



Renewables Investment Trends in India Since the COVID-19 Onset

More Renewables Investment Required to Meet Paris-Aligned Sustainable Development Scenario

Introduction

As the COVID-19 pandemic hit the world in 2020, governments responded with a range of massive fiscal stimulus packages to ease the economic distress caused by lockdowns. The restrictions on the movement of people and goods to curb the spread of the virus depressed global energy demand which in turn slowed investment in the renewable energy (RE) sector.

Investment in RE in India declined by 24% in the financial year (FY) 2020/21, dropping from US\$8.4bn in 2019/20 to US\$6.4bn in 2020/21. However, with the revival of energy demand and commitments from various banks and financial institutions to exit fossil fuel investments, the share of RE investment is rising. In the first four months of this financial year, from April to July 2021, investment in RE totalled US\$6.6bn.

India crossed 100 gigawatts (GW) of installed renewable energy capacity¹ (as of 13 August 2021). The country has made tremendous progress in RE installation and ranks fourth in the world in terms of installed RE capacity. During FY2019/20 India installed 7.4GW of new on-grid renewable energy capacity² and 4.4 GW from April to July 2021.³

Following the slowdown in FY2019/20, renewable energy installations have picked up again in the June 2021 quarter.

To address climate change and greenhouse gas emissions, India committed to reaching 175GW of RE capacity by 2022, which it increased to 450GW by 2030 as part of its Paris Agreement goal. Further, the country has pledged a 33-35% reduction in the emissions intensity of its economy by 2030, compared to 2005 levels.

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To boost energy security and self-reliance, the government is making efforts to reduce reliance on oil and gas imports by looking at alternate clean energy

¹ ETEnergyWorld. [India's renewable energy capacity crosses 100 GW; R K Singh says 'landmark day'](#). August 2021.

² CEA. [All India installed capacity \(in MW\) of power stations](#). March 2021.

³ CEA. [All India installed capacity \(in MW\) of power stations](#). July 2021.

technologies. In his Independence Day speech, Prime Minister Narendra Modi announced a National Hydrogen Mission⁴ that will help India become a global hub for green hydrogen production and exports.

India will need to deploy US\$500bn in investment⁵ to reach its 450GW capacity target by 2030 (US\$300bn for wind and solar infrastructure, US\$50bn for grid firming investments, and US\$150bn on expanding and modernising transmission).

To ascertain whether India can come close to meeting its ambitious targets, we explored India's renewable energy investment trends during FY2020/21 and for the first four months of FY2021/22.

Key Investment Deals

An analysis of the data shows that key investment deals in Indian renewable energy generation during FY2020/21 totalled US\$6.4bn. The momentum has picked up strongly at the start of FY2021/22, with investments totalling US\$6.6bn from April to July 2021.

Table 1: Top Ten Deals During 2020/21 and April-July 2021

	Company Name	Deal Type	Acquirer/Investor	Deal Value (US\$m)
FY2020/21	Adani Green Energy Limited	Debt	Consortium of banks led by Standard Chartered Bank	1350
	Greenko Energy	Equity	ORIX Corporation	961
	Engie (India)	Acquisition	Edelweiss Infrastructure Yield Plus	550
	REC Limited	Bond		500
	Ayana Renewable Power	Equity	National Investment and Infrastructure Fund (NIIF), EverSource Capital and CDC	390
	ReNew Power	Bond		325
	ACME	Acquisition	Actis	307
	Power Trading Corporation of India (PTC Ltd)	Acquisition	SJVN	275
	RattanIndia	Acquisition	Global Infrastructure Partners	232
	Adani Green Energy Limited	JV deal	Total	223
April – July (FY2021/22)	SB Energy	Acquisition	Adani Green Energy	3500
	ReNew Power	Bond		585
	Avaada	Equity	Global Power Synergy Public Company (GPSC)	453
	ACME	Acquisition	Scatec Solar	400
	ACME	Bond		334
	Fortum	Acquisition	Actis	333

⁴ Mint. [Independence Day: PM Modi announces National Hydrogen Mission](#). August 2021.

⁵ IEEFA. [Capital Flows Underpinning India's Energy Transformation](#). February 2021.

	Azure Power	Equity	OMERS Infrastructure	219
	Azure Power	Debt	Mitsubishi UFJ Financial Group (MUFG)	163
	Federal Bank	Equity	IFC	126
	Fourth Partner Energy	Equity	Norfund, The Rise Fund	125

Source: JMK Research.

In FY2020/21, on the one hand over 63% included capital investment by five renewable energy companies – Adani Green Energy Ltd. (AGEL), Greenko Energy Holdings, Engie, REC Ltd. and ACME – while 56% was contributed by five investors: a consortium of banks led by Standard Chartered Bank, ORIX, Edelweiss Infrastructure, National Investment and Infrastructure Fund (NIIF), EverSource Capital and CDC Group (the UK DFI).

The Indian RE sector witnessed a significant change in composition over 2020 regarding the group of companies with the largest share in setting up capacity compared with 2019. AGEL is now the biggest developer in terms of setting up RE capacity. AGEL became a signatory to the GRI South Asia Charter on Sustainability Imperatives, which develops targets and action plans to contribute to the United Nations Sustainable Development Goals (SDGs). The company also received the highest environmental score among India's NSE 100 companies in the Edelweiss Environmental, Social and Governance (ESG) rating in June 2021⁶ (although IEEFA notes the wider Adani Group is also the largest investor in new coal mining, coal infrastructure and coal power developments in India, significantly lagging the recent net zero emissions by 2035 pledge by rival Reliance Industries Ltd).

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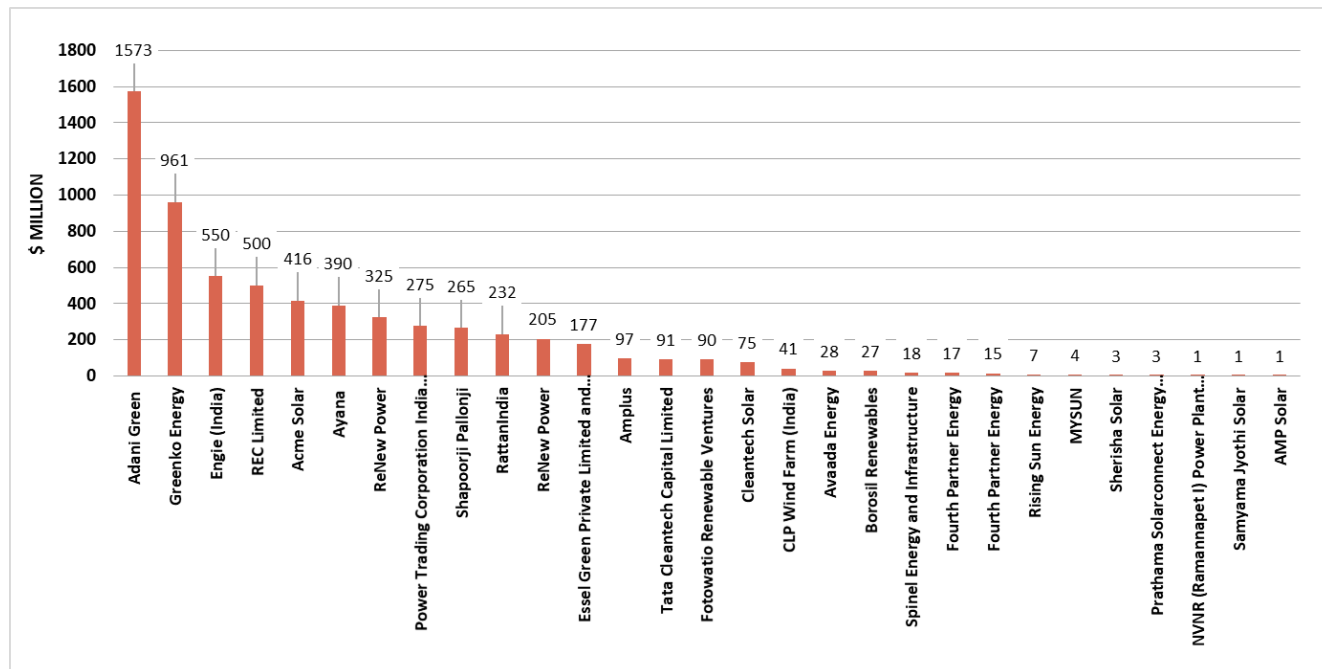
State Bank of India (SBI) has increased its lending to RE projects, with lending to the sector standing at Rs319bn (US\$4.2bn)⁷ or 1.5% of the bank's gross loan assets. The bank, to its credit, has significantly pivoted its lending focus resulting in it giving three times more funding to solar compared to coal power projects in the last financial year, acknowledging the low demand for new loans from fossil fuel producers.

⁶ BSEIndia.com. [AGEL financial statements and presentation](#). August 2021.

⁷ Mercom. [SBI Has Provided ₹319.18 Billion in Renewable Energy Project Finance as of FY 2021](#). July 2021.

In the April to July period of FY2021/22, over 86% included capital investment by five renewable energy companies – SoftBank (SB) Energy, ACME, ReNew Power, Azure Power and Avaada – while 74% was contributed by five investors: AGEL, Global Power Synergy Public Company (GPSC) of Thailand, Scatec Solar, Actis and OMERS Infrastructure.

Figure 1: Investment Acquired by Key Developers FY2020/21

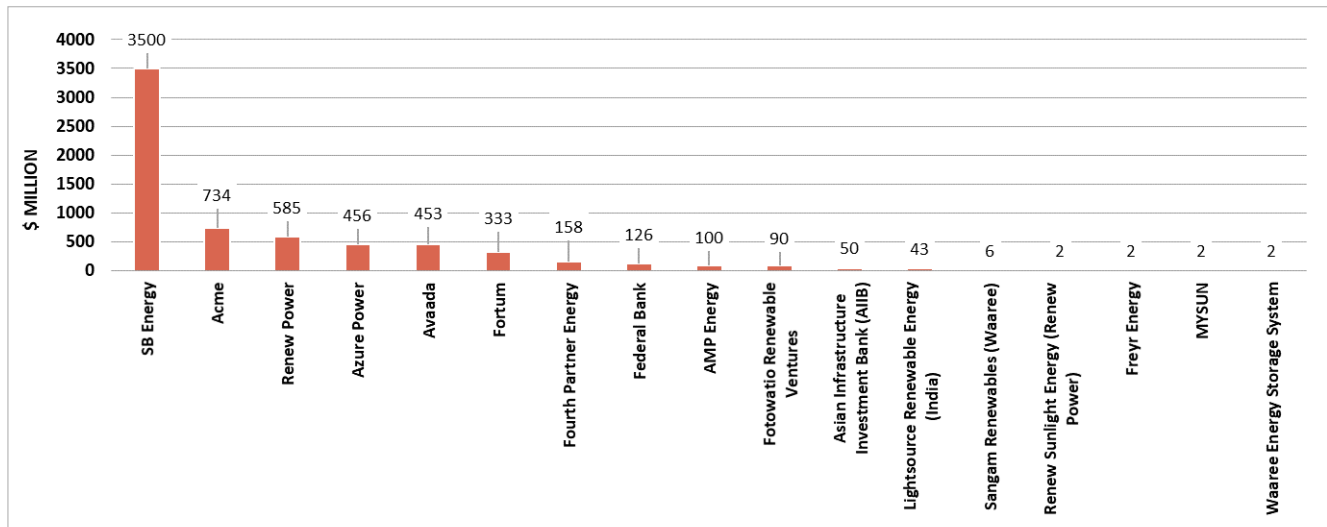


Source: JMK Research.

In May 2021, AGEL signed share purchase agreements for the acquisition of 100% interest in SB Energy India from SoftBank Group and Bharti Group. The total renewable infrastructure development portfolio of 4.9GW is spread across four states in India. With this acquisition, AGEL, as well as being one of the developers, became the largest investor. Further, Indian developers are attracting huge investments from green bonds. In April 2021, ReNew Power raised money from green bonds with a tenor of 7.25 years at a fixed interest rate of 4.5% per annum, and this was soon trumped in August 2021 by the US\$414m 2026 green bond issue by Azure Power Global at a record low 3.575% pa.

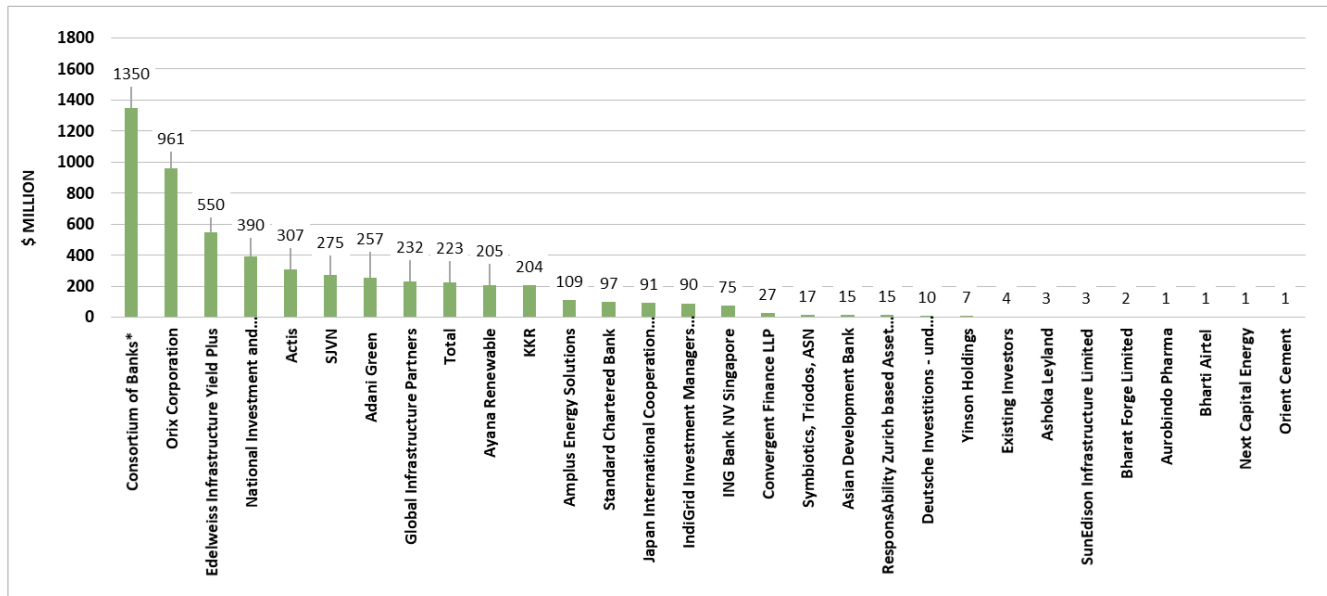
Further, CleanMax received a US\$222m equity infusion from Augment Infrastructure and ReNew Power acquired the L&T 99MW hydro project and another 260MW solar project worth US\$384m, thereby totalling investments worth US\$1bn in the first 15 days of August 2021. In the latest development, Renew Power and RMG Acquisition Corporation II have obtained the nod from a majority 88% of shareholders for the mega US\$8bn Special Purpose Acquisition Company (SPAC) transaction, paving the way for a Nasdaq listing with expected trading from 24 August 2021. This is a landmark transaction as it represents the biggest overseas listing of an Indian company via the SPAC route.

Figure 2: Investment Acquired by Key Developers FY2021/22 (April - July)



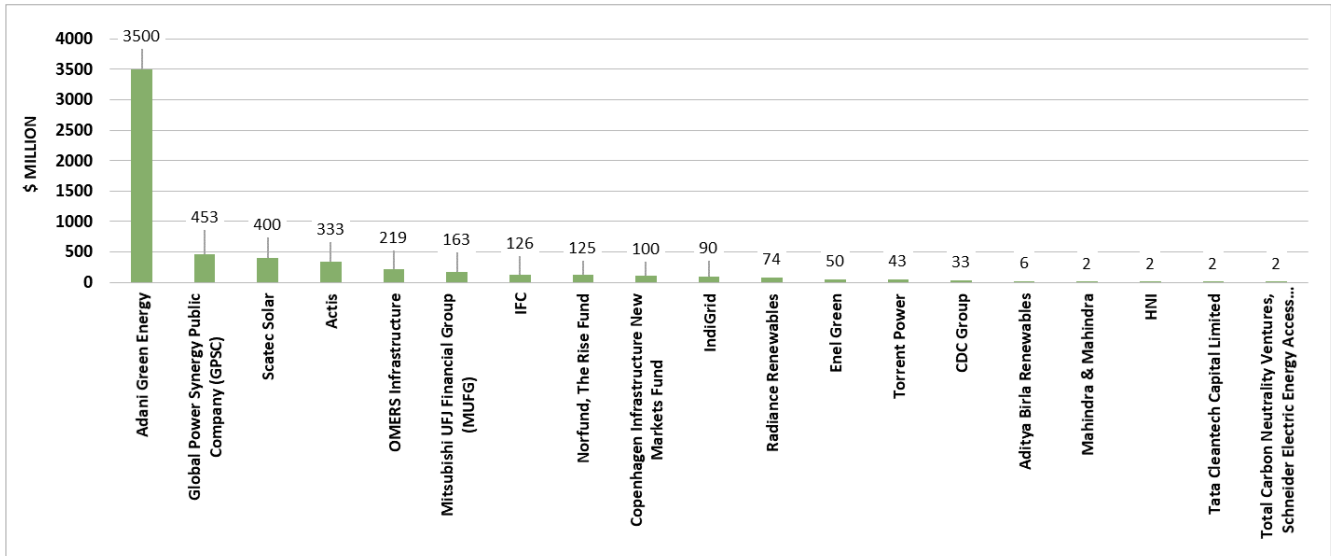
Source: JMK Research.

Figure 3: Key Investors in Renewable Energy FY2020/21



Source: JMK Research.

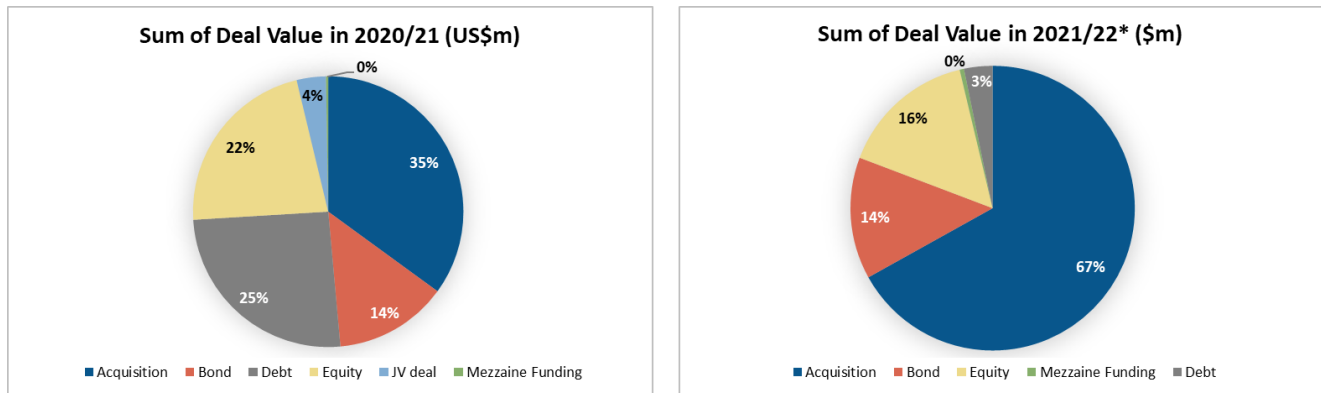
Figure 4: Key Investors in Renewable Energy FY2021/22 (April – July)



Source: JMK Research.

The investment deals in FY2020/21 and FY2021/22 indicate that the majority of the money flowed through acquisition. The largest deal was SB Energy’s exit from the Indian RE sector with a sale of assets worth US\$3.5bn. This was followed by the Engie, ACME and Fortum deals. Further analysis shows the investment deal type, with the majority of the other biggest deals packaged as debt, equity investment or green bonds, followed by mezzanine funding.

Figure 5: Investment by Deal Type



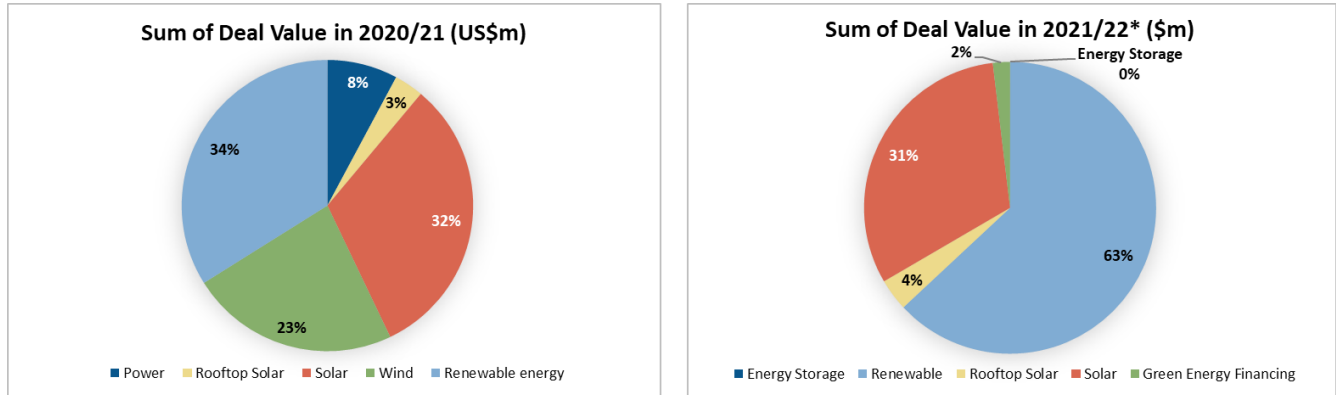
Source: JMK Research.

* April to July 2021.

In FY2020/21, almost equal shares of the total investment were for generalised renewable energy (34%), solar (32%) and wind (23%), while a small amount of investment went to the power sector (8%) and rooftop solar (3%). In FY2021/22, from April to July, a majority of the investment (63%) went to generalised renewable energy, followed by 32% targeted to the solar sector and 4% to rooftop

solar. This highlights the huge success of the clear long-term vision of the Indian government, supported by the exceptionally bankable 25-year power purchase agreements, providing long-term revenue certainty, and hence opening up the almost unlimited capacity of global markets to provide low cost, low risk infrastructure finance.

Figure 6: Investment by Sector Type



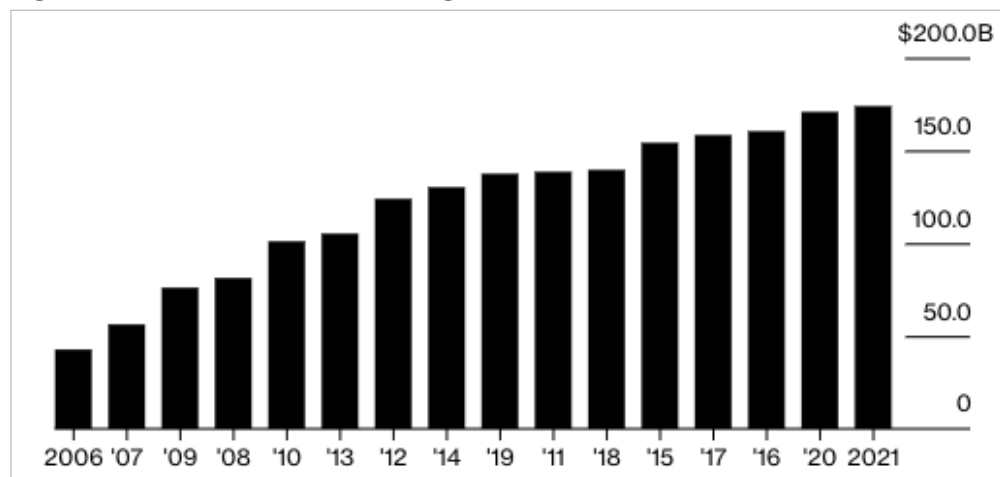
Source: JMK Research.

* April to July 2021.

Domestic and Global Capital Must Flow to Deflationary RE to Help India Meet Energy Transition Goals

According to a recent BloombergNEF report⁸ US\$174bn was spent globally on solar, offshore wind and other green technologies and companies in the first half of 2021. While the level of investment is 1.8% more than a year earlier, this is still 7% below the previous six months.

Figure 7: RE Investment Through to June 2021



Source: BloombergNEF.

⁸ Bloomberg NEF. Renewable Investment Rose to a Record in First Half. August 2021.

As per JMK Research data, RE investment in India is US\$8.8bn during the same period, representing 5% of the total global investment. So, while RE investment has increased in 2021, it is still only a fraction of the levels needed to curb increasing carbon emissions and to help India achieve its energy transition goals.

The International Energy Agency (IEA) released its India Energy Outlook⁹ in February 2021. The Sustainable Development Scenario (SDS) considers a decline in use of thermal capacity and an increase in the share of renewable energy. Under the SDS, the share of renewable energy in total generation increases from 20% now to 55% in 2030 and 79% by 2040. India is currently investing around US\$18-20bn in energy generation capacity and a further US\$20bn in the grid on an annual basis. To achieve the SDS scenario, India would need to more than triple its current rate of annual investment to US\$110bn. Daunting in one respect, but the financial trends in Indian renewable energy and grid infrastructure over the last 2-3 years strongly suggest domestic and global capital is ready, willing and enabled to support this ambition.

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Investment in India is clearly shifting towards renewables. In late June this year, Mukesh Ambani, chairman of Reliance Industries, announced plans to invest Rs75,000 crore (US\$10bn) into clean energy over the next three years in support of the group's world significant net zero emissions by 2035 pledge.¹⁰ JSW Energy also plans to scale up its total capacity to 20GW with a total investment of Rs75,000 crore (US\$10bn) by 2029/30¹¹ from a little over 4.5GW now, driven by renewable energy. Big clean energy commitments by major players like Reliance and JSW Energy will drive more investment into this space. Other public and private entities including NTPC, Tata Power, and ReNew Power have also made large commitments.

In addition, the lending portfolios of Indian financial institutions like SBI and PFC now include more renewable energy assets than fossil fuels, a trend which has picked up significantly in the last 1-2 years. Globally, capital is fleeing fossil fuels and moving towards more profitable clean energy. Accelerating this trend would allow India to decarbonise its energy sector and channel investment towards a green recovery to build a more sustainable economy.

⁹ IEA. [India Energy Outlook](#). February 2021.

¹⁰ The Hindu. [Reliance to invest ₹75,000 crore in 'new energy'](#). June 2021.

¹¹ ET Energyworld. [JSW plans Rs 75,000 cr investment to scale up capacity to 20 GW by FY30: CEO](#). June 2021.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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