were undertaken** after the NDC submission majorly missing the key policy documents (table 8)

NDC and Other Policies	Renewable Energy Target	Fossil fuel phaseout target	net GHG emissions and removals	rate of energy efficiency, carbon neutrality
Nationally Determined Contributions 2021	5026 MW (including both conditional and unconditional contribution) by 2030	Not mentioned	43.74 MtCO _{2e} (48.9 %)	10%
Integrated Energy and Power Master Plan (2023)	40% by 2041	Phase out of rental and quick rental power plants	Not mentioned	Reduce energy intensity (national primary energy consumption per unit of GDP) by 20% from 2013 levels in 2030
Climate Prosperity Plan (2023)	30% by 2030 40% by 2041	Not mentioned	Not mentioned	20% by 2030
Renewable Energy Policy 2025	30% by 2041	Not mentioned	No fixed goal	Not mentioned

9. Critical Review of the NDC 2021

9.4 Reporting the National Circumstances and Institutional Arrangements

- **The institutional arrangements for driving forward and coordinating NDC implementation are set out in the NDC Implementation Roadmap**
- The NDC implementation power sector action plan is supposed to be coordinated and led by the Sustainable and Renewable Energy Development Authority (SREDA) in the Ministry of Power, Energy and Mineral Resources
- SREDA, being an implementing agency, has implemented utility scale and distributed solar systems to mitigate emission
- SREDA has also taken projects and initiatives to increase energy efficiency in the energy sector
 - Such initiatives are not enough to ensure proper implementation of NDC and being the Chair of the NDC Implementation Power Sector Working Group, needs more proactive stance.
- There is a **lack of coordination among the public agenting** in ensuring NDC related activities
 - Not much of a significant collaboration has been noticed between the Department of Environment, who is overall in charge of the NDC implementation, and SREDA
 - **SREDA did not happen to arrange any consultation meeting** with the different stakeholders.
- The NDC Implementation Power Sector Working Group, Its main role is to **discuss sector-related issues, including discussions on mitigation measures and tracking progress**
- The Power Division is to be responsible for coordinating stakeholder engagement within the Ministry on the power sector issues such as running open consultations on policy proposals, organising NDC implementation workshops for the power sector
 - **Responding to specific queries regarding** NDC implementation in the power sector, **liaise with MoEFCC** in relation to wider NDC implementation stakeholder engagement and contributing from a power sector perspective to wider stakeholder engagement exercises

10. Proposed Redesigning the Power Sector Targets for NDC3.0

10.1 Setting Emission-reduction Targets for 2035 and Strengthening the Existing Target of 2030

- As per the NDC3.0 guideline which is reflected in the analytical framework of the study, Bangladesh needs to set **an emission reduction target for the power sector which should be ‘ambitious’**
- To set the target of emission reduction for the next decades, **a reliable estimate of electricity demand is an essential pre-requisite**
- According to Moazzem and Faisal (2023) the projection of electricity demand made in the IEPMP 2023 for 2041 is faulty (Moazzem and Faisal, 2024) because of its weak methodological foundation, especially failure to consider lower electricity demand during covid and post-covid period
 - Hence, **Bangladesh needs a revision of the electricity demand for 2030, 2035 and 2040**
 - CPD has made a projection based on the proper methodological tool and found that electricity demand would be significantly lower compared to what is being projected in the IEPMP (Moazzem and Faisal, 2023)
- According to the estimates, the projected demand for electricity for 2030, 2035 and 2040 would **be 22,702 MW, 26,722 MW and 29,761 MW respectively**
- Taking that into account that the remaining power to be generated by fossil fuel, a predicted reduction of CO₂ emission would be **76.9 m. ton, 91.2 m. ton and 103.3 m. ton** respectively (Table 9)
- The unconditional targets are **19.24 m. ton , 22.81 m. ton and 25.83 m. ton** respectively for 2030, 2035, 2041
- The unconditional targets are **57.72 m. ton , 68.43 m. ton and 77.5 m. ton** respectively for 2030, 2035, 2041

10. Proposed Redesigning the Power Sector Targets for NDC3.0

Table 9: Proposed Targets of NDC3.0: Electricity Demand and Carbon Emission			
Issues	2030	2035	2041
Forecasted electricity demand (MW)	22,702	26,722	29,761
CO ₂ emission reduction target for the power sector (m ton CO ₂ /MWH)*	76.96 (Unconditional 19.24, conditional 57.72)	91.24 (Unconditional 122.81, conditional 68.43)	103.34 (Unconditional 25.83, conditional 77.5)
Expected share of renewable electricity (%)	20	24.5	30
Expected electricity demand from renewables in MW (estimated)	4540	6438	8928
Required renewable capacity in MW (plant factor 0.25)	18,162 (Unconditional 4,540 MW, conditional 13,622 MW)	25,751 (Unconditional 6,438 MW, conditional 19,313 MW)	35,713 (Unconditional 8,928 MW, conditional 26,785 MW)
Source: Authors' calculation			

10. Proposed Redesigning the Power Sector Targets for NDC 3.0

10.1 Setting Emission-reduction Targets for 2035 and Strengthening the Existing Target of 2030

- The remaining share of electricity demand for the period of 2030 and 2040 will be met by fossil-fuel-based power generation
 - **A phased-out approach for fossil-fuel based power plants will be applied** by the MoPEMR in order to make a balance in the share of electricity supply using fossil and non-fossils including renewable energy sources
- Moazzem, Jeba and Mehadi (2025) estimated that the fossil fuel generation capacity for 2030, 2035 and 2040 would be **29773 MW, 32523 MW and 34,152 MW respectively** (table 10)
- It is expected that new NDC will improve its methodological rigor and framework for more accurate estimation of the key statistical indicators
 - It will set more ambitious target for reduction of CO₂, and other GHG emissions as well as undertake ambitious measures such as renewable energy targets, and energy efficiency targets
- There must be an interim target for 2035 for all the indicators such as reduction of GHG emission, renewable energy, grid upgradation and energy efficiency

Table 10: Required Fossil Fuel capacity to meet Demand

Year	Total projected demand (on grid and off grid)	Expected share of fossil fuel-based electricity (%)	Expected electricity demand from fossil fuel-based electricity in MW (estimated)	Required fossil fuel-based electricity capacity (plant factor 0.61)
2030	22,702	80	18,162	29,773
2035	26,277	75.5	19,839	32,523
2040	29,761	70	20,832	34,152

Source: CPD 2025

10. Proposed Redesigning the Power Sector Targets for NDC 3.0

10.2 Accelerate Systemwide Transformations by Establishing Ambitious, Timebound Sectoral Targets

- Moazzem, Jeba and Mehadi (2025) estimated a **distribution of energy-mix among different renewable energy sources** which include solar, wind, hydro, biogas, biomass, off-grid and imported renewable energy (table 11)
- According to the estimates major share of renewable energy would be sourced from different types of solar-based power generation- **34% by 2030 and 46.6% by 2035**
- Both utility scale and distributed scale of solar energy would be the possible option for meeting the required target
 - Wind **power** would be second important source for power generation (**24.8% by 2030**)
- Other important sources include hydropower, biomass and biogas
 - A part of requirements needs to be met by imported electricity generated from hydropower from regional market
- Enhancing energy efficiency at industrial and household levels needs to have a special focus in the future NDC as well

Table 11: Scaled Renewable Energy Source Contribution: CPD Estimates

Renewable energy source	Technology	2030 MW	2035 MW	2041 MW
Solar	Solar Park	4742.1	6843.9	10299.9
	Rooftop Solar Except NEM	417.37	2057.00	3095.72
	Net Metering Rooftop Solar	472.79	800.51	1204.79
	Solar Irrigation	290.51	492.09	740.69
	Solar Mini grid	32.36	54.73	82.62
	Solar Microgrid	0.00	0.00	0.00
	Solar Nanogrid	0.00	0.00	0.00
	Solar Charging Station	1.53	2.66	3.87
	Solar Street Light	95.41	161.52	243.02
	Solar powered Telecom BTS	44.88	76.00	114.57
	Solar Drinking Water System	0.46	0.89	1.29
Total Solar		6332.43	12023.9	17229.2
All Wind Projects		4520.2	9508.8	13625.1
All Hydro Projects		1504.9	2489.5	3567.1
All Biogas projects		4.5	7.4	10.4
All Biomass projects		42.9	44.6	46.4
Off-Grid renewable energy		554	554	554
Import Required		5243.2	1162.9	720.9
Total		18202	25791	35753

10. Proposed Redesigning the Power Sector Targets for NDC 3.0

10.3 Spur Investment in Renewable Energy based Power Generation

- Achieving ambitious NDC3.0 will require huge investment in generation, transmission and distribution of variable electricity of different types of renewable energy sources
- An unconditional contribution by the government of Bangladesh and the local private sector would marginally meet the required need of investment
- To ensure the required need for resources, NDC 3.0 should strongly approach **for conditional contribution from different external sources**
 - Moazzem, Jeba and Mehadi (2025) estimated that a total amount of **\$18 billion will be required for creating generation capacity of 16,655 MW of electricity by 2030**
- The amount would be **another \$13 billion for creating generation capacity of 12,832 MW by 2035** and another **\$11 billion for 11,124 MW by 2041**
- There is a need for financing diversification from national and international sources
- Bangladesh can set the target of attaining **20%-25% of the required financing from domestic (public c+ private) sources**, rest of the **75%-80% needs to be from overseas investment (FDI), G-G, G-P, P-P partnerships**
 - Multilateral development banks (MDBs), bilateral financial institutions, and the state-owned Infrastructure Development Company Limited (IDCOL) could serve as the main sources of debt financing for large-scale renewable energy projects in Bangladesh
- There are over **30 different global climate funds** available with a total potential available resource of **\$32 billion where Bangladesh can apply**
 - Moazzem, Mashfiq and Tamim (2023) identified that these sources offer different types of financial instruments targeting different kinds of demand for investment in generation, transmission and distribution of renewable energy

10. Proposed Redesigning the Power Sector Targets for NDC 3.0

Table 12: Different Climate Funds Available for Bangladesh

Name of the fund	Type of fund	About
Green Climate Fund (GCF)	Multilateral	The fund established under the UNFCCC to support climate mitigation and adaptation projects in developing countries.
Global Environment Facility (GEF)	Multilateral	The fund provides grants to developing countries for projects that benefit the global environment, including climate change mitigation and adaptation
Climate Investment Funds (CIFs)	Multilateral	The fund supports climate resilience and low-carbon development in developing countries through concessional financing
Adaptation Fund	Multilateral	The fund provides funding for concrete adaptation projects and programs in developing countries that are parties to the Kyoto Protocol
Clean Technology Fund (CTF)	Multilateral	It supports the demonstration, deployment, and transfer of low-carbon technologies in developing countries
The World Bank's International Development Association (IDA)	Multilateral	The fund provides concessional loans and grants to the world's poorest countries to support development projects, including those related to climate change.
The World Bank's Energy Sector Management Assistance Program (ESMAP)	Multilateral	The fund provides technical assistance and knowledge sharing to help countries transition to sustainable energy solutions
Renewable Energy Performance Platform (REPP)	Multilateral	It facilitates private investment in renewable energy projects in developing countries
The United Nations Development Programme (UNDP) Climate Change Adaptation Fund	Multilateral	Supports adaptation projects in vulnerable communities, focusing on building resilience to climate change impacts
The European Union's Climate Finance Instruments	Multilateral	The fund provides financial support to developing countries for climate change mitigation and adaptation projects.
The Global Energy Efficiency and Renewable Energy Fund (GEEREF)	Multilateral	GEEREF invests in specialist renewable energy and energy efficiency private equity funds in emerging markets.
The Asia-Pacific Climate Finance Fund (APCF)	Multilateral	The fund supports the development and implementation of innovative, scalable, and commercially viable financial risk management products that increase investments in climate change mitigation, adaptation, and disaster risk management in ADB's DMCs.
The Nordic Development Fund (NDF) Climate and Energy Fund	Multilateral	The Nordic Development Fund provides financing and expertise for climate change mitigation and adaptation projects in developing countries
The Japan International Cooperation Agency (JICA) Climate Change Mitigation Fund	Multilateral	JICA provides financial and technical assistance to developing countries to support various projects related to climate change mitigation, adaptation, and resilience building
The German Federal Ministry for Economic Cooperation and Development (BMZ) Climate Finance Program	Bilateral	BMZ's Climate Finance Program aims to support developing countries in their efforts to mitigate and adapt to climate change
The Climate Resilience and Adaptation Finance and Technology Transfer Facility for South Asia (CRAFT)	Regional	This facility aims to support climate resilience and adaptation efforts in South Asian countries

Source: Moazzem, Mashfiq and Tamim (2024)

10. Proposed Redesigning the Power Sector Targets for NDC 3.0

10.4 Ensuring Climate Action to Create Sustainable Employment Opportunities and Ensuring Community Wellbeing

- NDC 3.0 should include a new **perspective of gender and youth** with specific indicators which need to be track is generation of new employment for youths and women under the new initiatives to be committed
- CPD study shows that the renewable energy sector could generate **about 9300–28,626 new employment by 2030**, mainly through on-grid-based electricity generation (Moazzem & Mashfiq, 2023)
 - The estimates showed that the changing structure of employment in fossil fuel-based power generation would have either adverse or positive impact
- However, a substantial part of the new employment in the renewable energy-based power plants and associated services could be absorbed by **reemploying the occupants of the fossil fuel-based power plants**
- The new NDC should consider setting a new benchmark for male and female representation in the employment generation from renewable energy.
- One major drawback of the fossil fuel-based power generation is the limited scope of women inclusion in the workforce
- World Bank Bangladesh has run a baseline study (2020) on determining women representation in Power sector of Bangladesh
 - There is only **6% female representation in the work force of which 304 women are** working in technical positions and 5006 women are working as technical staffs
 - Representation of women in the power sector is very **low at 9.5% of total staff in the six public utilities**
- In total, **45 women work as executive/senior engineers, and 35 of them are in BPDB** and the share of female Board members and officials working in the 13 power sector organisations is 6% (16/276 officials)

10. Proposed Redesigning the Power Sector Targets for NDC 3.0

10.5 Comply with the Guideline for NDC 3.0 Reporting

- It is expected that the NDC 3.0 will properly reflect the ICTU guideline and ensure the quality and standard set by the UNDP highlighting the seven issues of ICTU
- CPD recommends that **quantifiable information that will be provided in the NDC 3.0** document should be appropriate
- The time frame to be mentioned in the NDC3.0 should keep in mind the implementability issue
- The scope and coverage of the NDC 3.0 should consider economy-wide approach as well as those should be sufficiently ambitious
- The planning processes need to be properly designed with specific responsibility. Assumptions and methodological approaches must be sound and robust as per guideline
- It is expected that **no vagueness and unclear assumptions** will be put in place while estimating the emission-related targets as well as projection of electricity demand
- It is expected that NDC 3.0 is fair and ambitious -just transition related issues including issues related with employment, gender, marginalised groups are properly be reflected. NDC is expected to contribute towards achieving the objective of the Paris Convention - regular monitoring and reporting and proper way of implementation with specific responsibilities
- Bangladesh NDC 3.0 must quality the UNDP quality assurance checklist for NDC 3.0. In other words, the NDC 3.0 should be passed on four indicators of the checklist –
 - (a) country ownership and inclusivity; (b) ambitious; (c) just transition and sustainable development; (d) clarity and transparency; and (e) feasibility
-

11. Recommendation to Redesign the Power Sector Targets for NDC 3.0

11.1 Recommendations for the Department of Environment, Ministry of Environment, Forest and Climate Change

- **A baseline assessment regarding the coordination and collaboration** of different government authority is vital as there is a visible dissimilarity among their perception
- Rather than playing small with less ambitious targets, the **NDC 2025 should set more ambitious** target for mitigation measures such as renewable energy targets, GHG emission and energy efficiency targets
 - The new NDC must improve its methodological rigor and framework for more accurate estimation of the key statistical indicators
- The renewable energy target should be set at **30% (35,753 MW) from renewable energy by 2040, if not 40%**
- There should be an interim target for 2035 for all the indicators such as renewable energy, energy efficiency, GHG emission reduction
- Department of Environment needs to schedule consultation and data tracking activities more frequently to implement the NDC and track progress against the indicators
- Policy for providing necessary training to the female and youth must be a part of the action plan of NDC
 - Along with the necessary finance and policy requirement for the effected vulnerable community in case of both the new renewable energy plants and phased out fossil fuel-based plants.
- For keeping the temperature under 1.5 degree Celsius, some new indicators to be included with attainable and realistic targets. Such as: **phase out of fossil fuel-based power generation**
- The NDC must lay out a target for gender and youth inclusion in the employment generation from energy transition.

11. Recommendation to Redesign the Power Sector Targets for NDC 3.0

11.2 Recommendations for the Sustainable and Renewable Energy Development Authority (SREDA)

Role of SREDA according to NDC NAP	Proposed role of SREDA
Chair the NDC Implementation Power Sector Working Group	<ul style="list-style-type: none"> • SREDA needs to capacitate first to be chair of the NDC implementation power sector working group • SREDA should have a separate cell to solely work on the implementation of the NDC
Coordinate the policy response for that sector, working with all power sector stakeholders as appropriate	<ul style="list-style-type: none"> • As the chair, SREDA should be the coordination focal point for all the private and public stakeholders including UNFCCC • Regular reporting and consultation regarding the policy and operational responses for the power sector must be maintained by SREDA
Track progress at the sectoral level	<ul style="list-style-type: none"> • Tracking progress at the sectoral level
Putting in place data sharing agreement as necessary to collect data to support this tracking of progress	<ul style="list-style-type: none"> • SREDA should also be the main point for data collection of the power sector which will help tracking the progress
Reporting to the NDC implementation technical committee on power sector NDC implementation issues and progress	<ul style="list-style-type: none"> • Consulting with the NDC implementation technical committee to check the progress of power sector • Reporting to the NDC implementation technical committee
Liaising with the NDC Implementation Coordination Team in MoEFCC to agree analytical needs on NDC implementation	<ul style="list-style-type: none"> • Liaising with the NDC Implementation Coordination Team in MoEFCC to agree analytical needs on NDC implementation
Suggesting ways and means to improve implementation	<ul style="list-style-type: none"> • SREDA needs to find out the ways and means to improve the implementation of NDC targets and must implement those by itself
Ensuring adequate capacity development for smooth NDC implementation	<ul style="list-style-type: none"> • Ensuring adequate capacity development of SREDA for smooth NDC implementation

11. Recommendation to Redesign the Power Sector Targets for NDC 3.0

11.3 Recommendations for the Power Division and Bangladesh Power Development Board

Role of Power Division according to NDC NAP	Proposed Activities
Running open consultations on policy proposals	<ul style="list-style-type: none"> • Organising open consultations on policy proposals by assisting power division to review and revise policies aligning with the net zero targets
Organising NDC implementation workshops for the power sector and responding to specific queries regarding NDC implementation in the power sector	<ul style="list-style-type: none"> • Regular monitoring of the NDC implementation in the power sector • Organising half yearly meetings to get an update regarding the implementation
Liaise with MoEFCC in relation to wider NDC implementation stakeholder engagement	<ul style="list-style-type: none"> • Liaise with MoEFCC and international development partners and foreign missions in relation to wider NDC implementation stakeholder engagement
Contributing from a power sector perspective to wider stakeholder engagement exercises	<ul style="list-style-type: none"> • Regularly meet and consult with the private power producers especially renewable energy-based power producers • Debrief the development partners and foreign missions to regularly update them and get feedback from them • Consultation and dialogue with the civil society organisations regarding the progress on NDC implementation

11. Recommendation to Redesign the Power Sector Targets for NDC 3.0

11.4 Strengthening Governance in Clean and Renewable Energy to Turn Targets into Practice

Government Authority	Proposed Activities
Ministry of Finance, and in particular the Economic Relations Division	<ul style="list-style-type: none"> Assisting in accessing climate financing and for general policy support
Energy and Mineral Resources Division of the Ministry of Power, Energy and Mineral Resources	<ul style="list-style-type: none"> Guiding the overall sector towards the net zero targets Monitoring the energy transition in power sector Coordinating the public and private stakeholders including power producers and foreign missions
The Bangladesh Power Development Board	<ul style="list-style-type: none"> Planning the power generation based on the emission target of 2030, 2035, 2041 Decide the fuel mix and phase out or approve the fossil fuel or RE based power plants accordingly Providing data support through conducting baseline surveys
The Infrastructure Development Company Limited (IDCOL)	<ul style="list-style-type: none"> Mobilise international funds, loans and grants for mitigation initiatives Facilitate the government to successfully implement the national rooftop solar programme For the link to the private sector and also for support in considering reduction of import barriers
Ministry of Industry	<ul style="list-style-type: none"> To provide data from industry particularly captive power
National Board of Revenue	<ul style="list-style-type: none"> To provide support in considering reduction of import barriers on renewable energy-based power generation related equipment

Thank You!