Energy Poverty: Bangladesh Perspective

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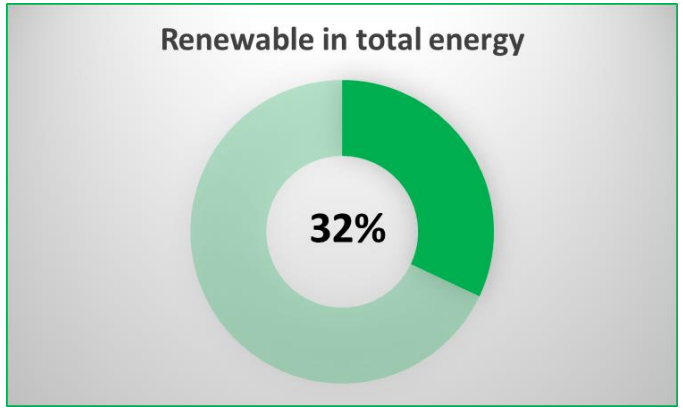
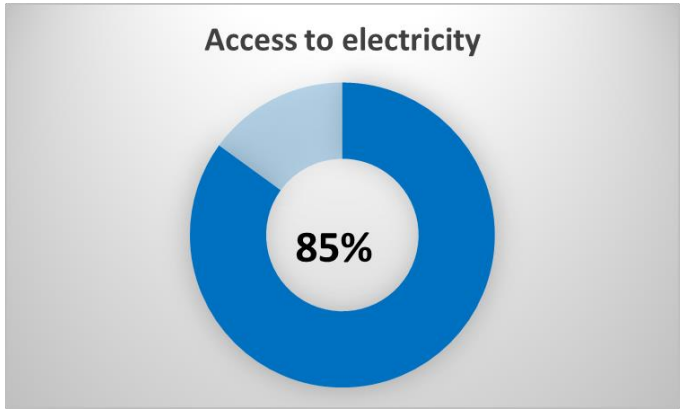
SDG7 Bangladesh 2018

Access of affordable, reliable, sustainable modern energy



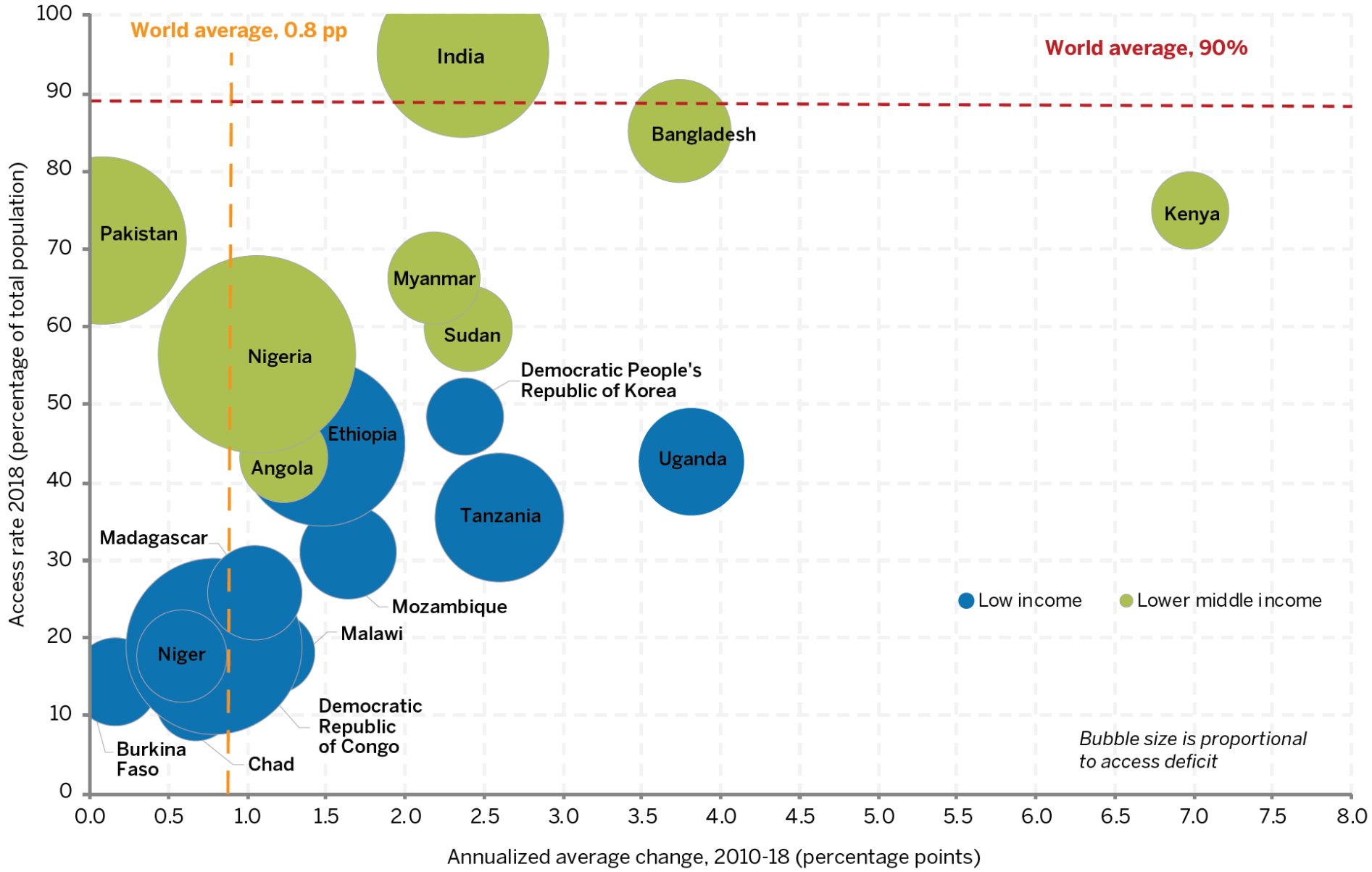


- Energy efficiency 2.9 (World average 5)

Source: World Bank

- Majority of the renewable is bio mass. SHS (6 million HH) declining because of Grid expansion
- Electricity is not reliable or of high quality although now 95% under coverage
- Rural electrification is by cooperatives. 71 out of 74 loses money because of subsidized residential supply. $6 billion power sector subsidy in last 10 years
- LPG (12%) and PNG (10%) are modern cooking fuel. 250,000 illegal HH gas connection in Dhaka

FIGURE ES.3 • The 20 countries with the largest access deficit, 2010–18



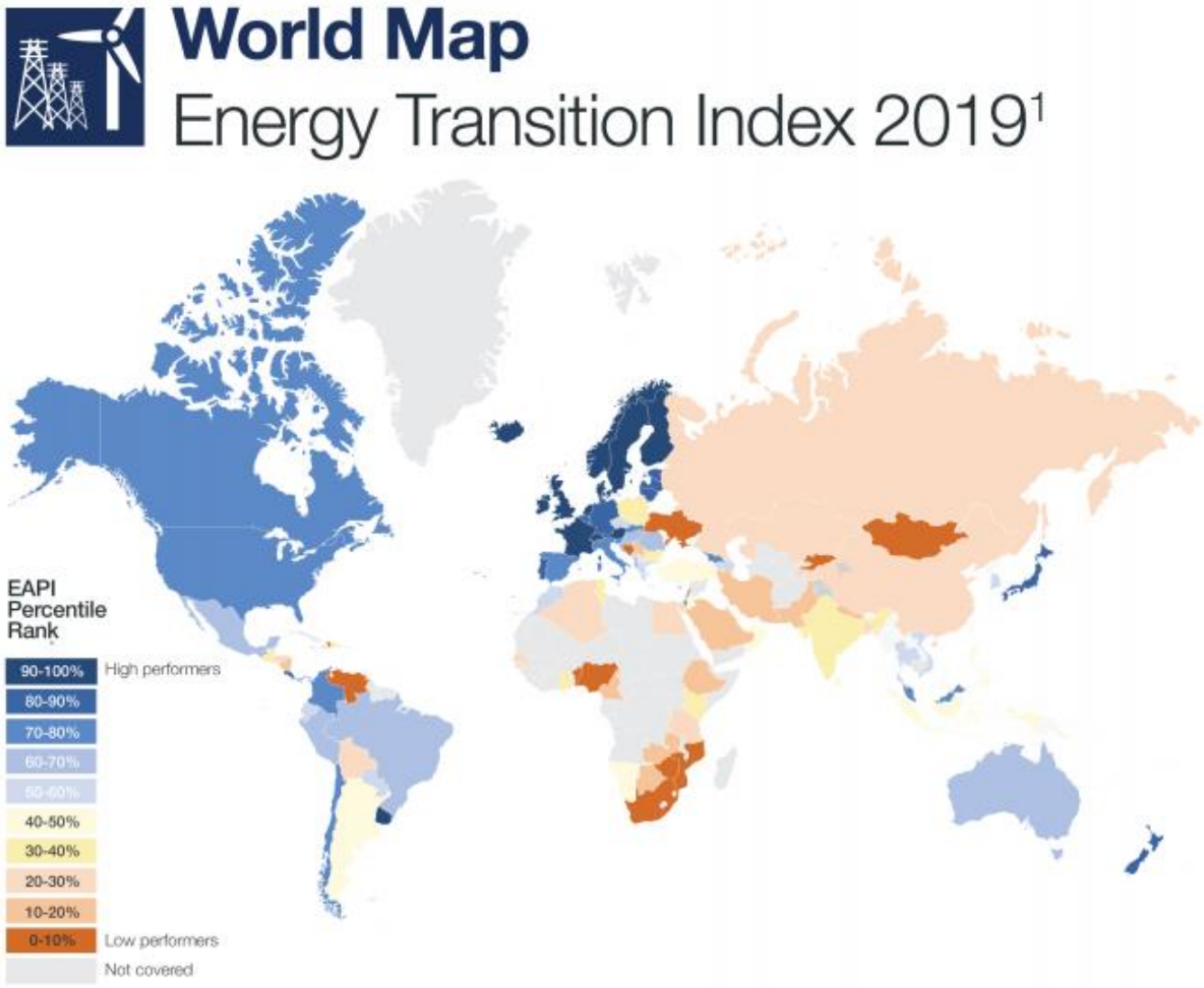
Source: World Bank.

ETI

How well a country is able to balance energy security and access with environmental sustainability and affordability

Bangladesh 90th among 115 nations

- Did very well is supporting economy
- Did poor in environment sustainability
- Poor in accessibility (despite 94% con.)
- Poor in security (import dependency)



Note 1: The Energy Transition Index benchmarks countries on the performance of their energy system, as well as their readiness for transition to a secure, sustainable, affordable, and reliable energy future. ETI 2019 score on a scale from 0 to 100%.

Source: Fostering Effective Energy Transition Report 2019, World Economic Forum

Climate change

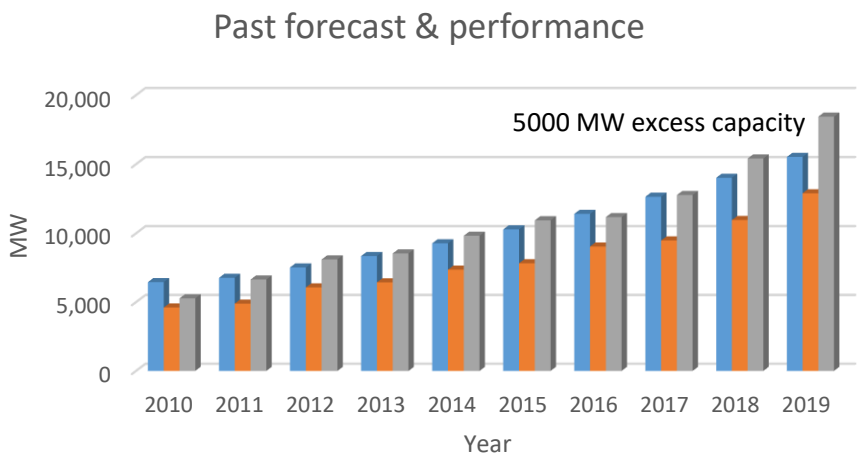
All Mega power projects are in coastal Bangladesh, currently 3.6 GW exposed to massive cyclone, tidal wave

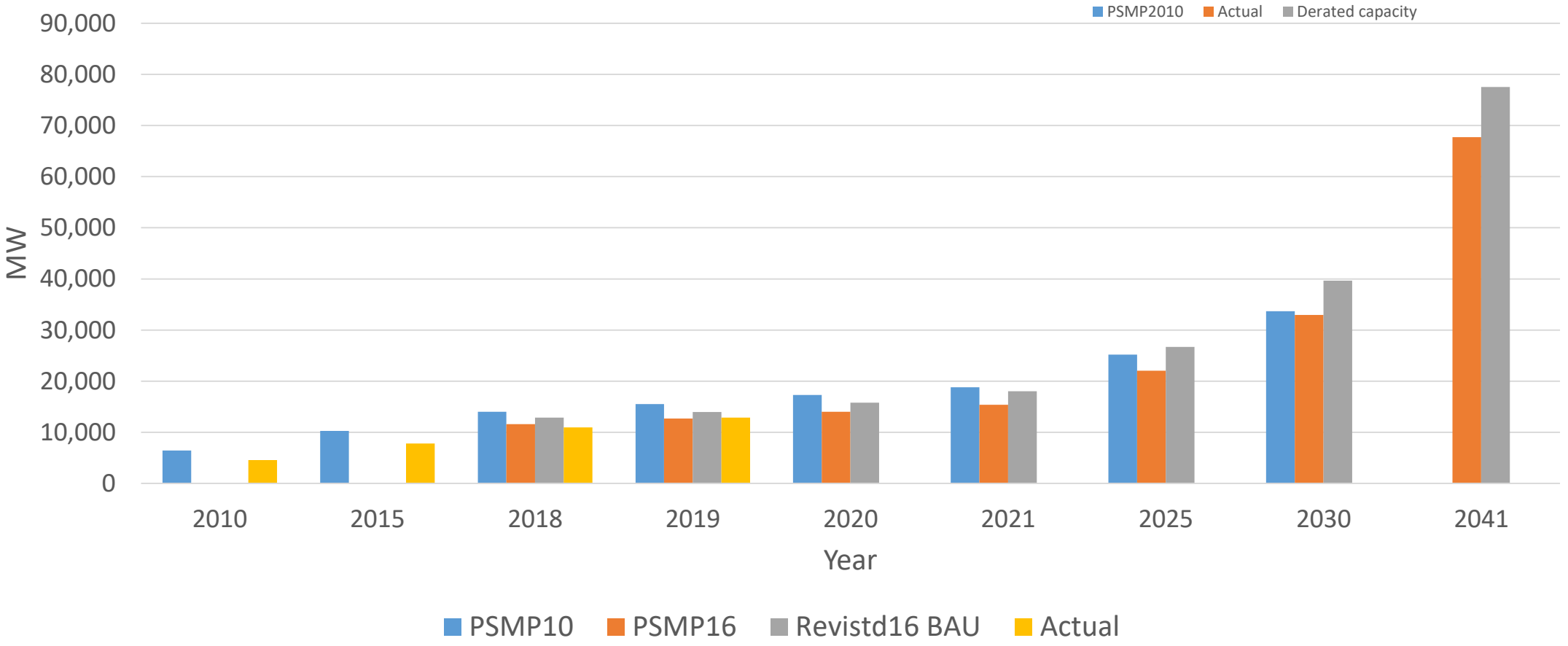
Cyclone Amphan knocked out power For 22 million people in early 2020

One third of Bangladesh Is under water in 2020

Heat stress increasing cooling load rapidly. 4GW diff between winter and summer now

Power demand forecast



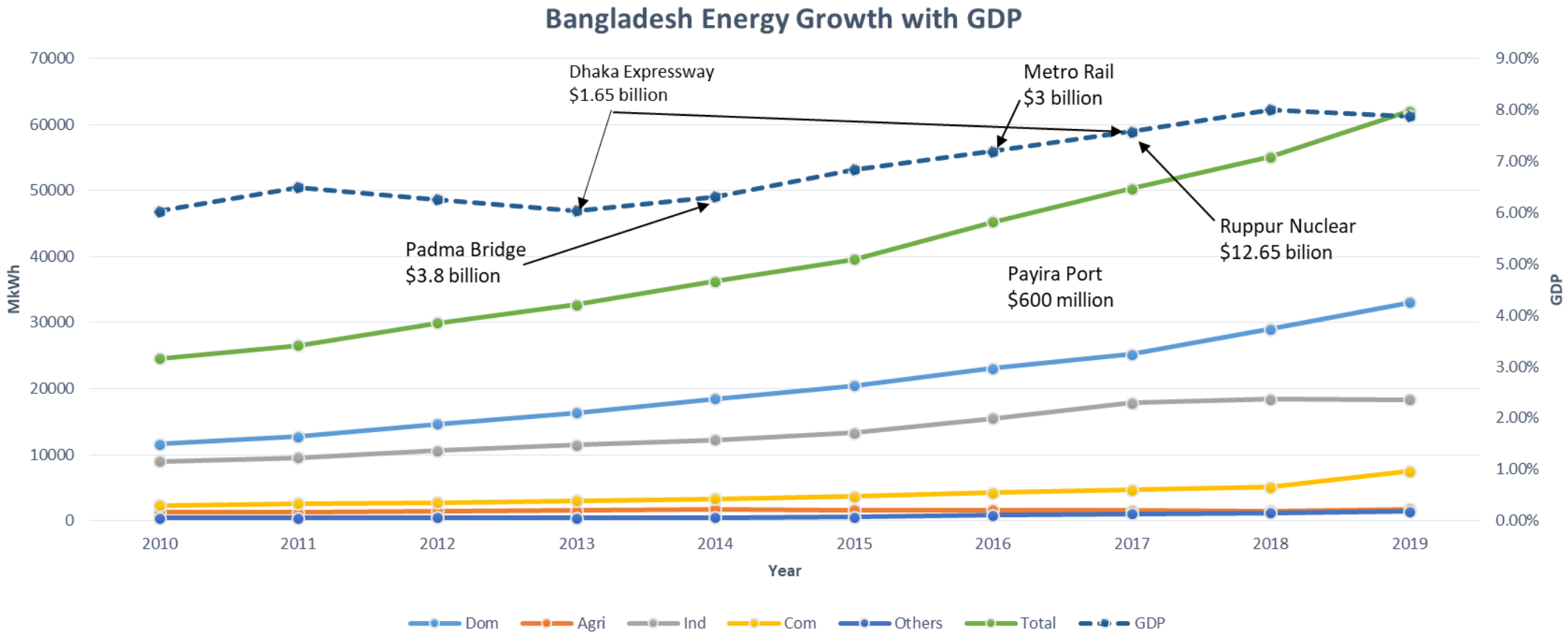


Basis for forecast

- GDP and per capita income growth have been much higher than previously predicted
- Macroeconomic framework dictates that the GDP must grow at 8% in 2020 and keep gradually increasing to 9.9% in 2041 (Over 8% growth in 20 years in a row) to achieve developed country status with a per capita GNI of $12,736
- The per capita energy usage would be 2000 kWh in 2041 from the current 400 kWh

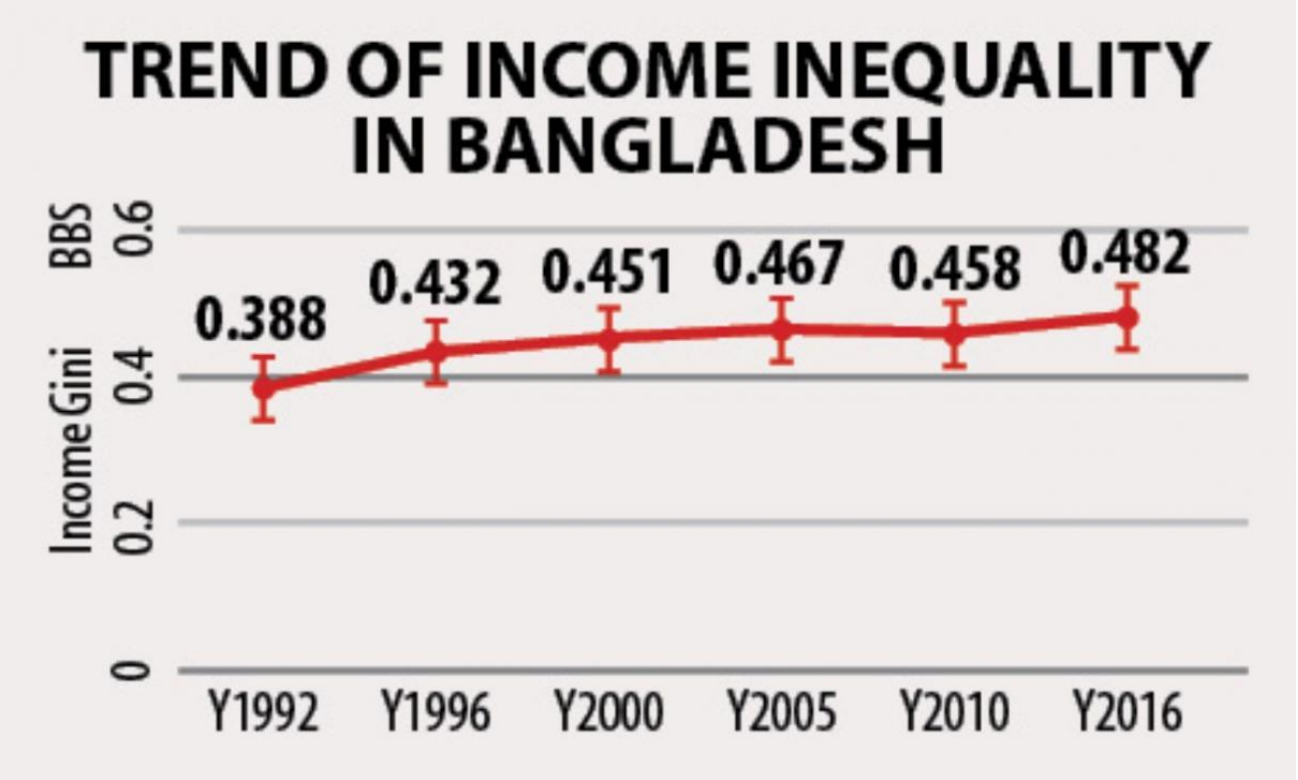
GDP and per capita energy use

	Per capita energy use kWh/yr (2014)	Per capita energy use kWh/yr (2019)	GDP per capita in current US$ (2014)	GDP per capita in current US$ (2019)
India	804	1181	1574	2104
Bangladesh	322 (HH 97)	400	1119	1855



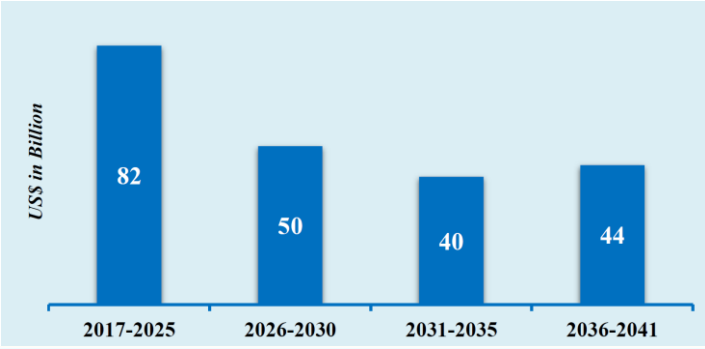
The Gini coefficient (BBS HEIS 2019)

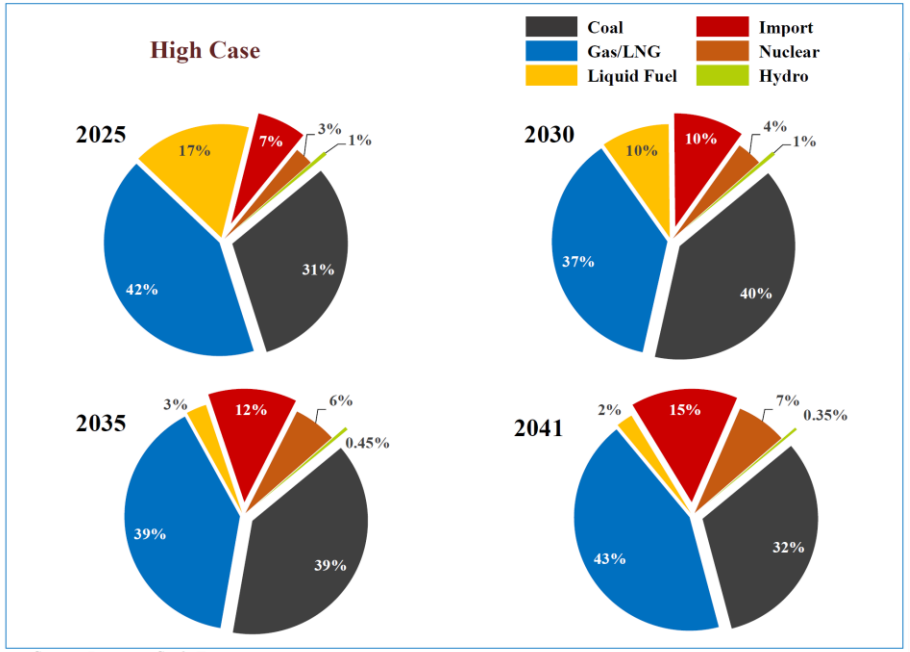
- Gini coefficient of 1 is extreme inequality
- It is alarmingly increasing nearing 0.5 mark
- Non inclusive development. Few getting the chunk of development benefit
- Large number of bank defaulters
- More than 114000 bank accounts with over Taka 10 million deposit
- Poverty reduced to 20% and overall standard of living has improved



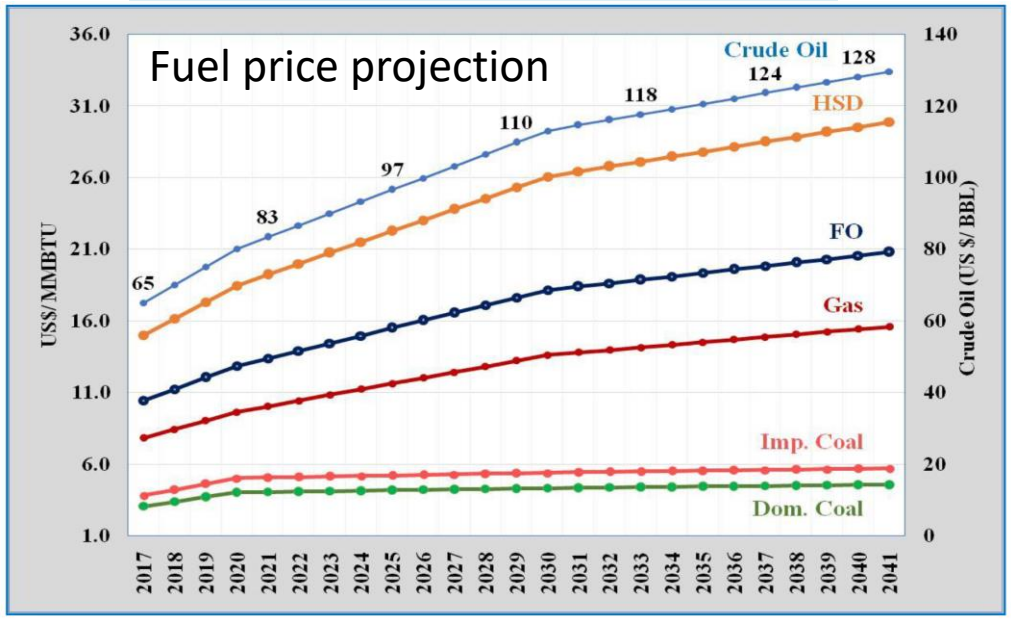
Investment requirement for RPSMP 2016 from 2017 - 2041

- Generation: $150 billion (98GW generation for high case with 10% surplus)
- T&D: $66 billion (31+35)
- Total investment $216 b (low $193 b)
- Yearly fuel cost will exceed $40 billion?
- >90% import dependency increasing risk.





Source: Revisiting Study Team



Private and public investment opportunity

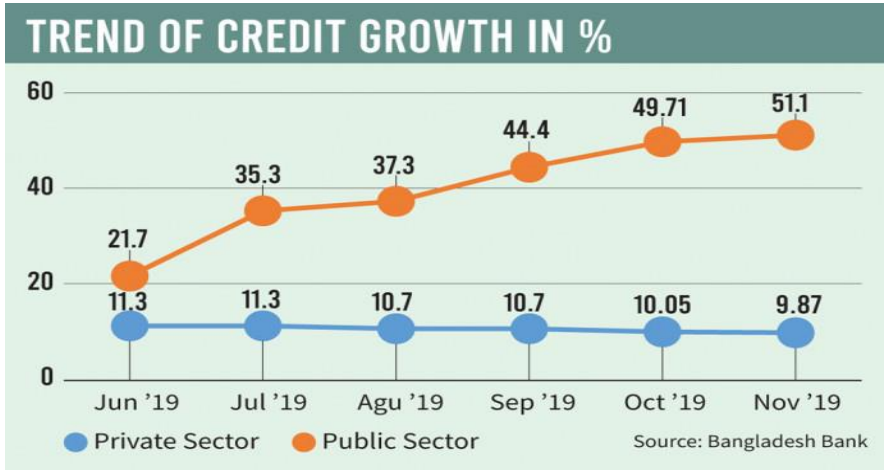
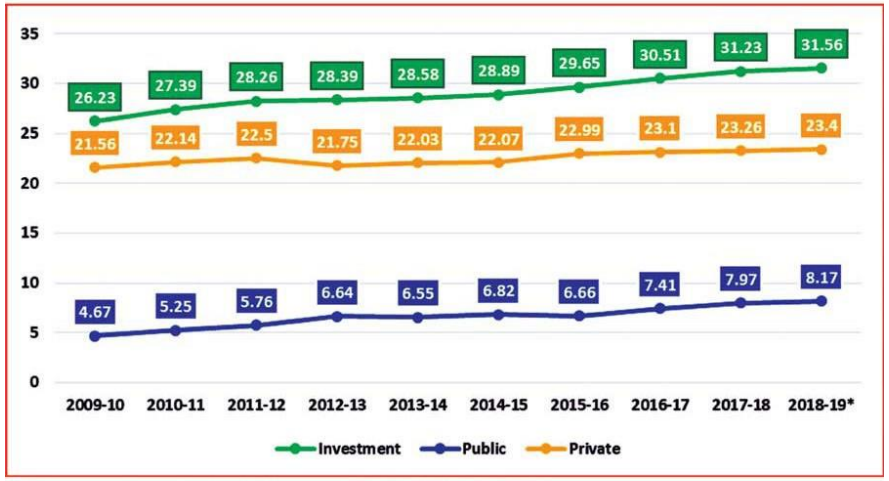
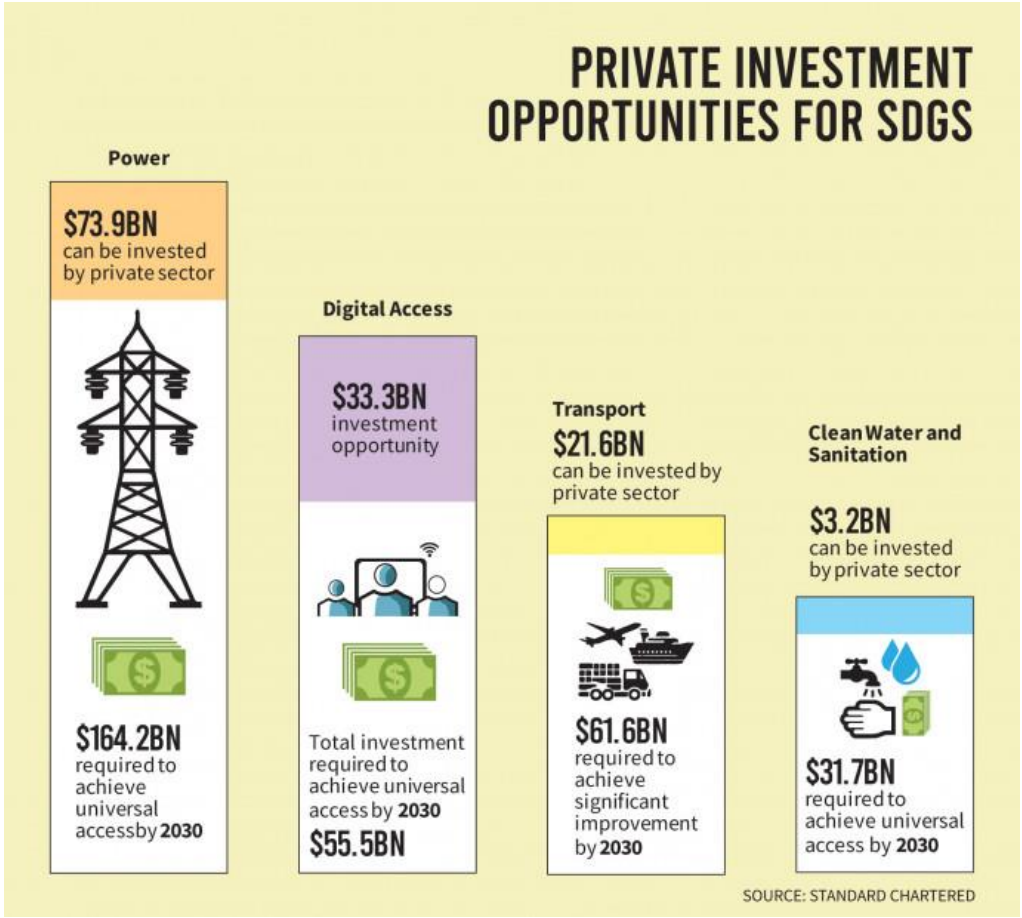


Table 1: Trends in investments (overall, private and public investment) as percent of GDP



Source: Bangladesh Bureau of Statistics (BBS)



The Covid19 effect

- It is estimated that 20% people will fall under poverty line wiping out all the gains achieved in the last decade
- The current subsidy of about $ 1 billion a year in electricity sector will increase in the future that may not be sustainable
- Many power sector mega projects have been put on hold
- The ambitious energy plan will be revisited
- The effect of current economic hardship on the gas, water and electricity utilities is very uncertain
- Providing affordable, reliable and sustainable energy is not sufficient in eradicating energy poverty. There are entire range of issues like climate, governance, income distribution etc that can affect and change an apparent success into a dismal situation, especially in a developing country.

THANK YOU