Bond Blog

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PGIM FIXED INCOME

INVESTING IN ENERGY TRANSITION ACROSS EM: INDIA AND SOUTHEAST ASIA

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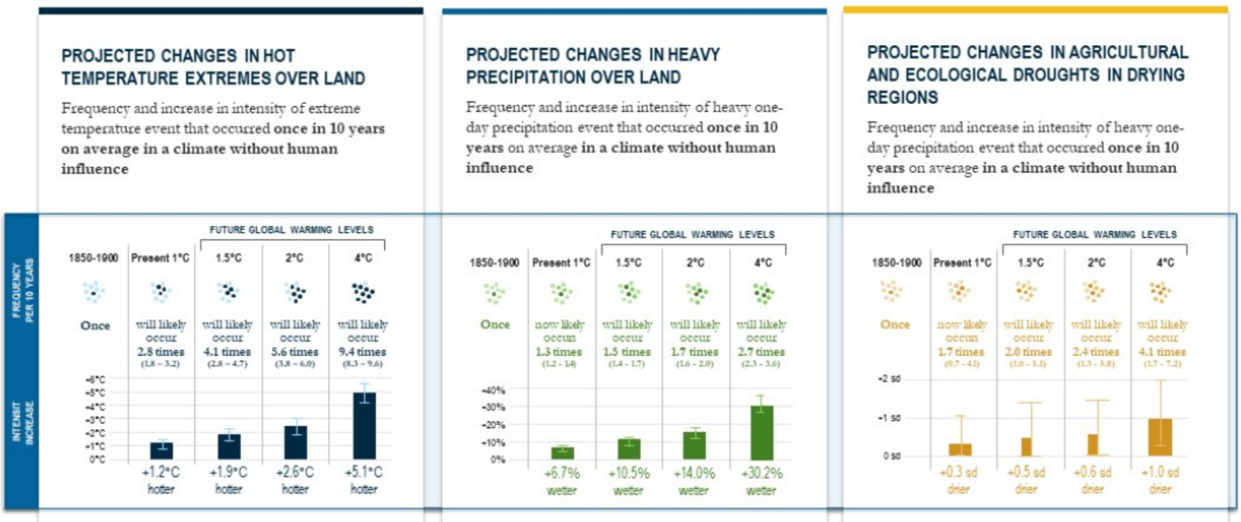
The Intergovernmental Panel on Climate Change's (IPCC) recently released report projected that global warming will exceed its preferred 1.5°C target during the 21st century under current global policy settings and could even reach 2.7°C by the turn of the century. The rapid intensification of climate change has propelled a dynamic energy transition amid a broader acceptance that "it is never too late to be wise," and government policies, technological developments, and international cooperation have advanced renewable infrastructure from niche to mainstream. In this first installment on investing in renewables within the emerging markets, we address the challenges and investment opportunities that exist across India and Southeast Asia. Our next instalment will cover the opportunities and challenges in Latin America.

Renewables: Front and Center in the Energy Transition

Our opening quote alludes to the severity of the challenges due to climate change. Yet, to the casual observer, the climate impact from single degrees of temperature increases over several decades can be difficult to conceptualize. The IPCC report extrapolates how these events may evolve in a warmer future with more extreme weather events (Figure 1). The intersection of current observations and future projections points to an energy transition that is underway with highly uneven progress.

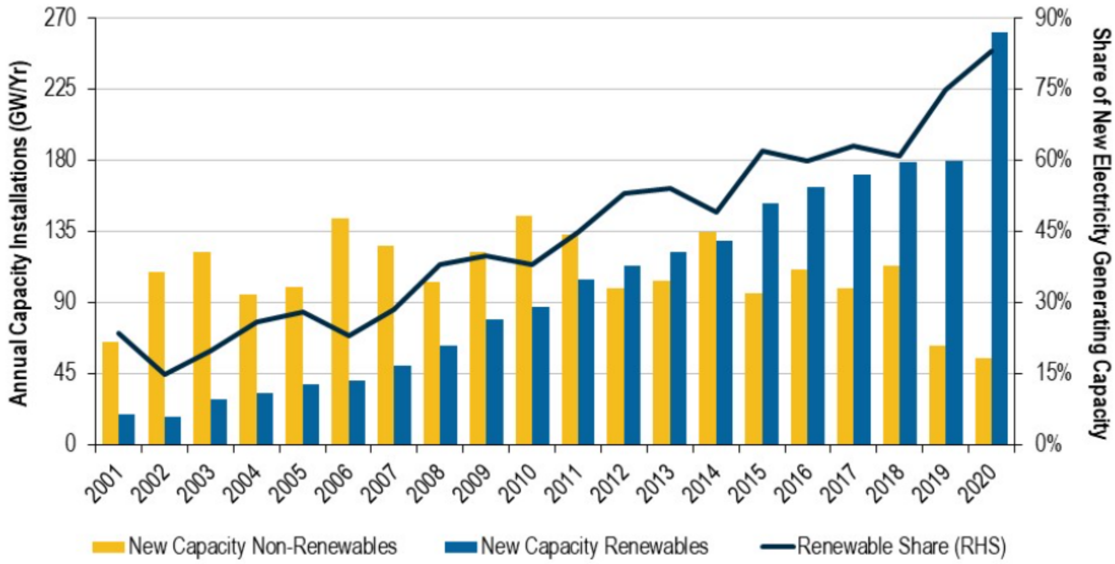
FIGURE 1: THE EFFECTS OF A WARMING WORLD



Source: PGIM Fixed Income and IPCC. For informational or educational purposes only. Projections are not guaranteed, and actual results may vary.

One area of the energy transition that is seeing the greatest progress is the adoption of renewables, which are cheaper than fossil fuels for three quarters of the world by GDP (coal was the cheapest for most of the world as recently as 2014). More renewable power was added to the grid over the last seven years than fossil fuels and nuclear power combined (Figure 2). Given its crucial role in driving positive environmental change, we have been overweight the renewables sector since its emergence in the Asian public debt markets in 2017.

FIGURE 2: GLOBAL SHARE OF ANNUAL CAPACITY INSTALLATIONS FOR RENEWABLES

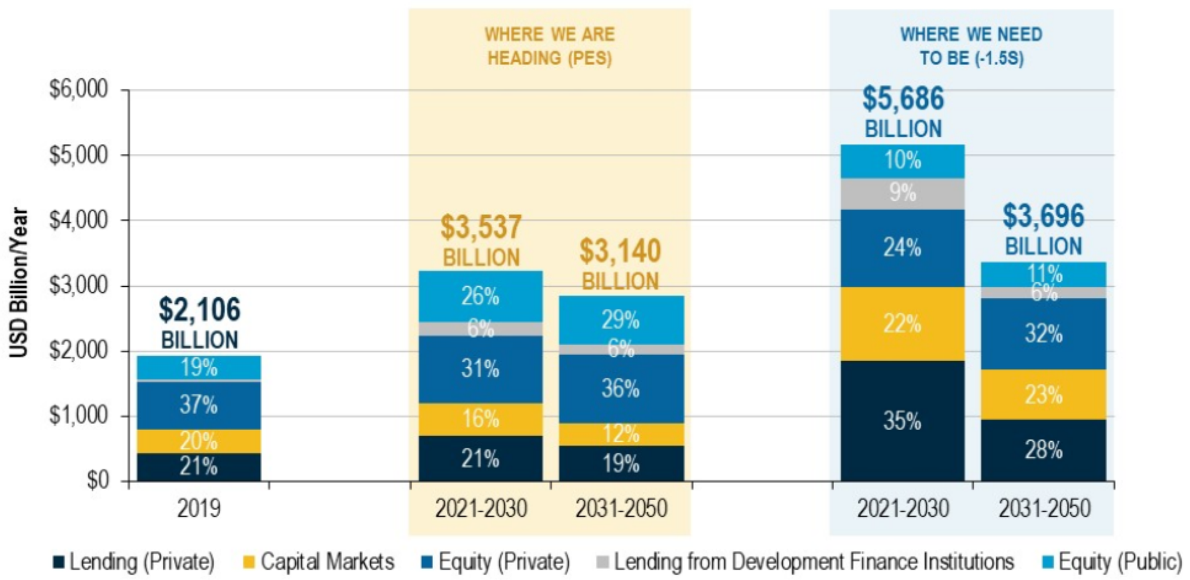


Source: International Renewable Energy Agency's World Energy Transitions Outlook 2021. For informational or educational purposes only.

Debt Financing in Renewables

The International Renewable Energy Agency (IRENA) sees $98 trillion of global energy investment by 2050 in the 1.5°C global warming scenario, of which $24 trillion will be redirected from fossil fuels to energy transition technologies. Not only does this imply a near doubling of annual energy investment, but the share of debt capital will need to increase to 57%, from the current 44%. IRENA estimates that every $1 spent on the energy transition should yield benefits, valued at around $2 to $5.5, derived from reduced externalities due to improvements in human health and the environment. Although the current set of global policies remains sub-optimal, they imply $3.5 trillion of annual investment by 2030, of which 16% ($566 billion/year) is set to land in the debt capital markets (Figure 3).

FIGURE 3: TOTAL AVERAGE ANNUAL INVESTMENT BY SOURCE AND TYPE OF FINANCING



Source: International Renewable Energy Agency's World Energy Transitions Outlook 2021.

India

India is undergoing a rapid energy transition. A target of 450GW in renewable capacity by 2030 requires India to increase capacity by 35 to 40 gigawatts/year, which translates to capital investments of around $25 billion annually, indicating a substantial increase from the $6 billion in financing that closed in the first half of 2021 (Figure 4).

FIGURE 4: INDIA: RENEWABLE CAPACITY 2030 TARGETS

	Current (March 2021; GW)	Target (March 2030; GW)	Capacity (Additions; GW)	Cost Required	
				Total ($Bn)	Per Annum ($Bn)
Total	**94**	**450**	**+356**	**+226**	**+25**
Wind	39	140	+101	+108	+12
Solar	40	280	+240	+109	+12
Other Renewables	15	30	+15	+9	+1

Source: Ministry of Renewable Energy, PGIM Fixed Income estimates. The estimates contained herein are based on and/or derived from publicly available information from sources that PGIM believes to be reliable. We do not guarantee the accuracy of such sources or information. This outlook, which is for informational purposes only, sets forth our views as of this date. The underlying assumptions and our views are subject to change. Past performance is not a guarantee or a reliable indicator of future results.

The International Energy Agency (IEA) believes a net-zero emissions target may be possible by the mid-2060s in India, even amid a potential quadrupling in power demand over the next three decades. While these targets pose a significant challenge, India has experience in developing renewables at scale, having surpassed 100GW in renewable capacity (excluding large hydro) in August from just 40GW six years ago.

Importantly, the government has supported regional distribution companies - to whom renewable energy companies sell most of their power - under a liquidity infusion scheme of around 1.4 trillion rupees ($18 billion), and in June approved a 3-trillion-rupee ($42 billion) power distribution scheme linked to reform initiatives to be deployed over the next three to four years. This indirect support to renewable companies improves upon past attempts to resolve deeply-entrenched issues in the financially-challenged distribution sector, although a lasting solution will require structural improvements on collection efficiency and transmission loss.

Key policy priorities will also include spurring investments into energy storage to address intermittency of renewable assets and the development of a domestic solar manufacturing industry. Integration challenges arising from state grids, project cancellations (especially in wind), issues with the auction process, and the retirement of inefficient fossil fuel plants are major challenges that will remain in policymakers' view.

Debt valuations and credit fundamentals were resilient for renewable companies through the worst of last year's slowdown, notwithstanding some variabilities in wind asset performance. The increased equity cushion in these issuers is underscored by ReNew Power's SPAC listing this year at an $8 billion valuation against $620 million in EBITDA. Azure Power, listed in the U.S. since 2016, has seen its valuation multiples break out of its historical range of 10-16x this year. Renewable companies have attracted high-quality shareholders - including sovereign wealth funds, global financial firms, and at least one major oil company - to invest in multiple tranches in recent years, providing a robust source of capital amid expectations for more IPOs to follow. Meanwhile, bond structures have ever-tighter cashflow waterfalls, built-in partial amortization, collateralization by onshore assets and generally increasing cashflows derived from entities under central government (rather than regional) control. Bonds are trading in the 250-350 bps spread range, reflecting broader sector pricing among mid-tier and strong BB-rated companies, with the market comfortably absorbing the $2.6 billion in net issuance in 2021 year-to-date ($4.8 billion gross), as compared with $3 billion in 2019.

Southeast Asia

India's rapid transition stands in contrast to the countries in Southeast Asia, which are on a slower track given that coal-fired generation is still largely the cheapest form of energy in the region. As of 2019, Southeast Asia's capacity mix was 29% renewables (around one-fifth of which consisted of hydro), while coal and gas represented around one-third of the market. Of the region's 77GW in installed renewables capacity Thailand and Vietnam have the highest penetration of wind and solar at 11% and 10%, respectively. As such, we have seen relatively few deals coming from the region, except for Singapore-based Vena Energy, which has a diversified portfolio of assets in Asia.

While issuance has a long way to go, we have seen pledges from the official sector to scale up the renewables sector. Vietnam has been the most aggressive with large renewable energy targets, and it was responsible for over 70% of the $22 billion in asset finance for renewable capacity builds between 2018 and 2020. It is expected to add 28GW between 2020 and 2023, compared to just 2-3GW in other large economies in Southeast Asia. The Philippines targeted 30GW in renewable energy by 2040 and announced a moratorium on coal-fired projects. Malaysia and Indonesia targeted 31% and 23% in renewable energy contribution by 2025, respectively, while Thailand targeted 18.7GW in renewable capacity additions by 2037.

Conclusion

The climate change imperative is clearer than ever, and we continue to favor the renewables sector given its core role in the energy transition. We see value in Indian renewables, which have had the lion's share of issuance out of South and Southeast Asia, and expect steady returns backed by resilient operational performance, growing importance of the sector, policy support, and a solid shareholder base. Bond and issuer selection remains key, however, given the varying structures and collateral pools. We also participate in transactions out of Southeast Asia, which are well received given the diversification value and national-level pledges to reduce emissions.

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