IEX
INDIAN ENERGY EXCHANGE
INNOVATION TECHNOLOGY FUTURE

ANNUAL REPORT 22-23

15 YEARS
GROWING RESPONSIBLY

Accelerating India's Sustainable Energy Transition

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CORPORATE OVERVIEW

Accelerating India's Sustainable Energy Transition

The Government's decisive focus on renewable energy has helped the sector diversify its energy sources. The country added more than 15 GW of RE capacity in this fiscal and is on the path to achieve its target of 500 GW of non-fossil fuel-based electricity installed capacity by 2030.

IEX will support the Government's vision of achieving India's revised NDC target which now aims to reduce emission intensity of GDP by 45% (with respect to 2005 levels) and to become a Net Zero emitter by 2070.

The Indian Energy Exchange has been an instrument of change in the power sector, leading through product innovations. We remain committed to adopting new technologies, enter new markets, and launch new and futuristic products that will accelerate India's march towards energy security and sustainability.

Financial Year 2023

A Year of Resilience

IEX has been a pioneer in the Indian power markets for the last 15 years.

In the wake of a turbulent geopolitical situation and inflationary pressures on the back of supply side disruptions, IEX remained resilient in financial year 2023, diversified in terms of products and markets, and continued to invest in technology.

96.8 BU
Trading Volume

₹ 474.1 Cr.
Consolidated Revenue

₹ 305.9 Cr.
Consolidated Profit After Tax

TOWARDS A NET ZERO FUTURE

India is among the few countries that have set itself a target to achieve net zero by 2070. The country plans to achieve this through a broad two-pronged approach. One, reducing the emissions intensity of its economic activities by 45% (with respect to 2005 levels) and two, achieving 50% of its installed capacity from renewable resources, both by 2030. Blended fuels like E20, coupled with bio-fuels and compressed biogas will augment these green energy sources, helping India accelerate its drive to becoming net zero.

LONG TERM CLIMATE ACTION STRATEGY

Mid-November last year, India submitted its long-term climate action strategy to the United Nations Framework Convention on Climate Change (UNFCCC) at the UN Climate Conference (COP27). In doing so, India joined a select list of less than 60 countries that have articulated how they will achieve their net zero emissions goal in the long-term.

India's updated Nationally Determined Contribution (NDC) under the Paris Agreement to the United Nations has two broad quantifiable goals – to reduce the emissions intensity of its Gross Domestic Product (GDP) by 45% with respect to 2005 levels by the year 2030, and to achieve 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. These are the broad objectives that India has to achieve on the long path of reaching net-zero emissions by 2070.

In accordance with Prime Minister Modi's vision of "LiFE", or an environmentally conscious lifestyle, India is moving forward firmly to usher in a green industrial revolution and consequent economic transition. It is a new model of economic development that India has set out to pursue, one that aims to avoid carbon-intensive approaches of the past. If successful, this could provide a blueprint for other developing nations to emulate.

India's long-term climate strategy is consequently based on energy access, energy efficiency, research and innovation for energy sustainability, and employment with a focus on Atmanirbhar Bharat and Make in India to usher an era of energy security for the country. The plan builds on intensifying renewables growth and strengthening the grid; innovation for future technologies such as green hydrogen, fuel cells, and biofuels; improve energy efficiency through smart metering; optimum energy mix such as use of E20 fuel to complement national development scenarios; and exploring a greater role for nuclear energy. This strategic transition is expected to follow a dedicated roadmap for each identified sector within a specific time frame. Achieving the net zero target for India, thus, is a combination of policies that can limit trade-offs between security, sustainability, and affordability.

This grand push requires regulatory catalysts to keep the momentum. To draw in investments required to grow green energy capacity, the government has permitted up to 100% of Foreign Direct Investments in the sector through the automatic route. Similarly, to reduce costs of integration of renewables across the country, Inter State Transmission (ISTS) charges have been waived off for renewables, and new transmission infrastructure is being set up to facilitate an efficient distribution of energy and improve access to this power.

BUDGETARY GREEN PUSH

The Union Budget 2023-24 focus on pushing green growth has re-affirmed the Government's efforts to combat climate change. From green credits to green energy to green mobility to green farming to green buildings to green equipment, the budget's policy

focus is to help India execute one of the world's largest energy transition programs.

The Union Budget has pledged ₹ 35,000 crore in support of net zero and energy transition objectives with a near 25% increase in allocations for the Ministry of Environment, Forest and Climate Change this year. The budget for the Ministry of New and Renewable Energy (MNRE) has also increased by nearly 50% this year to ₹ 10,222 crore. Among the main policy initiatives that have been launched is the Green Credit Program under the Environment (Protection) Act, with a purpose to encourage behavioural change. Companies, individuals, and local bodies that adhere to sustainable practices under the Environment Act can raise additional resources for sustainable activities. To incentivise sustainable development, funding has also been initiated for Battery Energy Storage Systems (BESS) wherein the Government shall provide Viability Gap Funding (VGF). The budget also includes an investment of ₹ 20,700 crores for building an inter-state transmission system for grid integration of 13 GW of renewable energy from Ladakh.

ACCELERATING RENEWABLES' ADOPTION

Total installed capacity of the country stood at 418 GW as on 31st May, 2023, with a projected share of renewables set to grow to 500GW by 2030. To achieve such a transition India requires rapidly growing green energy infrastructure. Currently, close to 174 GW of the capacity or nearly 42% of the installed capacity in the country comes from renewables. About 74 GW of renewables have been added to the grid in between 2016 to 2022.

Solar

By virtue of its geographical location and proximity to the equator, India receives nearly 5,000 trillion kWh of solar power, every year according to the Ministry of New and Renewable Energy. Solar power thus is leading the country's renewables race. Inevitably, rooftop solar projects are being encouraged by the Government, which has also set up a portal – National Portal for Roof Top Solar - that is designed to accelerate the installation of such setups across the country.

Large-scale solar power infrastructure is being driven by initiatives such as the Development of Solar Parks, and Ultra Mega Solar Power Projects which are underway to achieve rapid solarisation of the Indian energy sector. An aggregate capacity of over 10GW has already been commissioned in 17 such parks with the help of these schemes, while others are currently in the pipeline. In terms of projects, the government has already approved 59 solar parks with a cumulative capacity of nearly 40 GW. The impact of these will be a significant reduction in the per unit rate of solar power in the future that will make it extremely viable and bode well for its proliferation across the country.

Solar panels have been recommended to generate electricity for homes in areas of last mile connectivity where connection to the grid might not be feasible due to remote location or geographical constraints. To improve the efficiency of solar photovoltaic panels and manufacture of upstage technologies such cells, wafers, ingots, and polysilicon, the government has decided to continue with the Production Linked Incentive (PLI) Scheme. The PLI Scheme earmarked an outlay of ₹ 24,000 crores and is expected to build 65GW of annual manufacturing capacity in the second phase of the scheme that began in September last year. By the year 2026, the Solar module manufacturing capacity is expected to reach 100 GW, which shall be a cornerstone for India's Atmanirbhar ambition.

Wind

With an extensive coastline on three sides, wind power in India is as important as solar power, contributing 43 GW of installed capacity. To balance the grid and compensate for variations in solar power generation, the country is working towards developing offshore wind energy generation stations, with a targeted installed capacity of 30 GW from such facilities by 2030. Three such sites for these offshore wind farms have already been identified with 16 zones having been identified and currently under evaluation. According to the Strategy Paper for Offshore Wind Development issued by the Ministry of New and Renewable Energy, offshore wind projects are considered extremely viable for India.

A solar-wind project is currently underway in Gujarat, which at a capacity of 30 GW, is the largest of its kind in the world.