

Transition to Clean Energy in Bangladesh



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And

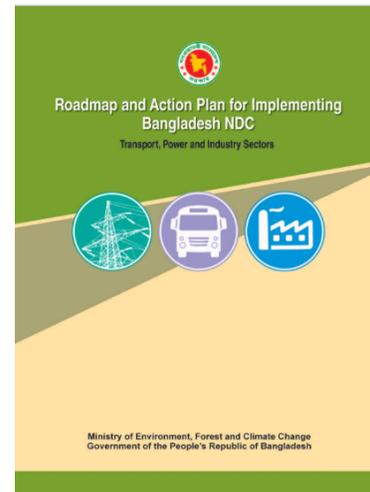
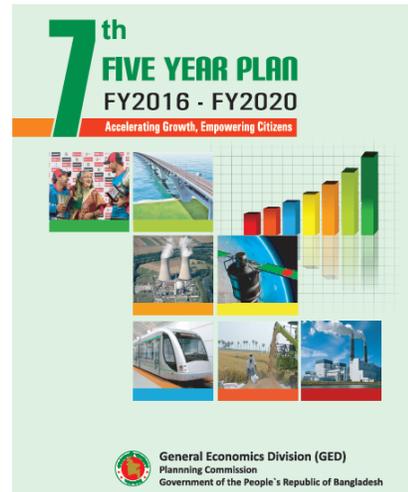
Ex- Additional Secretary and Memeber

Sustainable and Renewable Energy Development Authority (SREDA)

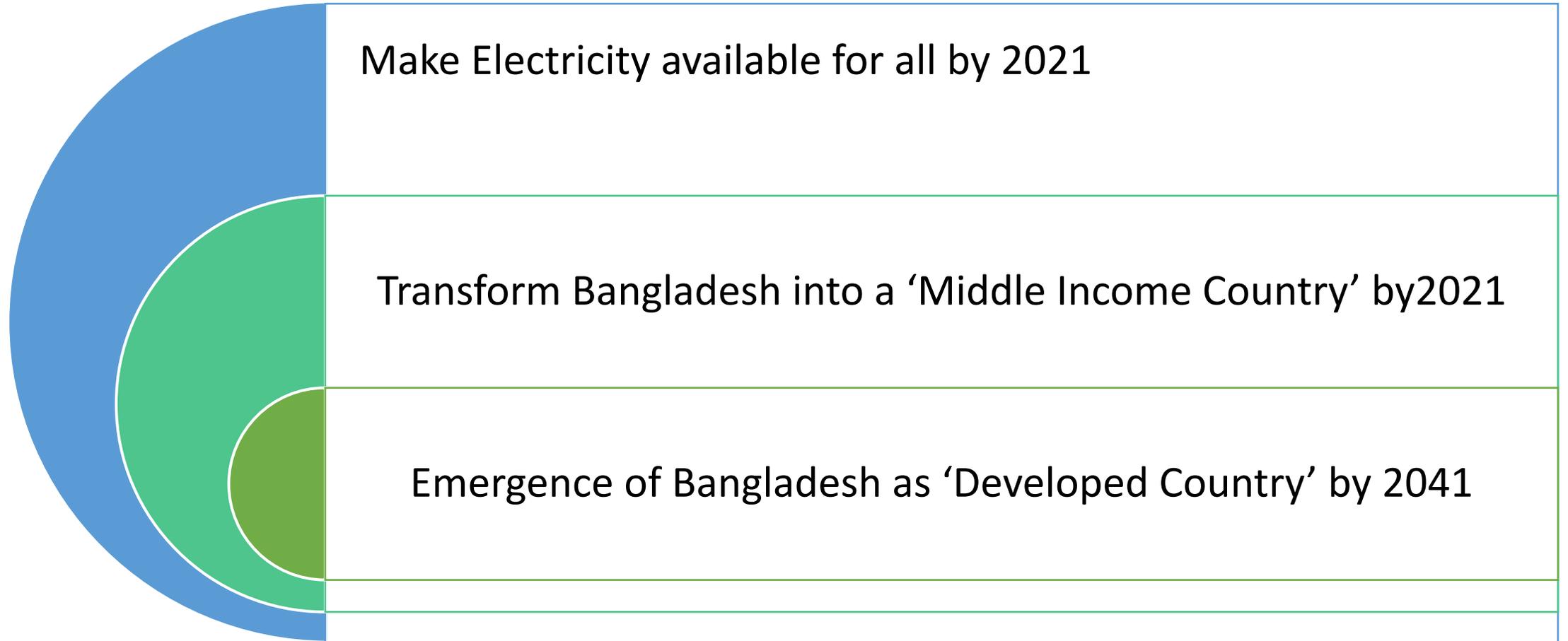
Ministry of Power, Energy and Mineral Resources

Government of the People's Republic of Bangladesh

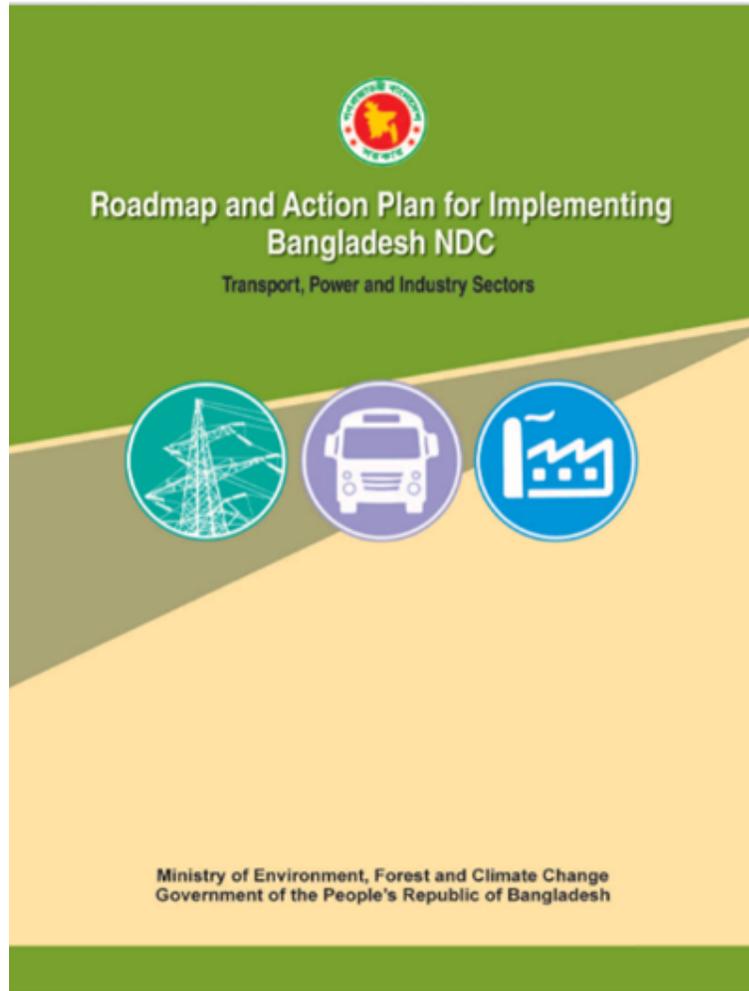
Clean Energy transition



Government's Vision



Bangladesh's NDC – a summary



Key points

- Bangladesh is a highly climate vulnerable country with less than 0.35% of global GHG emissions.
- The main focus of Bangladesh's activities is on adaptation – increasing resilience to the impacts of climate change.
- Bangladesh committed to reduce GHG emissions in the power, industry and transport sectors by 5% (**12 MtCO₂e**) 'unconditionally' below "business-as-usual" GHG emissions by 2030, or by a "conditional" 15% (**36 MtCO₂e**) below "business-as-usual" GHG emissions within 2030 if sufficient and appropriate support is received from developed countries
- Bangladesh therefore wants to play its part in global collective action to reduce GHG emissions.
- Set out proposals for governance and coordination of NDC implementation and key next steps.
- Described Bangladesh's support needs, with some examples of indicative costs of taking action on mitigation and adaptation.

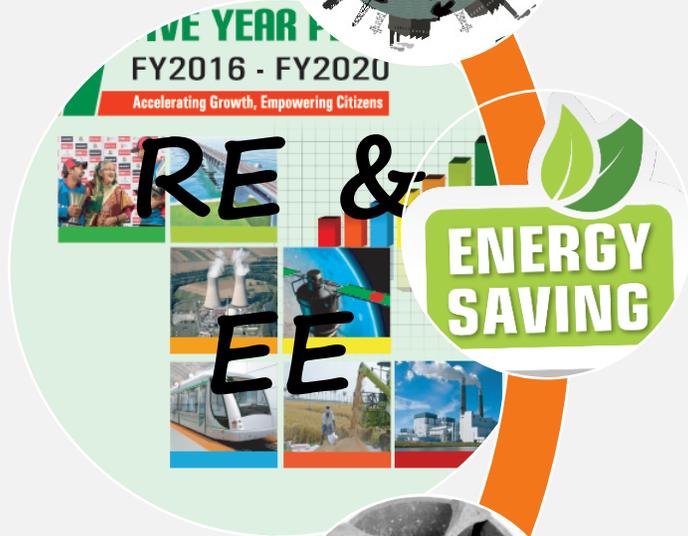
Clean Energy transition



Targets



*RE Policy 2008: Generate 10% electricity from RE by 2020
And 15% by 2030*



EE&C Master Plan 2015: Reduce 15% energy intensity/GDP by 2021 and 20% by 2030



Country Action Plan for Clean Cookstoves: Replace 100% (30 million) traditional cookstoves by Improved Clean Cookstoves by 2030

- Concessional Financing for Industrial EE Equipment
- Concessional Financing for Labeled Appliances
- Green financing for EE

Financing

Regulation and Standards

- Standardization of Equipment
- EE&C Rules
- Energy Audit Regulations
- Net metering Guideline
- Energy Labeling Regulation for Electric Appliances
- Building Energy Efficiency & Environmental Rating

Capacity Development

- Training on Energy Audit
- Certify Energy Auditors and Managers
- Training on Net Metering
- Training for solar EPC
- Skill development program on EE equipment & appliances

Approach

Incentives

- Duty free import facility
- Best consumer Award
- Tax waver/ Reduced rate of tax
- Allow additional floor space for BEEER rated buildings

Awareness

- Seminar and Workshops
- Schooling Programme
- Advertisement on print, electronic & Social media
- Exhibitions of RE and EE products



RE
Activities

2019

Present Renewable Energy Generation (upto Dec 2019)

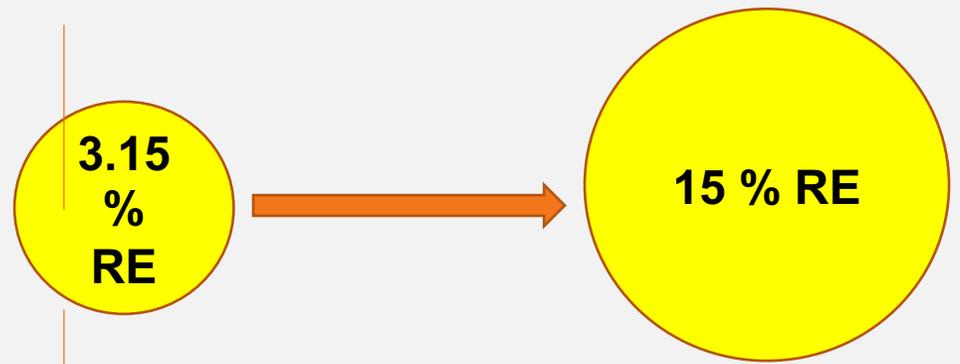
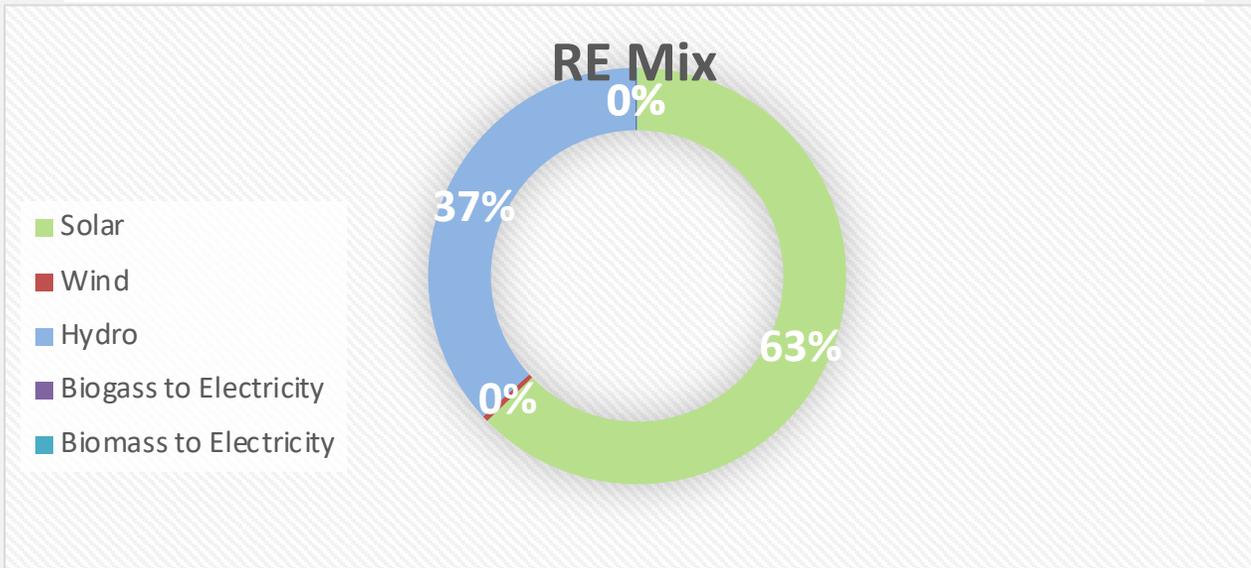
Technology	On-grid (MW)	Off-grid (MW)	Total (MW)
Solar	80.92	312.97	393.89
Wind	0.9	2.00	2.9
Hydro	230	00	230
Biogas to Electricity	00	0.63	0.63
Biomass to Electricity	00	0.4	0.4
Total	311.82	316	627.82

2020-2030

!!!!



4000 MW



Upcoming RE Project

<i>Sl.</i>	<i>Technology</i>	<i>Projects under construction</i>	<i>Capacity (MW)</i>
<i>1.</i>	<i>Solar</i>	<i>Utility scale grid tie solar project at Manikgonj</i>	<i>35</i>
<i>2.</i>		<i>Utility scale grid tie solar project at Mymansing, Khulna</i>	<i>50</i>
<i>3.</i>		<i>2000 solar irrigation system</i>	<i>30</i>
<i>4.</i>		<i>Grid tie rooftop solar under net-metering policy</i>	<i>54</i>
<i>5.</i>		<i>Off grid solar projects</i>	<i>25</i>
<i> </i>			
<i>6.</i>	<i>Wind</i>	<i>Utility scale grid tie wind project at Muhuri, Feni</i>	<i>30</i>
<i>7.</i>		<i>Utility scale grid tie wind project at Dakop, Khulna</i>	<i>50</i>
	<i>Total</i>		<i>274</i>

Upcoming *RE projects*

<i>Sl.</i>	<i>Technology</i>	<i>Project in pipeline</i>	<i>Capacity (MW)</i>
<i>1.</i>	<i>Solar</i>	<i>Utility Scale grid tie project</i>	<i>700</i>
<i>2.</i>		<i>Grid tie rooftop solar project</i>	<i>75</i>
<i>3.</i>		<i>Off grid solar project</i>	<i>25</i>
<i>4.</i>	<i>Wind</i>	<i>Utility scale grid tie project</i>	<i>120</i>
<i>5.</i>		<i>Off grid wind project</i>	<i>5</i>
	<i>Total</i>		<i>905</i>



EE
Activities

Efficient Use of Energy

Behavioural Changes



Use programmable thermostats to automatically adjust temperatures



Turn off appliances when not in use



Take other modes of transportation; drive more efficiently

Using New & Existing Technologies



Building design & materials

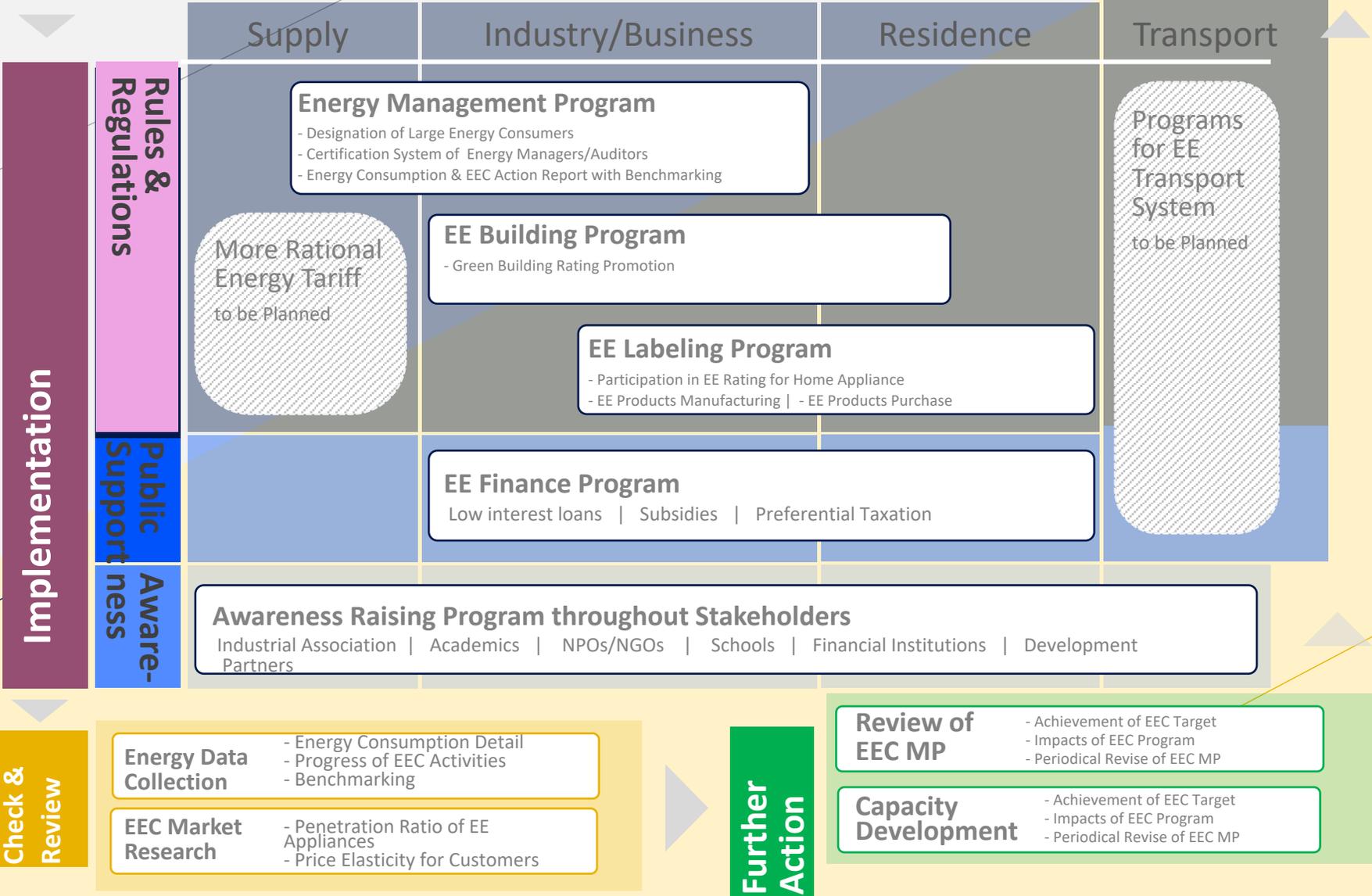


High-efficiency lights & appliances

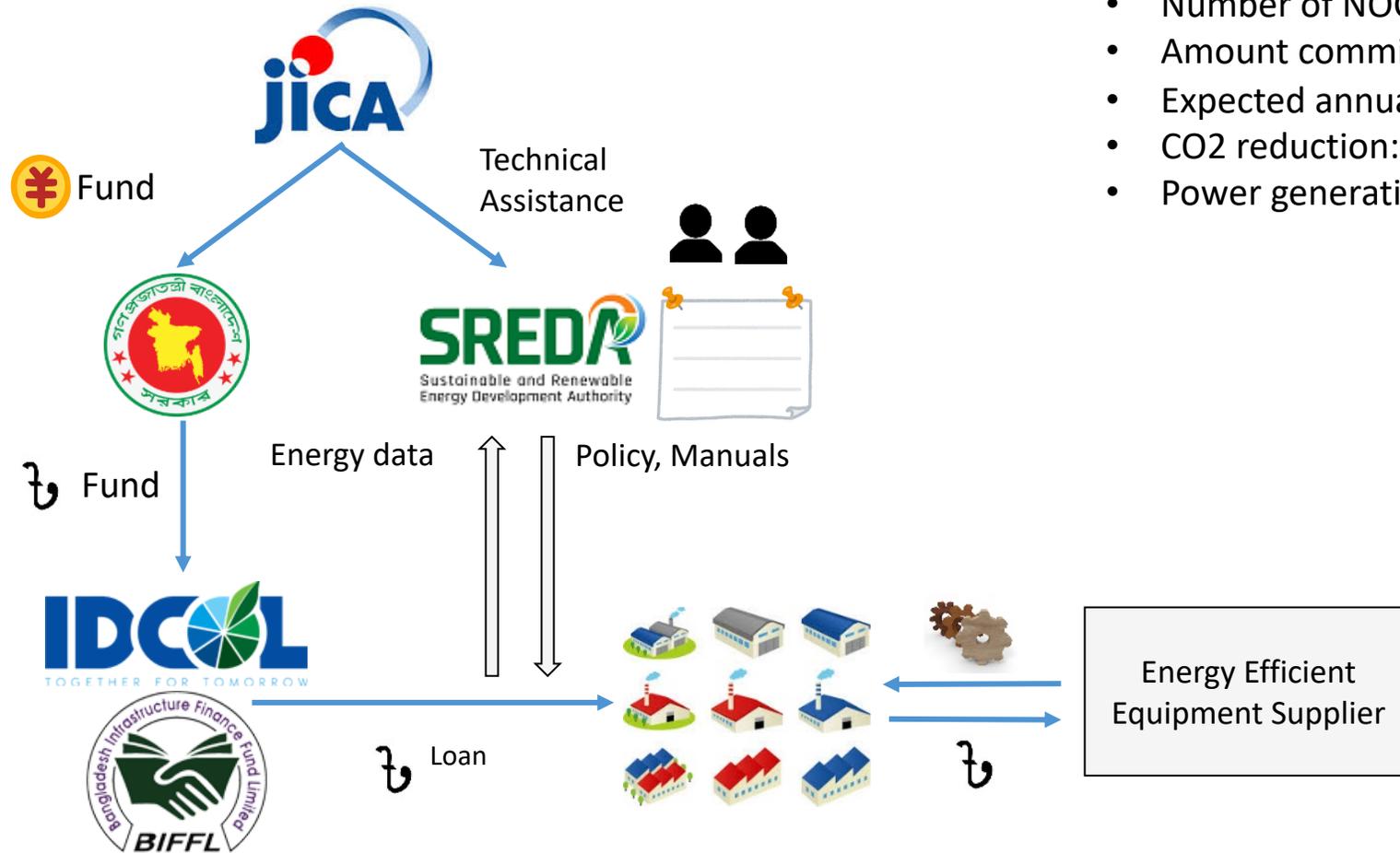


Hybrid, electric & efficient vehicles

2030: 20% Improvement of Primary Energy Consumption per GDP 2021: 15% of the same above (Baseline as of FY2013/14)

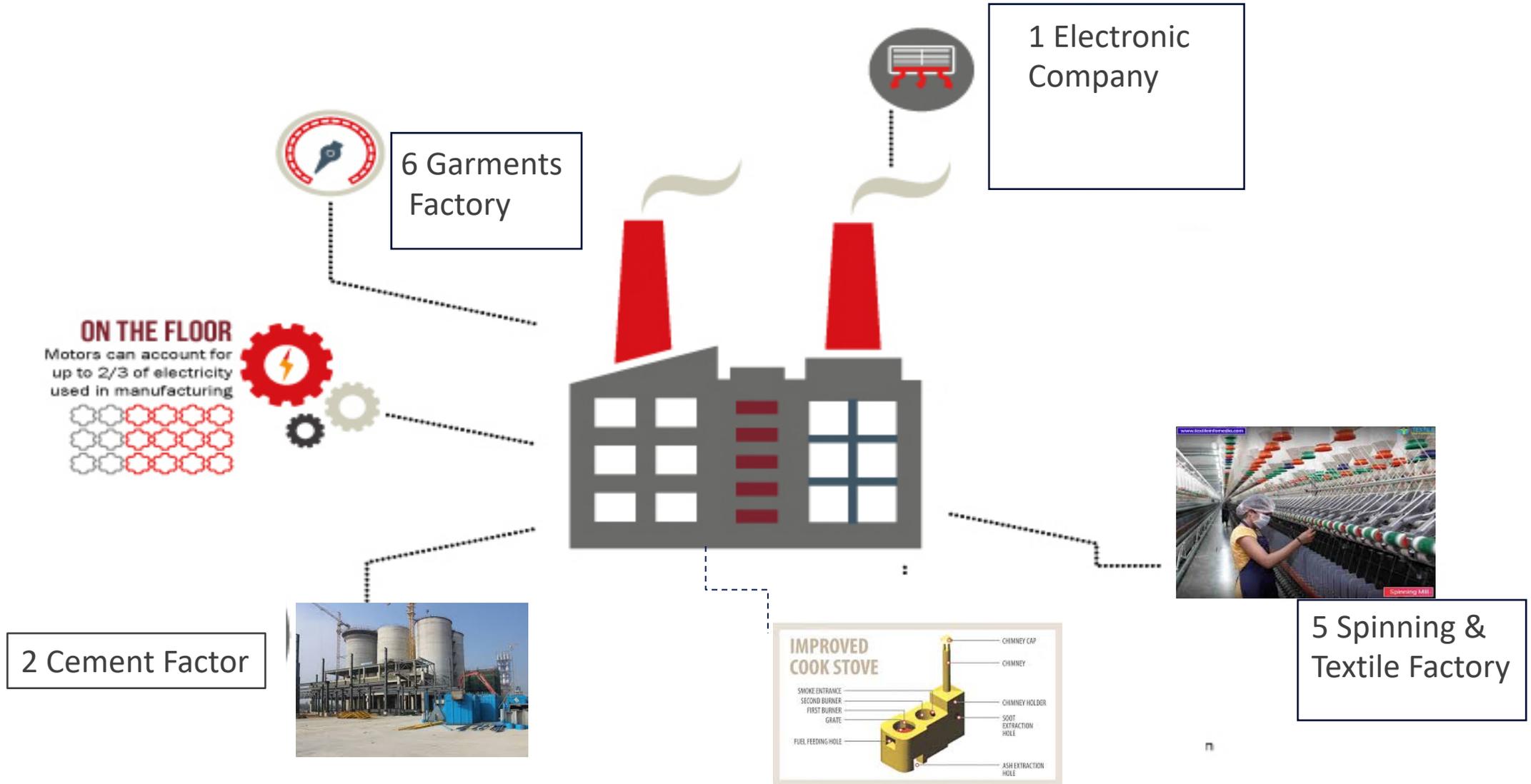


EE&C Financing Project

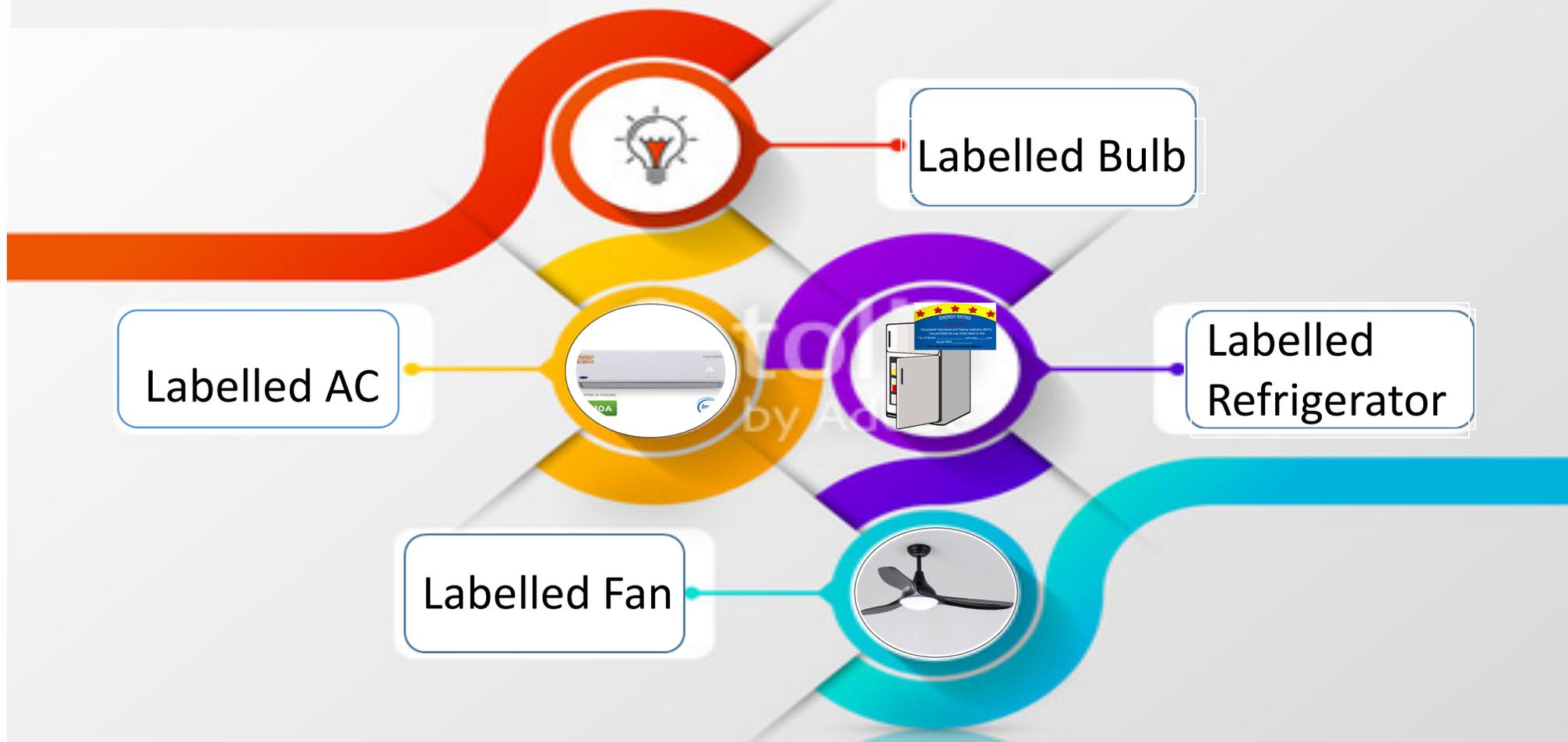


- Total loan amount: about USD 300 million
- Number of NOC issued: 13
- Amount committed: about USD 103 million
- Expected annual energy saving: 12,373 toe
- CO2 reduction: 25,983 t-CO2
- Power generation capacity relief: - 18.6 MW

EE & C Financing to Industries



Labeling Program



Set Minimum Standard by BSTI

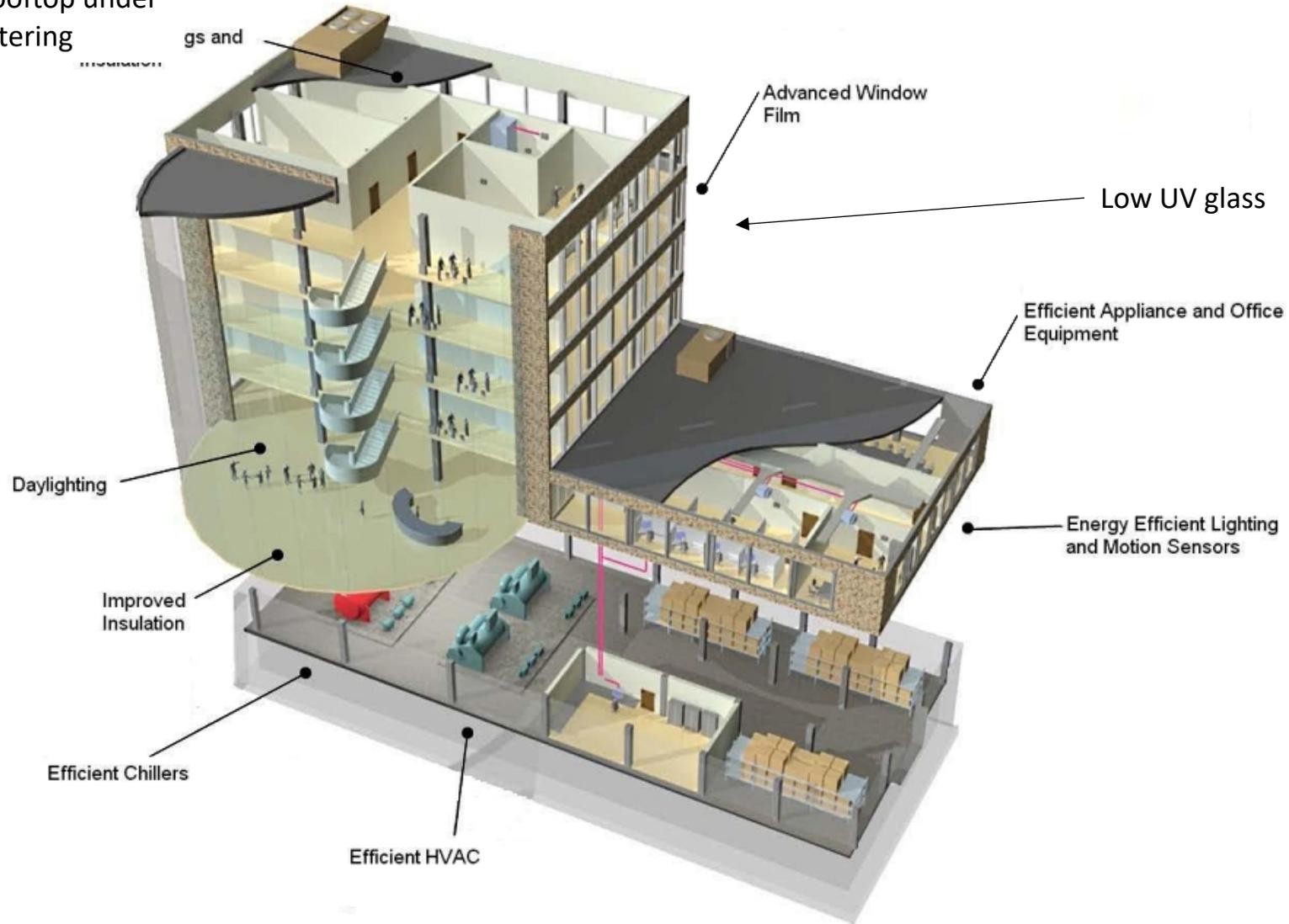
Design Labeling Protocol by SREDA

Ensure compliance by SREDA



Bangladesh Energy Efficiency and Environmental Rating (BEEER)

Solar Rooftop under
Net Metering



Energy Data Requirements

- Sub-project owners are requested to provide energy related data through cloud-environment Project management information system (MIS) which is accessible from your PC.

Financing | LoanAppInfoExistingMonthlyData/Index?loanApplicationId=6

Applications ▾ Sub-projects ▾ Inspection Settings ▾ Reports

Loan application No.: AD17020901 Sub-project amount: 468,010,000.00 Line of Business: Preparati

Monthly Energy Data - RSML

Energy Source:

Month	Operation Hours	Production Volume/Qty	Production UOM	Electricity Consumption(kWh)	Gas Consumption (m3)
Jul, 2016	624.00	487,318.00	Other	1,967,318.00	
Aug, 2016	744.00	583,575.00	Other	2,363,849.00	
Sep, 2016	600.00	468,000.00	Other	1,880,619.00	
Oct, 2016	744.00	580,537.00	Other	2,253,083.00	
Nov, 2016	720.00	555,600.00	Other	2,173,161.00	
Dec, 2016	744.00	586,954.00	Other	2,097,322.00	
8,400.00	6,540,874.00			24,673,235.00	0.00

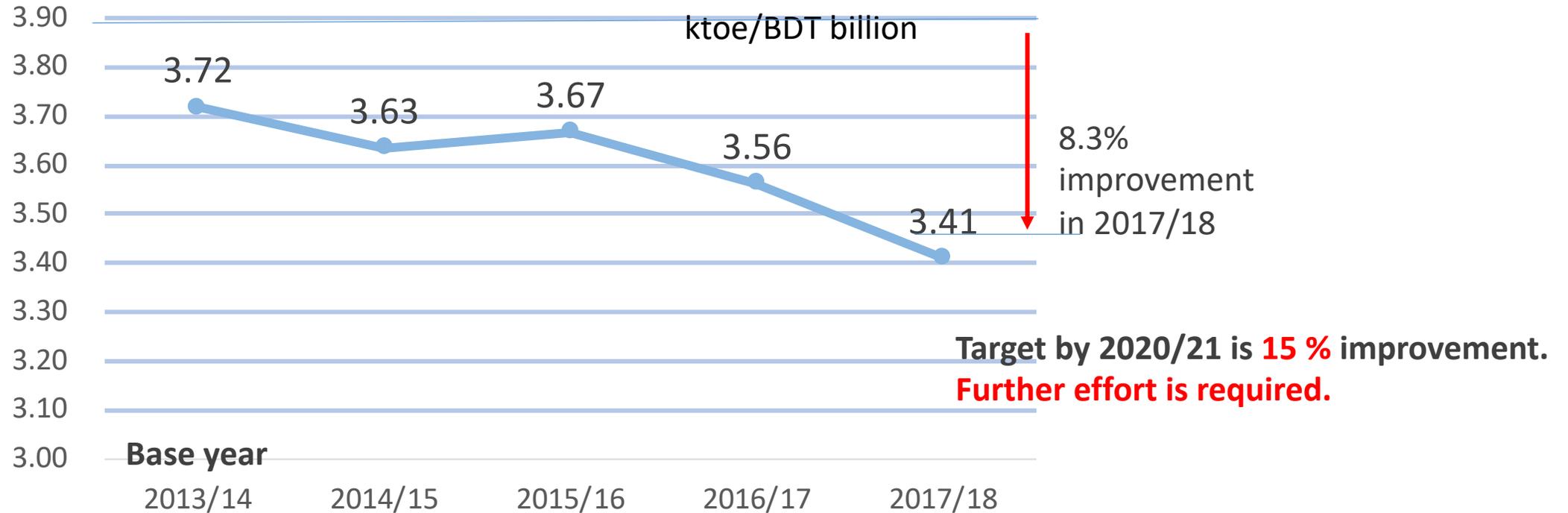
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Business Coalition

- More than 25 companies have signed up to become a member of the newly established “EE&C Business Coalition”.
- The Coalition is an autonomous association of industries who will join their forces and share good practices for promoting EE&C.
- The Coalition will also become a major interface between industries and the Government.



National Energy Intensity (TPES/GDP) Trend



Note: National Energy Intensity = TPES / GDP

Note: Non-tradable biomass (domestic firewood, etc) is excluded while tradable renewable energy (solar, bioethanol, etc. are included)

Source: (1) TPES: SREDA compilation from Hydrocarbon Unit (natural gas, coal), BPC (oil & petroleum), LPG association (LPG) data

(2) GDP (constant 2010): Bangladesh Bureau of Statistics



