

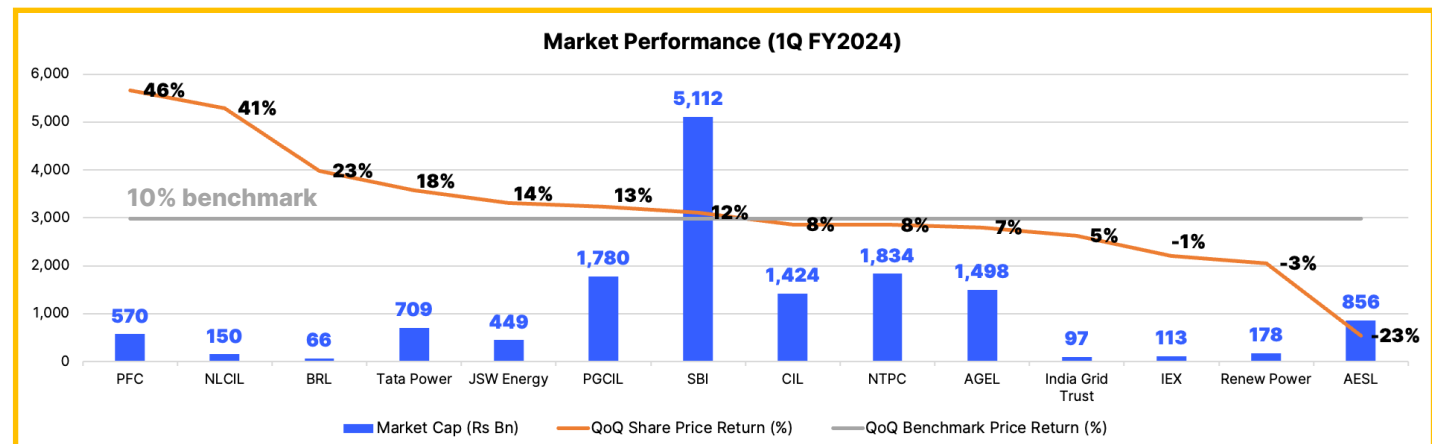


## 1. Key Financial Highlights for the First Quarter (1Q) Fiscal Year (FY) 2024

- Adani Green Energy's 1Q FY2024 energy sales rose 70% year-on-year (YoY) to six billion units, thanks to a **43% increase** in operational capacity to **8.3GW**.
- JSW Energy's leverage ratio (Total Debt/Total Equity) spiked from **1.8x** in 1Q FY2023 to **4.7x** in **1Q FY2024** due to acquisitions (Mythra and Ind- Bharat) and funding pipeline projects.
- NLC India saw a significant drop in revenue during the quarter due to limited land for mining expansion, reduced production in lignite mines and lower power generation at Neyveli.
- ReNew Power signed an MoU with Gentari (Petronas-owned) to develop **5GW** renewable energy and secured **~US\$8 billion** in debt financing through MoUs with Power Finance Corporation (PFC) and REC (formerly Rural Electrification Corporation Limited), along with **~US\$230 million** in debt funding from the State Bank of India.
- Tata Power's 1Q FY2024 residential rooftop solar business grew by **87%**.
- Adani Transmission Limited rebranded to Adani Energy Solutions Limited (AESL) as an integrated energy solutions provider.
- Coal India reached a record coal production of **175.5 million metric tonnes** in 1Q FY2024, marking a **10% growth**, the highest ever for a first quarter.
- Borosil Renewables reported a remarkable **108% YoY** surge in operating revenue, attributed to the successful commissioning of a new solar glass plant with **550 tonnes per day** (TPD) capacity.

Table 1: Financial Highlights

S No.	Company	Operating Revenues (Rs Billion)	YoY Revenue Growth (%)	QoQ Revenue Growth (%)	Net Income (Rs Billion)
1	Adani Green Energy Ltd (AGEL)	21.8	33.1%	-16.2%	3.2
2	JSW Energy Ltd (JSWEL)	29.3	-3.3%	9.7%	2.9
3	NLC India Ltd (NLCIL)	33.2	-14.4%	-35.4%	4.1
4	NTPC Ltd	430.8	-0.2%	-2.7%	49.1
5	ReNew Power	21.4	-4.8%	-8.9%	3.0
6	Tata Power Company Ltd	152.1	4.9%	22.1%	11.4
7	Adani Energy Solutions Limited (AESL)	36.6	17.0%	9.1%	1.8
8	Power Grid Corporation of India Ltd (PGCIL)	110.5	1.3%	-9.9%	35.9
9	India Grid Trust	6.3	12.2%	5.2%	1.1
10	Coal India Ltd (CIL)	359.8	2.5%	-5.7%	79.4
11	PFC Group	209.9	13.3%	4.6%	59.8
12	Indian Renewable Energy Development Agency Limited (IREDA)	11.4	45.4%	10.4%	2.9
13	State Bank of India (SBI)	1,014.6	32.1%	3.4%	190.9
14	Borosil Renewables Ltd (BRL)	3.6	108.5%	14.7%	-0.1
15	Indian Energy Exchange (IEX)	1.0	5.8%	-2.8%	0.8



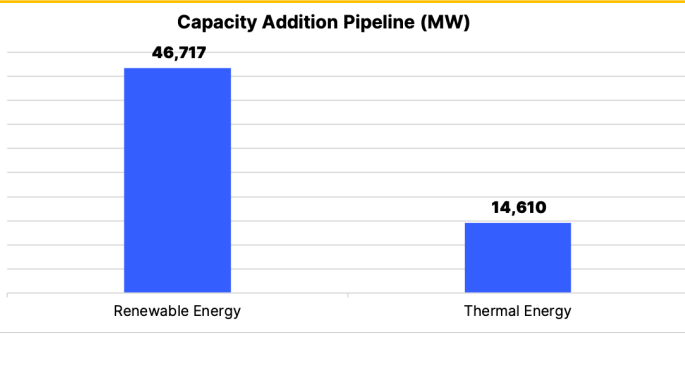
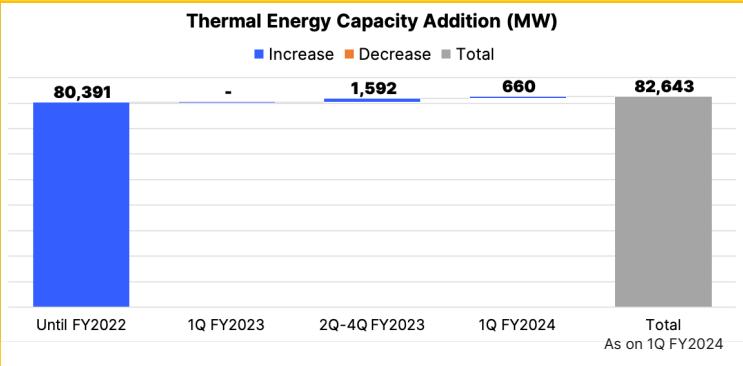
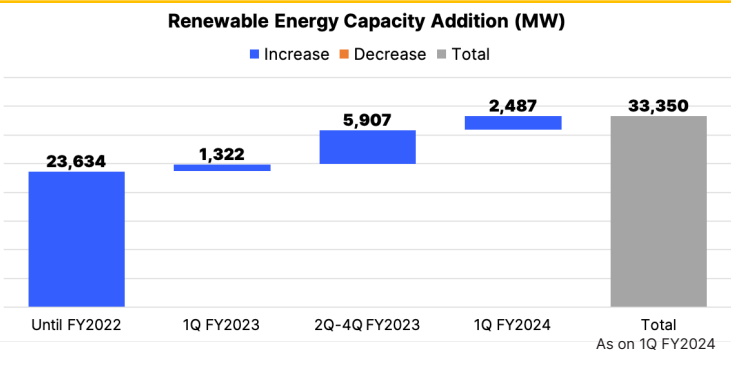
Market capitalisation as of 30 June 2023  
Benchmark taken as SENSEX

## 2. Key Operational Highlights for 1Q FY2024

**Table 2: Operational Highlights: Power Sector Companies**

S No.	Company	Renewable energy capacity added during quarter (MW)	Total installed renewable energy capacity (MW)	Pipeline renewable energy capacity (MW)	Thermal capacity added (MW)	Pipeline thermal capacity (MW)	Total installed capacity (MW)	Power generation (BU)	Transmission lines added (ckms)	Total transmission line (ckms)	Pipeline transmission capacity (ckms)	Transmission reliability (%)	Discom customers (in million)	Coal production (MMT)
1	Adani Green Energy Ltd (AGEL)	230	8,316	12,118	-	-	8,316	6						
2	JSW Energy Ltd (JSWEL) <sup>(1)</sup>	62	3,509	2,403	-	700	6,605	7						
3	NLC India Ltd (NLCIL)	-	1,421	6,500	-	4,610	6,061	7						6.7
4	NTPC Ltd	110	7,039	16,700	660	9,300	73,024	82						6.2
5	ReNew Power	520	8,400	5,300	-	-	8,400	5	-	-	275			
6	Tata Power Company Ltd	184	4,554	3,696	-	-	14,294	7	189	4,383	871	NA	12.9	
7	Adani Energy Solutions Limited (AESL)								-	15,291	4,489	99.8%	3.13	
8	Power Grid Corporation of India Ltd (PGCIL)								512	174,625	NA	99.9%		
9	India Grid Trust	-	100	NA			100	0.1	-	8,468	NA	99.5%		
10	Coal India Ltd (CIL) <sup>(2)</sup>	NA	11	NA	NA	2,260	NA	NA						175.5
<b>Total</b>		<b>1,106</b>	<b>33,350</b>	<b>46,717</b>	<b>660</b>	<b>16,870</b>	<b>116,800</b>	<b>114</b>	<b>701</b>	<b>202,767</b>	<b>5,635</b>		<b>16</b>	<b>188</b>

(1) JSWEL solar and wind CUF does not include acquired Mytrah portfolio  
 (2) CIL renewable energy capacity as of March 2023



- PFC and Indian Renewable Energy Development Agency (IREDA), both had impressive YoY disbursement growth in 1Q FY2024, with PFC’s disbursements **surging by 233%**, and IREDA achieving a **177% increase** compared to 1Q FY2023.
- SBI achieved its highest-ever net profit for the fourth consecutive quarter, with its lowest ever net non-performing assets (NPAs). SBI’s advances to the power sector **fell by 4% YoY**.

**Table 3: Operational Highlights: Financial Sector Companies**

S No.	Company	Loan book growth (%YoY)	Total loan book (Rs Bn)	Renewable energy lending during the quarter (Rs Bn)	Total renewable energy lending (Rs Bn)	Total thermal lending (Rs Bn)	Net NPA ratio (%) <sup>(2)</sup>	Yield on advances (%) <sup>(3)</sup>	CRAR (%) <sup>(4)</sup>
1	PFC Group	17.0%	4,323	15.1	497	1,773	1.0%	9.9%	25.1%
2	Indian Renewable Energy Development Agency Limited (IREDA) <sup>(1)</sup>	44.0%	472	NA	329	NA	1.6%	NA	20.0%
3	SBI	13.9%	28,204	43.6	406.0	NA	0.7%	8.8%	54.4%

*(1) Lending besides renewable energy includes distribution, transmission, generation and manufacturing, EV, transmission, EE & IC debit balance, and short term loans; CRAR  
 (2) Net NPA Ratio : Net NPA% denotes the proportion of advances which turned into non-performing assets after adjusting for the provisions already made for NPA by the financial institution. A low Net NPA ratio indicates that the bank has made adequate provisions against non-performing loans.  
 (3) Yield of Advances : Yield on Advances is calculated as Interest Income / Avg. Advances The ratio gives the average lending rate of a financial institutions  
 (4) CRAR: Capital to Risk (weighted) Assets Ratio (CRAR) is an estimation of a bank’s available capital expressed as a percentage of a bank’s risk-weighted credit exposures*

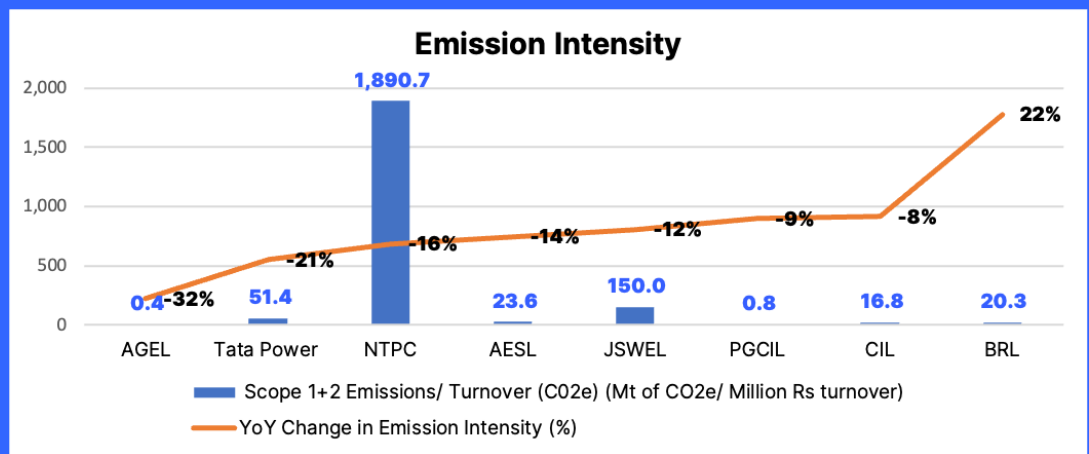
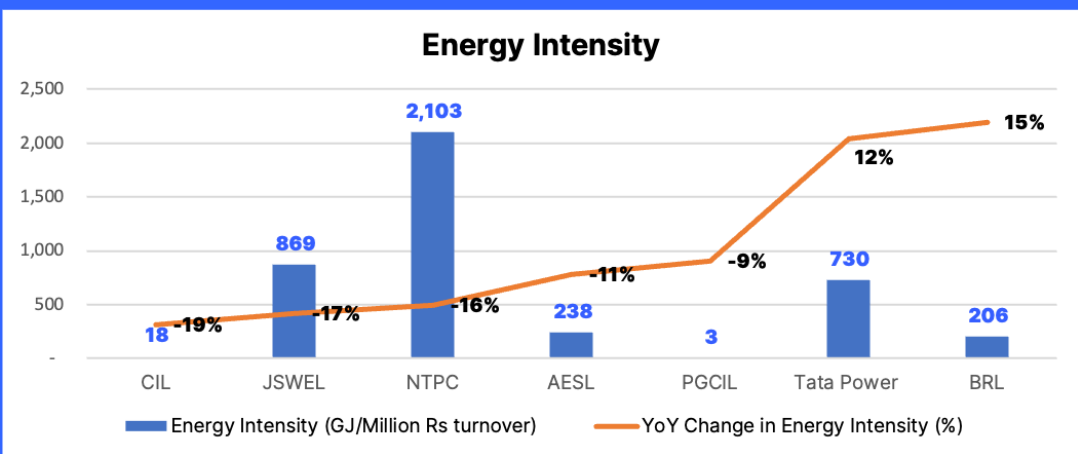
### 3. Key Developments Impacting Power Sector Companies

<b>Renewable Energy Capacity Expansion</b>	In April 2023, the Ministry of New and Renewable Energy (MNRE) decided to invite bids for 50 gigawatts (GW) renewable energy capacity annually – from fiscal year (FY) 2024 to FY2028 – while in June 2023, India’s Central Electrical Authority (CEA) issued the National Electricity Plan that projects 562GW installed capacity from renewables by FY2032. To accelerate power sector reforms, the Ministry of Finance earmarked Rs1.4 trillion (US\$17 billion) for additional borrowing by states for FY2024.
<b>Transmission Capacity Expansion</b>	In the transmission sector, projects worth Rs1.4 trillion (US\$17 billion) are likely to be awarded through competitive bidding in the near future, according to the National Committee on Transmission (NCT). Three corridors worth Rs495 billion (US\$5.95 billion) are planned as part of renewable energy integration.
<b>Solar Module Prices</b>	On the market side, the prices of solar grade polysilicon in China dropped by a whopping 78% in July 2023 from November 2022, resulting in a steep fall in the prices of solar modules globally. This caused disturbances in module manufacturing due to procurement being postponed by developers.
<b>Coal Supply Scenario</b>	The coal supply scenario continued to ease in India due to robust coal production, reduction in the prices of e-auction coal and imported fuel. Imported coal prices are down from US\$85/tonne in June 2022 to US\$54/tonne in June 2023. E-auction premium has also eased since January 2023, down from a premium of 182% over the notified price in January 2023 to 78% in May 2023.
<b>Power Exchanges</b>	In the coming months, higher liquidity is expected to result in more competitive prices on the power exchanges, giving further optimisation opportunities to DISCOMs and open access consumers.

## 4. Advancement on Energy Transition

India’s power sector is responsible for 40% of the nation’s greenhouse gas emissions. Achieving India’s emission reduction goals depends heavily on major power companies’ transition efforts. In 2021, India’s capital market regulator introduced business responsibility and sustainability reporting (BRSR) standards, providing detailed environmental, social and governance (ESG) performance information for top listed companies. Through our analysis of BRSR reports from power sector companies, we will evaluate their material risks, commitments, and progress towards achieving energy transition.

- Apart from NLC India, all companies in the tracking list released their FY2023 reports and Business Responsibility and Sustainability Reporting (BRSR) disclosures in the last quarter, even though BRSR becomes mandatory for the top 1,000 Indian companies in FY2024.
- Companies have set varying targets for these KPIs; Adani Energy Solutions and Tata Power provide transition plans, but Coal India only states a renewable energy target.
- State-owned firms like NTPC, NLC India and CIL have mixed progress in energy transition, announcing thermal capacity additions while falling short on renewable energy.
- Some companies have obtained third-party assurance for energy transition metrics, boosting stakeholder confidence.
- PFC, SBI and IREDA expanded their green portfolios with reduced NPAs and growing industrial activity, using instruments like infrastructure bonds for renewable energy projects. Banks are developing specific lending policies for energy transition assets, though climate risk (Physical and Energy Transition Risk) integration is slow.
- Power sector companies are actively advancing industrial decarbonisation by engaging in corporate power purchase agreements (PPAs) and actively participating across various elements of the green hydrogen value chain.



- The increasing trend in emissions and energy intensities at BRL pertains to the commissioning of the new Solar Glass furnace in FY2022-23.
- Except for Tata Power and BRL, all companies reported reductions in both energy and emission intensities.
- Adani Green reported a 497% increase in energy intensity for FY2023 since the FY2022 calculation does not include renewable energy consumption.
- None of the companies are reporting entire scope 3 emissions.

Scope 1 emissions are direct greenhouse gas emissions from sources that are owned or controlled by an organisation, such as emissions from on-site combustion of fossil fuels.  
 Scope 2 emissions are indirect emissions associated with the generation of purchased electricity, heating, or cooling consumed by an organisation.  
 Scope 3 emissions are all other indirect emissions, including those in the organisation’s value chain, such as emissions from the production of purchased goods and services or from employee commuting and business travel.

**Table 4: Key Developments towards Energy Transition**

S No.	Company	Material KPIs identified (Risk-R, Opportunity-O) <sup>(1)</sup>	Commitments and goals across material KPIs identified	Performance on achievement of goals
1	Adani Green Energy Ltd (AGEL)	1) <b>Climate change (R)</b> 2) <b>Opportunities in renewable energy (O)</b>	1) Install 25GW renewable energy capacity by 2025 and 45GW renewable energy capacity by 2030 2) Achieve net zero by 2050	1) 8.3GW installed renewable energy capacity 2) Reduction of 49% emission intensity from baseline
2	JSW Energy Ltd (JSWEL)	1) <b>Climate Strategy (O)</b> 2) <b>Energy management in operations (R)</b> 3) <b>Enhancement of renewable power (O)</b> 4) <b>Emissions (R)</b>	1) By 2030 reduce carbon emissions by more than 50% 2) Enhance the renewable power to 2/3rd of total installed capacity 3) Become carbon neutral by 2050	1) Acquired 700MW thermal power plant Ind-Barath 2) Starting India's largest green hydrogen project for group captive use by JSW Steel
3	NLC India Ltd (NLCIL) <sup>(2)</sup>	1) <b>Air emissions (R)</b> 2) <b>Renewable energy (O)</b> 3) <b>Operational efficiency and plant reliability (O)</b> 4) <b>Climate Strategy (R)</b> 5) <b>Decommissioning of old plants (R)</b>	1) The company intends to increase its renewable energy capacity to 6,031MW capacity by 2030 from the existing capacity of 1,421MW 2) Add 1GW renewable energy capacity each year	1) Renewable energy capacity virtually unchanged since FY2020. 32MTPA of pipeline coal mining capacity and 6500MW of pipeline thermal capacity 2) Setting up a pilot green hydrogen project with input of 4MW solar
4	NTPC Ltd	1) <b>Energy Transition (O)</b> 2) <b>Climate change (R)</b>	1) 5% reduction in net energy intensity (MJ/kWh) by FY2022-23 2) Reduce net energy intensity by 12% by 2032 3) 60 GW of renewable energy capacity by 2032 4) Pursuing just transition and prioritising the re-skilling of the workforce	1) Current pipeline of 9.3GW of thermal capacity and considering additional capacity of 7.2GW 2) Renewable energy pipeline of 20GW 3) Working on developing a net zero roadmap 4) On green hydrogen, a blending project started
5	Renew Power	NA	1) Source 50% of electricity through clean sources across all operations by 2025 2) 100% of electricity through clean sources across all operations by 2030 3) Become net-zero by 2040	1) 4.8% reduction in Scope 1+2 reported in 1st year of disclosure 2) Achieved carbon neutrality in operations in FY2023
6	Tata Power Company Ltd	1) <b>Climate Strategy (O)</b> 2) <b>Emissions Management (R)</b> 3) <b>Energy Management (R)</b> 4) <b>Continuous and affordable green power (O)</b>	1) Carbon net zero before 2045 2) Clean and green capacity 70% by 2030 3) Tata Power plans to expand its EV charging points to 25,000+ in the next five years	1) 38% of total portfolio renewable energy as on 1Q FY2024 2) Installed 4,400 public and 50,000 home EV charges till 1Q FY2024
7	Adani Energy Solutions Limited (AESL)	1) <b>Climate Change (Energy and Emissions) (R)</b>	1) 60% renewable energy in total electricity distribution by 2027 2) Emission intensity target in line with India's Nationally Determined Contributions (NDCs) and performance disclosures in the public domain	1) Achieved 30% renewable power procurement by the end of March 2023

(1) Material key performance indicators identified by companies pertaining to environmental and social matters that present a risk or an opportunity to their business

(2) NLC data from FY2022

(3) Scope 3 emission sources accounted in the bank's greenhouse gas inventory, viz work-related travel via rental car, bus, rail and air and paper waste

S No.	Company	Material KPIs identified (Risk-R, Opportunity-O) <sup>(1)</sup>	Commitments and goals across material KPIs identified	Performance on achievement of goals
8	Power Grid Corporation of India Ltd (PGCIL)	1) <b>Climate change (R)</b> 2) <b>Energy Management (O)</b> 3) <b>GHG Emissions (O)</b>	1) 50% of electricity consumption from renewable sources by 2025 2) Strive to become a net zero emission company by 2047	1) Envisaged investment till 2030 of ~Rs1.7 trillion, in solar, smart metering infrastructure and data center businesses aligned to India's 2030 renewable energy goals
9	Coal India Ltd (CIL)	1) <b>Energy Efficiency / Energy Management (O)</b> 2) <b>Renewable Energy and clean energy (R)</b> 3) <b>GHG Emissions / Climate Change (R)</b>	1) Aims to add 3GW of RE capacity in the next three years and enter into PV manufacturing business 2) Scaling up the conversion of CO <sub>2</sub> to methanol and other value-added chemicals	1) Adding 87MTPA capacity and planning to add 3.9GW thermal power capacity 2) Addition on renewable energy portfolio has been minuscule
10	PFC Group	1) <b>Gradual shift from conventional power sources to renewable power sources (O)</b>	1) Position to become the nodal agency for net zero 2) Provide financing to help India achieve its NDCs through its focus on Renewable & Emerging Technologies and Revamped Distribution Sector Scheme (RDSS)	1) 51GW of renewable energy addition supported by PFC till FY2023 2) Renewable energy loan book growing with CAGR of 20% over the last five years 3) Financing installation of pollution control equipment in thermal plants 4) Favourable terms of financing for renewable energy
11	State Bank of India (SBI) <sup>(3)</sup>	1) <b>Sustainable Business Strategy (O)</b> 2) <b>Natural Resource Management (R)</b> 3) Value Chain Management (R & O)	1) Goal of becoming carbon neutral by the year 2030 (in own operations) 2) Net zero for the bank by 2055 3) Facilitate at least 7.5% of domestic gross advances to be green advances by 2030	1) Rs406 billion renewable energy financed portfolio as of 1Q FY2024 2) Favourable terms of financing for renewable energy and EVs 3) ESG Risk Rating Model to assess borrowers on ESG criteria 4) Does not consider financed emission in net zero target however floated tender for measuring the carbon footprint of its entire portfolio
12	Borosil Renewables Ltd (BRL)	1) <b>GHG Emissions (R)</b> 2) <b>Energy Management (O)</b> 3) <b>Climate Change (R)</b>	1) Carbon neutral (at operational sites) by 2040	1) BRL has a 22% lower carbon footprint in comparison to the default score for glass manufacturing globally
13	Indian Energy Exchange (IEX)	1) <b>Facilitating trading in renewable electricity/ renewable certificates/ energy saving certificates (O)</b>	1) Contribute towards fulfilling India's net zero emissions' target by creating an ecosystem for reduction of emissions	1) India's first carbon-neutral power exchange 2) Ventured into the voluntary carbon market to help large corporates meet their ESG requirements

IndiGrid is an infrastructure investment trust (InvIT) and is currently not under the ambit of BRSR reporting; IREDA is unlisted  
ReNew power is listed on Nasdaq exchange and is not under the ambit of SEBI regulations

## 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](http://www.ieefa.org)

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