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Bangladesh: Fossil Fuel Risk and Renewable Energy Progress

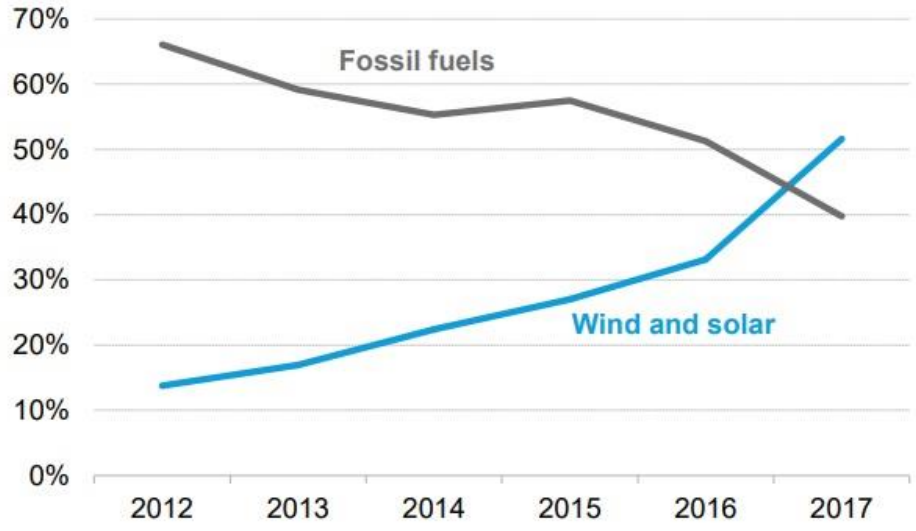
Bangladesh's plan to markedly over-build coal- and LNG-fired power capacity in excess of growing electricity demand growth is in stark contrast to a recent tipping point that developing nations as a whole recently passed through.

In 2017, for the first time renewable energy accounted for the majority of all new power capacity additions added in emerging markets (Figure 1). The year 2017 saw the large majority of the world's new zero-carbon power capacity built in emerging markets.

The trend followed in 2018 during which renewables made up nearly two-thirds of all new power generation capacity added, led by emerging and developing nations. Momentum has moved firmly behind renewables, and away from coal, in both developed and developing markets.

The excess fossil fuel power capacity planned for Bangladesh exposes the country to a high risk of stranded assets as renewable energy continues to become cheaper and more efficient than fossil fuel-based power going forward.

Share of Power Capacity Additions in Emerging Markets



Source: Bloomberg New Energy Finance/Climatescope.

Renewable Energy Momentum

Renewable energy progress in Bangladesh has lagged behind that of its South Asian neighbour India which has a target to install 275 GW of renewable capacity by 2027. In addition, Pakistan is due to release a new renewable energy policy in 2019 which

is expected to significantly increase its ambition and target 30% renewable energy capacity by 2030, up from 5% currently.

However, despite its slower start, renewable energy in Bangladesh is now gaining momentum due to the ever-decreasing cost, and improving efficiency, of renewable technology:

- October 2018 saw Bangladesh's first truly utility-scale solar plant (28 MW) commence operations. The proponent has already signed a Memorandum of Understanding (MoU), for construction of another solar plant of 100 MW.
- The following month, in November 2018, a unit of the Bangladesh Power Development Board (BPDB) issued an expression of interest for a 100 MW solar plant near Chittagong.
- Also in November 2018, it was revealed that a U.S. National Renewable Energy Lab study had demonstrated significantly more wind power potential in Bangladesh than previously thought. BPDB has consequently invited bidders for wind power projects totally around 150 MW.
- In December 2018 the Bangladesh government approved proposals for five solar power projects totaling 227 MW.
- January 2019 saw the Asian Development Bank (ADB) approve funding for a 50 MW floating solar project on Kaptai Lake with another being planned.
- In February 2019 a deal was announced that will see U.A.E. invest in a 100 MW solar power plant in Bangladesh.
- In March 2019, the World Bank approved finance for 310 MW of Bangladeshi renewable energy projects starting with a 50 MW solar project in Feni.
- Also in March 2019, Saudi Arabian infrastructure company Alfanar signed an agreement in the presence of the Bangladesh Prime Minister to finance a 100 MW solar project to be built by the Electricity Generation Company of Bangladesh in Feni district.
- In April, Bangladesh's second utility-scale plant was set to come on line with a reported tariff of US$65/MWh. This compares to a calculated required tariff for the Rampal coal-fired power plant of US$99/MWh after tax, interest and dredging subsidies (US$120/MWh without these subsidies).

These recent developments, along with the prospect of even cheaper renewable energy power imports from India, give Bangladesh an opportunity to obtain far more than the targeted 10% of its electricity needs from renewables.

With electricity demand in Bangladesh growing fast, renewable energy represents an increasingly cheap and quicker-to-build response that can improve energy security and lessen the economic burden of coal and LNG imports.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy. www.ieefa.org

About the Author

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Simon Nicholas is a research analyst with IEEFA in Australia. Simon holds an honours degree from Imperial College, London and is a Fellow of the Institute of Chartered Accountants of England and Wales. He has 16 years' experience working within the finance sector in both London and Sydney at ABN Amro, Macquarie Bank and Commonwealth Bank of Australia.