

## Management Discussion and Analysis

Established in 2016, Sterlite Power is counted among the foremost integrated players in the energy transmission and distribution space globally. We seek to leverage our technology leadership, strategic collaborations, resource efficiencies, agile execution capabilities and economies of scale in order to address the three primary challenges in the power sector: space, time and capital.



## INDUSTRY OVERVIEW

### INDIA

#### INDIA MACROECONOMIC OVERVIEW

##### Review of India's GDP Growth

While the economy shrank as a whole in fiscal 2021, agriculture and allied activities and electricity, gas, water supply and other utility services were the outliers, expanded. India's gross domestic product rebounded in the second half of fiscal 2021, growing 0.5% and 1.6% in third and fourth quarters, on-year, respectively. India is likely to retain its position as the fastest-growing economy in the world in 2021 and will continue to occupy the top slot among major economies growing faster than the global average of 5.5% and also higher than other developing economies such as China & Brazil<sup>1</sup>.

While per capita electricity consumption registered a CAGR of 2.6% over the past five years, it is estimated to have dipped to 1,100-1,130 kWh in fiscal 2021 as power demand slid, particularly from high-consuming industrial and commercial categories, on account of weak economic activity caused by COVID-19 outbreak. India's per capita electricity consumption is expected to grow at a healthy CAGR of 5-6% between fiscals 2021 and 2026 primarily due to the favourable lower base in fiscal 2021. Per capita consumption is expected to gradually improve in the long term as power demand picks up, due to improvement in access to electricity in terms of quality and reliability on account of intensive rural electrification and reduction in cost of power supply, resulting in realisation of latent demand from the residential segment.

<sup>1</sup>According to S&P Global's forecast

##### India's Environment Protection and Emission Target to Combat Climate Change

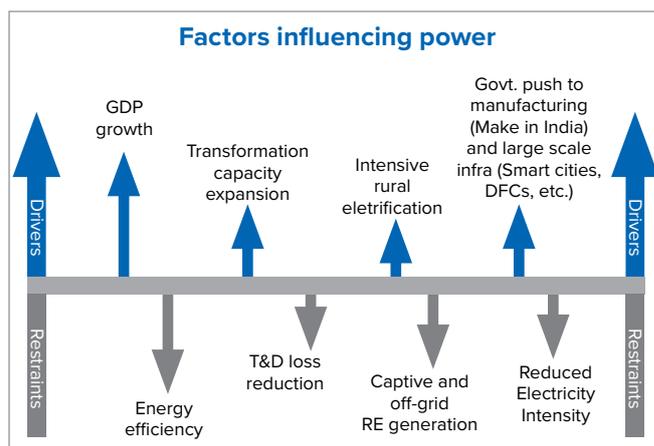
India has further committed to to have about 40% of cumulative installed capacity from non-fossil fuel-based energy resources by 2030, with the help of transfer of technology and low-cost international finance, including from Green Climate Fund. To this end, CRISIL Research expects an addition of ~15-17 GW in wind capacity over the next five years, entailing an investment of ~₹ 1 Trillion. Most of this will be tied up with relatively stronger buyers such as SECI and Power Trading Corporation (PTC), which also reduces risk compared with direct exposure to state discoms. In the solar segment, meanwhile, the capacity addition expected is a much higher at ~55-57 GW over fiscal 2021-25.

#### POWER SECTOR IN INDIA

##### Review of Power Demand-Supply Scenario in India

##### Long-Term Drivers and Constraints for Demand Growth

CRISIL Research estimates energy requirement to grow at a CAGR of 5-6% between fiscals 2022 to 2025 on account of following factors:

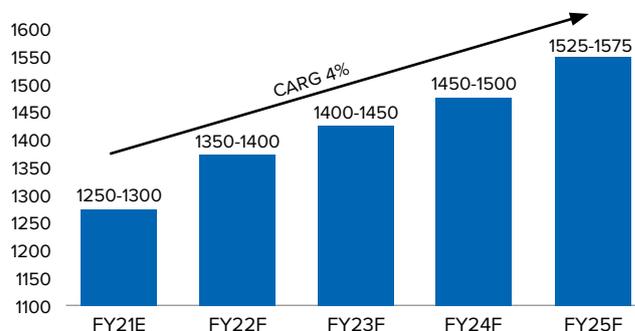


Note: DFC: Dedicated freight corridor

Source: CRISIL Research

India's economy is expected to recover slowly post fiscal 2021, with a gradual pick up in industrial growth over the subsequent 4 years. Trickle-down effect of the Aatma Nirbhar Bharat relief package, government spending on infrastructure through the National Infrastructure Pipeline (NIP), dedicated freight corridors (DFC) infrastructure, service industry expansion, rapid urbanization, and increased farm income from agri-related reforms are key macroeconomic factors which will aid a pickup.

#### Power Demand Outlook (fiscals 2021-2025)



Note: Data is approx.

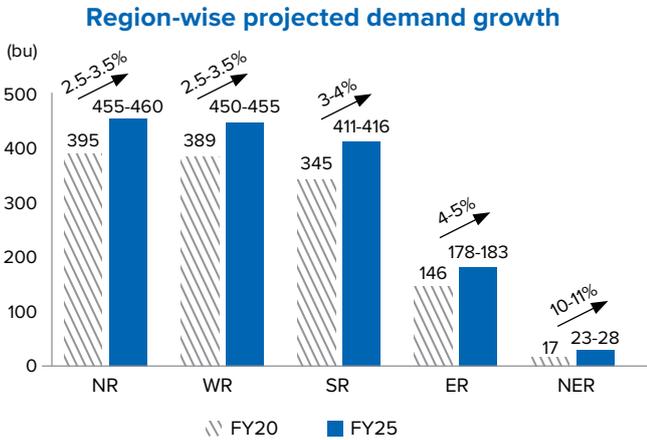
Source: CRISIL Research

##### Power Demand: Gradual pick-up in GDP growth and infrastructure development to support power demand

CRISIL Research expects power demand to rise at a healthy pace of 4% CAGR over fiscals 2021 to 2025, after a minor decline of 1-2% in fiscal 2021 on account of economic downturn induced by the COVID-19 outbreak. Demand recovery will be driven by gradual uptick in economy, higher domestic demand due to rapid urbanisation, latent demand, and a strong recovery in fiscal 2022 over a lower base. Industrial demand, which forms the largest share in power demand, is expected to see an uptick owing to gradual recovery in industrial activity over the forecast period.

Various government initiatives such as Make in India, smart cities mission, dedicated freight corridors, metro rail projects, railway track electrification, etc. are expected to boost infrastructural development in the country, albeit in the medium to long term.

**Regions and Sector that are Expected to Drive Demand**



Notes: Figures in percentage CAGR over fiscals 2020-25; NR: Northern region; WR: Western region; SR: Southern region; ER: Eastern region; NER: North-eastern region

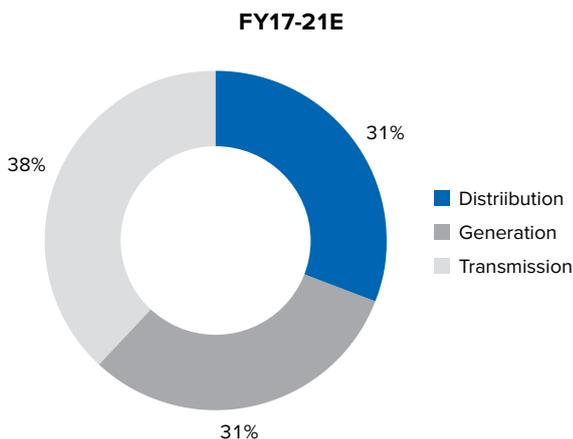
Source: CEA, CRISIL Research

CRISIL Research expects the eastern and north-eastern regions to show higher growth in power demand over fiscals 2021-25 than the other regions. Demand in the eastern region is expected to log a healthy 4-5% CAGR, led by higher power availability on account of significant capacity additions over the next five years. However, despite financial restructuring, the financial health of utilities in states such as Bihar and Jharkhand continues to remain poor because of inadequate tariff revisions and high AT&C losses. Energy deficit in the north-eastern region stood at 3.7% in fiscal 2020, driven by high deficit of 5.3% in Assam. This indicates high potential for increasing electricity consumption in the region, although difficult terrain and rough weather could constrain transmission infrastructure.

**Investments in the Transmission and Distribution Segments**

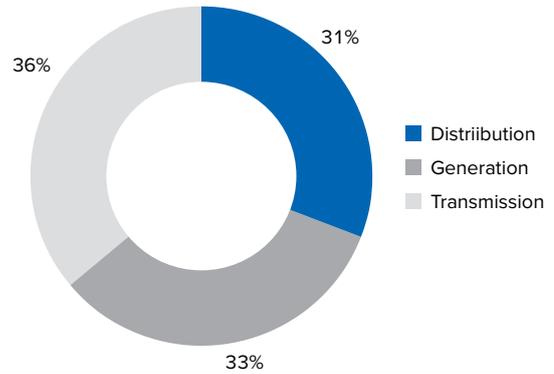
**Investments in Power sector**

**Share of investments across power sector value chain**



CRISIL Research projects investments of ₹ 10-11 Trillion in the power sector over the next five years. The share of generation, transmission, and distributions segments over the forecast period is expected to remain largely unchanged, with similar investments across the segments.

**FY22-25F**

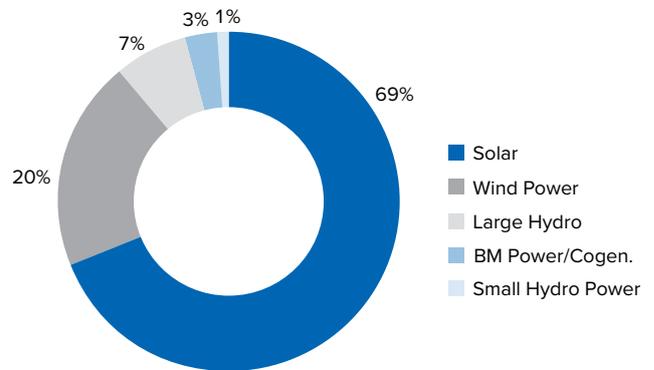


Note: E: estimates, F: forecast

Source: CRISIL Research

**RENEWABLE ENERGY SECTOR IN INDIA**

**Renewable capacity addition was dominated by solar in fiscal 2021**

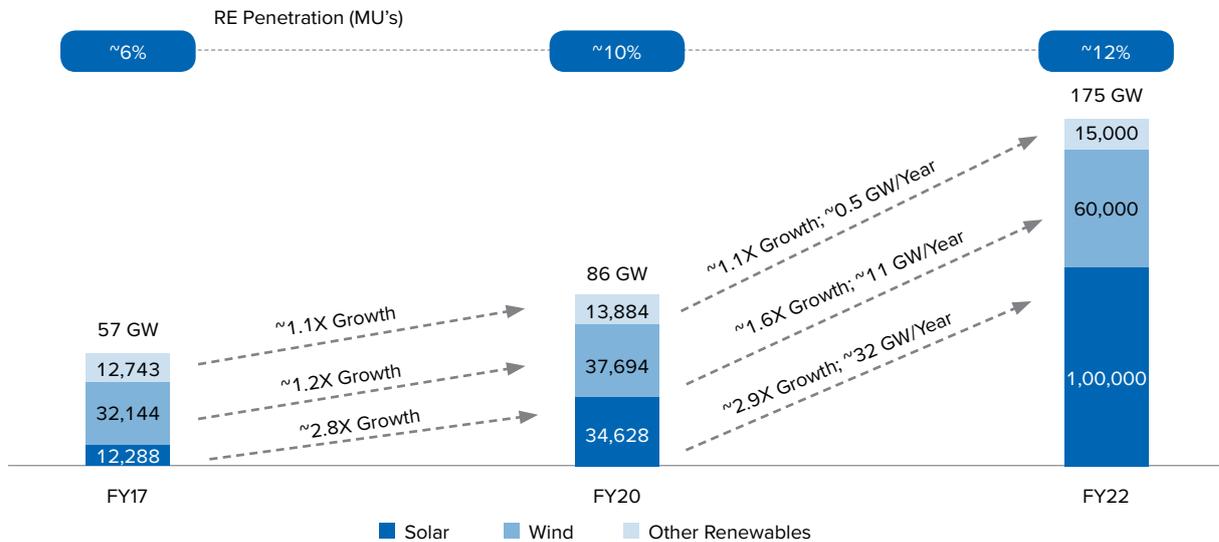


Source: CRISIL Research

The last five years (between fiscals 2016 and 2020) witnessed ~32 GW of capacity additions. Compared to last year, growth in capacity additions will be driven by government support with an aggressive tendering roadmap outlined and being followed by the government so far. Few external factors such as improvement in technology (floating solar, module efficiency) and low capital costs is also key to enabling additions.

The renewable capacity addition in the fiscal 2021 stood at 7,916 MW (including 510 MW of large hydro capacity addition), ~20% lower than the additions in the previous year.

## Revised renewable energy capacity addition targets till fiscal 2022



CRISIL Research expects 55-57 GW of solar capacity additions over fiscals 2021 to 2025. This will be driven by additions under the following:

- The National Solar Mission (NSM) Phase II Batch IV, V and VI
- Other schemes launched by SECI (ISTS, floating solar tenders, newer structure tenders, state specific schemes etc.)
- Capacities tendered by distribution companies in various states to fulfil Renewable Purchase Obligations (RPO)
- Capacities tendered by cash rich public sector undertakings (PSU) such as National Thermal Power Corporation (NTPC), Neyveli Lignite Corporation (NLC), Coal India Limited (CIL) etc.
- Rooftop projects

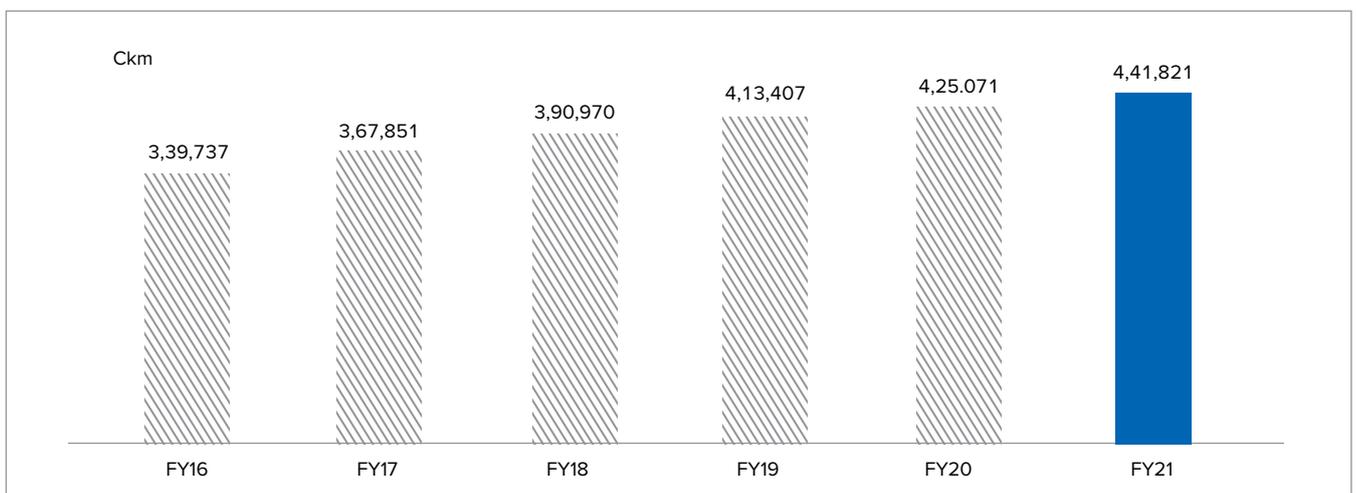
The RE market of India is one of the most attractive markets globally on account of large capacity additions, strong government support and a favourable policy regime. Further, India is the fourth largest in terms of installed wind energy capacity. Going forward, we believe 70-74 GW of RE capacities (solar and wind) will be added over fiscals 2021-2025.

### TRANSMISSION SEGMENT IN INDIA

#### Market Review

Robust generation capacity addition over the years and government's focus on 100% rural electrification through last mile connectivity has led to extensive expansion of the transmission and distribution (T&D) system across the country. The total length of domestic transmission lines rose to 4,41,821 ckm in fiscal 2021.

## Total transmission line network in the country (220 kV and above)



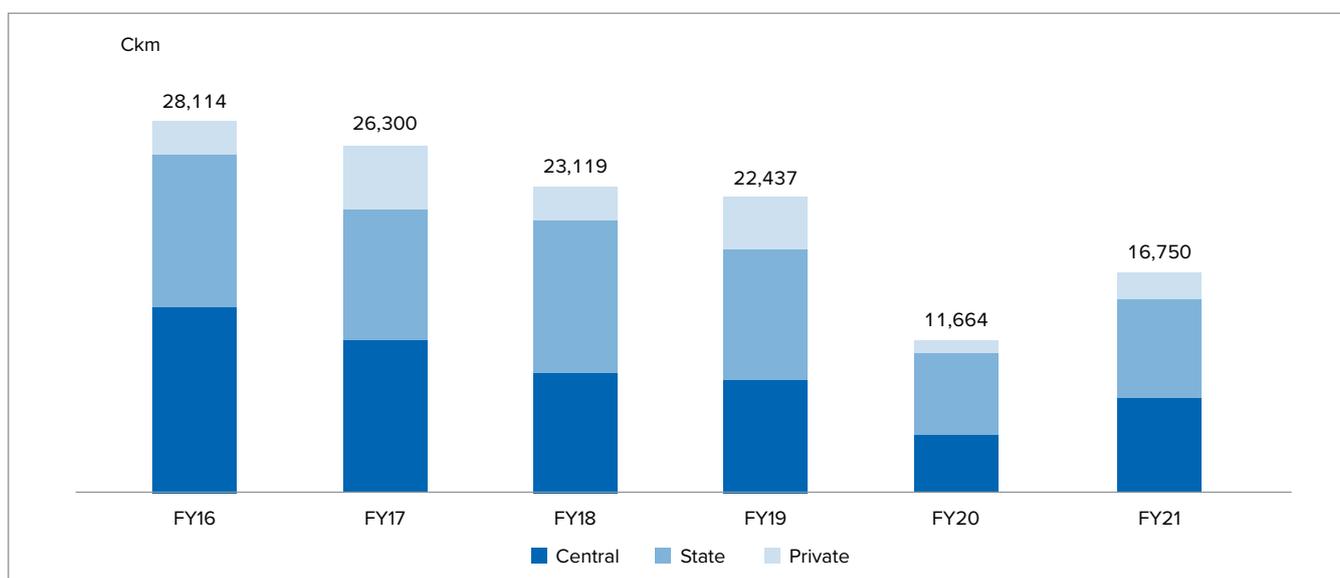
Source: CEA, CRISIL Research

There has been strong growth in the transmission system at higher voltage levels and substation capacities. This is a result of increased requirement of the transmission network to carry bulk power over longer distances and at the same time optimise the right of way, minimise losses and improve grid reliability.

The total transmission line length (above 220 kV) has increased at 5.4% CAGR from fiscal 2016 to fiscal 2021. This increase can also be attributed to an increase in the commissioning of the 765 kV lines, growing at a CAGR of 12.4% over the same time period. 765 kV lines have higher transfer capacity and lower technical losses thereby reducing the overall number of lines and rights of way

required to deliver equivalent capacity. Performance in a transmission line improves as voltage increases and as 765 kV lines use one of the highest voltage levels, they experience comparatively lesser amount of line loss. 800 kV lines have also shown strong growth momentum, rising at 29.8% CAGR over the last five fiscals, majorly owing to strong investments by the central sector. Inter-regional power transmission capacity of the National Grid has grown strongly from 58,050 MW in fiscal 2016 to 105,055 MW in fiscal 2021, at a CAGR of 12.6%. Subsequently, transformation capacity rose from 6,58,949 MVA in fiscal 2016 to 10,25,468 MVA in fiscal 2021, growing at a CAGR of ~7.6%.

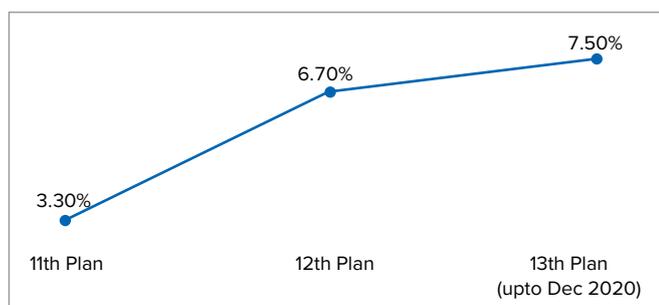
### Sector-Wise share of transmission line additions



Source: CEA, CRISIL Research

Although private sector participation has been growing in the segment, with contribution reaching ~7.5% in fiscal 2021 (till Dec 2020) (from nil in fiscal 2007). However, private participation in the transmission segment still lags the generation segment, where private contribution has grown strongly from 39% in fiscal 2015 to 47% in fiscal 2021\*.

### Private sector participation in transmission sector



\*Upto Dec 2020

Source: CEA, CRISIL Research

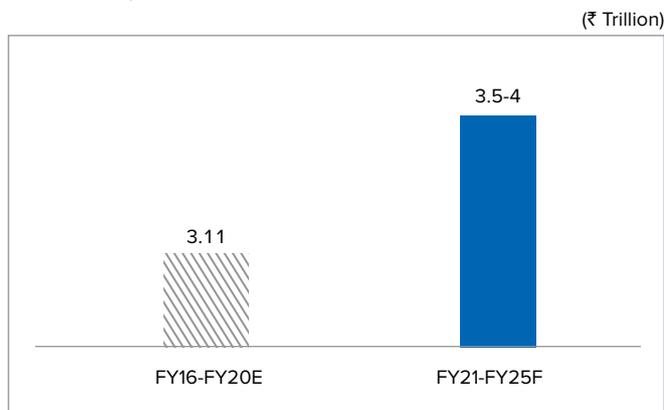
Although to encourage private-sector participation in building transmission capacity, the central government notified power transmission schemes to be undertaken through TBCB, but a lower base of private player penetration in the transmission sector necessitates higher allotment of transmission lines to private players by the central transmission utilities.

### Transmission Segment Investments to Rise to ₹ ~3.5-4 Trillion Over Next Five Years

To service a large power generation installed base, the estimated investment in the transmission sector is expected to be ~₹ 3.5-4 Trillion over the next five years. Investments in the sector are expected to be driven by the need for a robust and reliable transmission system to support continued generation additions and the strong push to the renewable energy sector as well as rural electrification.

Moreover, rising private sector participation with favourable risk-return profile of transmission projects will support growth in investments. Transmission investments could slow down slightly in fiscal 2021 due to COVID-19 outbreak, but are expected to rebound strongly in the subsequent year.

### Expected investments in transmission segment (fiscals 2021-2025)



Source: CEA, CRISIL Research

With the introduction of TBCB and viability gap funding schemes for intra-state projects, the share of private sector players in the power transmission sector is expected to increase gradually over the next five years.

Key growth drivers for transmission sector include widening gap between interregional power demand-supply, limited short-term open access availability, strong RE capacity additions, conventional power generation addition, upgradation of existing lines, improving power scenario and measures to stabilize grid, and strong government support.

### Other Key Trends

#### Key technology trends

To meet the long-term power transfer requirement by fiscal 2022 and beyond as well as for the optimal utilization of right of way, large power evacuation corridors are needed to be planned, which requires advancements in transmission voltage, conductor technology, substation equipment and infrastructure etc. Further, due to large geographical expanse of India and strongly growing power consumption need, there is requirement for transfer of large quantum of power from various generation complexes in Chhattisgarh,

Jharkhand, Orissa to load centers in Northern and Western regions. However, major limitations to the erection of ultra-high voltage lines are: transportation of large equipment to remote places, dielectric design and short circuit withstand capability.

On the conductor front there have been many advancements such as usage of high temperature low sag, high surge impedance loading and gas insulated line conductors. These conductors have been used in recent 132 kV lines bid out by the Odisha Power Transmission Corporation limited, 400 kV Meerut-Kaithal D/C line and in the Naptha-Jhakri hydro project. Usage of these conductors increases the transfer capability of the transmission line and simultaneously reduces the line losses.

Further due to growing urbanization and high real estate prices in cities, newer technology-based Gas Insulated Switchgear (GIS) substations are used, which not only reduces the space requirement but also cuts down on the maintenance and improves reliability. Modern substations are also using highly automated components with digital communication facilities, to increase the reliability of operations and reduce system downtime. With the advent of smart grid networking infrastructure and communication solutions synchronous digital hierarchy is utilized to communicate between substations, which not only helps in quick addressal of the fault but also helps in maintaining the grid frequency.

There have also been new innovative techniques used in the construction of transmission lines. For instance, there have been use of Light Detection and Ranging (LIDAR) technology, which uses laser distance measuring technology to conduct topographic mapping with the help of aircrafts. Further, helicopters are used for stringing (heli stringing) of transmission lines. A helicopter pulls the rope through stringing wheels, which are attached to each arm of structure. Conductor is then pulled back through the stringing wheels using a machine located on the ground. Then the stringing wheels are removed from each arm while attachments including dampeners are used to minimize the vibration on the conductor. Other newer technologies which help in automated inspection and maintenance planning such as drones are used to monitor lines spread over long distances. Further preventive maintenance of transmission lines are also done by modern equipment's which includes thermo vision scanning, punctured insulator detector, corona measurement devices etc.

## BRAZIL

### BRAZIL MACROECONOMIC OVERVIEW

#### Risk Overview

Fitch Solutions forecasts that real GDP in Brazil will grow by 3.2% in 2021, after a 4.1% contraction in 2020, implying that Brazil will come close to recovering to pre-COVID levels. However, a worsening COVID-19 crisis will slow the pace of the rebound over the coming quarters, presenting significant downside risks to the forecast.

### POWER AND TRANSMISSION INDUSTRY IN BRAZIL

#### Power Sector Overview

Brazil's power sector is set to see robust growth over the coming decade, in which Fitch forecasts total electricity capacity will increase from 181.6GW in year-end 2020 to 238.5GW in 2030. Subsequently, electricity generation will reach 785 TWh in 2030—up from 601 TWh in 2020.

Headline Power Forecasts (Brazil 2020-2025)						
Indicator	2020e	2021f	2022f	2023f	2024f	2025f
Generation, Total, TWh	600.6	617.0	637.2	658.4	672.2	691.2
Consumption, Net Consumption, TWh	517.5	537.6	550.9	566.3	582.0	598.7
Capacity, Net, MW	181,601.0	189,896.4	197,235.7	206,055.5	210,224.4	217,285.5

e/f = Fitch Solutions estimate/forecast. Source: EIA, Fitch Solutions

#### Updates and Structural Trends

Brazil's power sector is expected to see significant growth over Fitch's 10-year forecast period. The non-hydro renewables sector will drive capacity and generation growth, accounting for 82% of forecasted capacity additions, resulting from extensive utility-scale wind and solar project pipelines, as well as robust growth in distributed generation solar systems. In addition to the non-hydro renewables sector, a handful of large-scale projects in the thermal and hydropower sectors will also support growth. As a result, Fitch forecasts Brazil's electricity generation to increase by an annual average of 2.7% between 2021 and 2030 - totalling 785 TWh by the end of the decade.

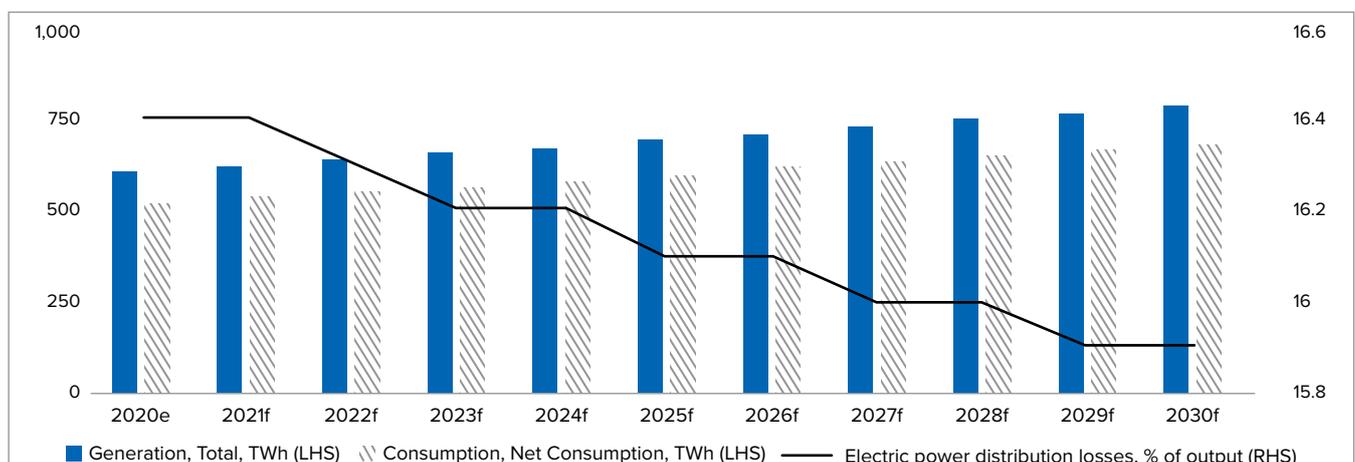
#### Electricity Consumption

Fitch estimates that electricity consumption declined by 2.6% in 2020 as a result of weakened commercial and industrial activity in H120 amid the COVID-19 pandemic. Fitch's estimated contraction remains unchanged from Q121, when Fitch revised up given a better-than-anticipated recovery in electricity consumption in H220. Looking forward, Fitch

has slightly revised up electricity consumption for 2021 and forecast electricity consumption to rebound to 3.9% growth this year—up from 3.8% forecasted in Q221. This is the result of Fitch's Country Risks team's slight upward revision to real GDP growth, up from 3.2% to 3.5%, as well as strong electricity consumption figures from the Brazilian government through March 2021. From 2021 and beyond, Fitch expects growth to return and continue, and forecast power consumption to expand by an annual average of 2.8% between 2021 and 2030, when it will total 683.1 TWh.

In line with the strengthening of the country's power consumption growth over the long term, Fitch expects Brazil will remain a net importer of electricity over the coming decade. Among the factors causing power demand to outstrip supply are high electricity losses along the transmission and distribution infrastructure. Growing investment in increasing the efficiency of the power distribution infrastructure over the coming years, including by the deployment of a smarter grid, should help to gradually reduce losses.

### Total Net Generation and Consumption Brazil (2020-2030)



c/f = Fitch Solution estimate/forecast. Source: EIA, EPE Fitch Solutions

### **Continued Growth in Power Transmission Infrastructure**

Fitch believes the Brazilian government will be committed to ensuring power transmission infrastructure is available ahead of the development of new generation projects. Supporting this view, the government held a successful auction for power transmission lines in throughout 2017, 2019 and 2020. In March 2020, the government suspended all auctions, including the June and December 2020 transmission auctions. However, in August 2020, the government resumed planning future auctions and scheduled its next tender to take place in December 2020. The auction was held on December 17 and included projects worth an estimated BRL6.1bn in investments. ANEEL's next auction was held in June 2021.

## **PERFORMANCE OVERVIEW**

### **FINANCIAL PERFORMANCE**

#### **High ROCE and an efficient capital structure with access to multiple funding sources**

Our ROCE was 1.97%, 40.22% and 36.68% for FY19, FY20 and FY21 respectively, which we believe reflects the profitability and capital efficiency of our business. We seek to maintain an efficient capital structure by raising long-term project financing and having access to multiple sources of funding including financial institutions, public and private sector banks and non-bank financial companies (NBFCs) and the capital markets. Our borrowings include non-convertible debentures, long-term loans, short-term loans, cash credit from banks and working capital demand loans.

We have also received investments from global investment managers including Standard Chartered Private Equity and AMP Capital on behalf of its Global Infrastructure Fund II. In 2021, we entered into a framework agreement with AMP Capital for the development of four of our Ongoing Projects in India, pursuant to which both us and AMP Capital have invested 50% equity in these projects. Such investments provide us with increased capital to bid for newer and larger transmission projects.

#### **Purpose driven organization, with a strong focus on ESG**

We believe that access to electricity transforms society and acts as a platform for prosperity. Hence, we believe our business is purpose driven and has an immense social impact, which acts as a driving force for our employees and stakeholders. Further, our core purpose resonates even more strongly with our stakeholders in the "post-pandemic" era, as electricity has become critical for society and economy. For instance, virtual working, remote learning and uninterrupted access to healthcare all require access to reliable power. We take pride in playing a part in enabling this by creating reliable power transmission networks. Further, we are also proud of our focus on integrating renewable energy sources to transmission grids.

Since our inception, we have endeavoured to adopt a sustainable approach to developing power infrastructure. We have integrated ESG best practices to many of our

business processes. Our ESG focus is demonstrated through sustainable practices adopted throughout our project life cycle, such as optimizing transmission routes to minimize the impact on environment and bio-diversity, innovations such as tree translocation and drone-stringing and adopting a "safety-first" culture.

### **EMPLOYEES**

As of March 31, 2021, we had 715 employees in India, out of which 260 employees are in operations, 103 employees are in sales and growth functions, 61 employees are in research and development, technology and engineering functions, 58 employees are in quality, health and safety functions and the remaining are in other functions.

As of March 31, 2021, we had 68 employees in Brazil of which 20 employees are in operations, 9 employees are in research and development, technology and engineering functions, 8 employees are in quality, health and safety functions and the remaining employees are in other functions.

In addition to the above, as of March 31, 2021, we employed 912 temporary or contract workers.

Our operations require highly skilled and experienced management and technical personnel. We offer our employees comprehensive ongoing training in order to increase their competence and capabilities.

Our employees are not covered by any collective bargaining agreements. We have not experienced any material strikes, work stoppages, labor disputes or actions by or with our employees, and we consider our relationship with our employees to be stable.

We have multiple initiative that focus on building our employees' functional and leadership capabilities. These initiatives include:

#### **Talent Review**

We conduct a comprehensive assessment for all our mid- to senior-level employees. In addition to reviewing employees' performance, this process seeks to identify key actions for their professional development. Employees' progress on the identified key actions are then tracked regularly.

#### **Leadership Development Framework**

We identify the most crucial roles in our organization, which have the most impact on our overall organisation's vision and plan, and then map our talent development efforts against those critical roles. For example, we provided our entire leadership with a detailed executive assessment and individual development planning program including psychometric assessments, '360 reviews,' feedback as well as group and individual coaching opportunities.

### **PM Next Program for Mid-Level Leaders**

This program was launched with the objective of creating a pipeline of future Project Managers, or individuals who will take on Project Manager responsibilities, from within the organization by training participants in the functional and leadership areas of cost, finance, contracts, supply chain management and design and engineering.

## **RISK MITIGATION**

### **INTERNAL CONTROLS**

We have an internal control system, commensurate with the size, scale and complexity of our operations. We have documented a comprehensive internal control system for all the major processes to ensure reliability of financial reporting and timely feedback on achievement of operational and strategic goals. It also includes compliance with the policies, procedures, laws and regulations, safeguarding of assets and economical and efficient use of resources.

To maintain its objectivity and independence, the Internal Audit function reports to the Chairman of the Audit Committee of the Board. The Internal Audit function monitors and evaluates the efficacy and adequacy of our internal controls, its compliance with operating systems, accounting procedures and policies at all our locations. Based on this report, process owners undertake corrective and preventive actions in their respective areas and thereby strengthen the

controls. Implementation is monitored on an ongoing basis with the help of an automated tool.

Significant audit observations, if any, and corrective actions thereon are presented to the Audit Committee of the Board. The Audit Committee also meets our Statutory Auditors to ascertain their views on the financial statements, including financial reporting system, compliance to accounting policies and procedures, the adequacy and effectiveness of internal controls and systems followed by us.

### **RISK MITIGATION FRAMEWORK**

Sterlite Power has a Risk Management Committee constituting of Board Members. The Committee is responsible to review, identify, evaluate, and monitor both business and non-business-related risks and take requisite action to mitigate the same through a properly defined framework. The Company has framed a Risk Management Policy to identify and assess the risk areas, monitor, and report compliance and effectiveness of the policy. The scope and functions of the Risk Management Committee are in accordance with Section 177 of the Companies Act, 2013 and the SEBI Listing Regulations and its terms of reference as stipulated pursuant to resolution passed by our Board in its meeting held on August 7, 2021.