

MANAGEMENT DISCUSSION & ANALYSIS REPORT

The management of the Company is pleased to present its report on the business environment & industry scenario, industry risks and opportunities and Company's performance during the financial year 2020-21.

BUSINESS ENVIRONMENT

Global Business Environment

The Covid-19 pandemic delivered a significant blow to the economic activities worldwide, unleashing an employment crisis, widening inequalities and pushing 131 million additional people into poverty. As per IMF's Report of April 2021, after an estimated contraction of -3.3% in 2020, the global economy is projected to grow at 6% in 2021, thereafter likely to moderate to 4.4% in 2022 and expected to moderate to 3.3% over the medium term. Economic activity has been hit by reduced personal interactions, owing both to official restrictions and private decisions, uncertainty about the post-pandemic economic landscape and policies, lesser investments, disruptions to education resulting in slower human capital accumulation, concerns about the viability of global value chains and slowdown in international trade and tourism. However, the unprecedented policy response to the pandemic has brought several reliefs. Therefore, the slowdown caused by Covid-19 is likely to leave smaller scars than the global financial crisis of 2008.

Global trade in goods and services contracted by an estimated 7.6% in 2020, slightly smaller contraction than the global financial crisis. While international travel remains at a fraction of its pre-pandemic level, global merchandise trade has been recovering since mid-2020, on the back of strong demand for electric and electronic goods, pharmaceuticals and personal protective equipment. The recovery in merchandise trade has been led by China and other East Asian economies, which were relatively successful in containing the spread of the virus and which experienced a faster-than-expected recovery in economic activities. Advanced economies faced a sharp resurgence of Covid-19 in the second half of 2020, thereby cutting short the economic rebound taking place. The expected recovery in 2021 and beyond will depend heavily on the evolution of the pandemic, its waves and the effectiveness of vaccination drives.

The United States was able to avert economic disaster in 2020, due to a significant fiscal and monetary policy response. A K-shaped recovery is underway, where industries and households most vulnerable to the pandemic, still need assistance to prevent long-term economic scarring. The goods industry is doing well, since the pandemic saw a surge in goods consumption by 3.9%. Many households purchased time-saving goods and gadgets, to improve their work-from-home experience. Meanwhile consumption of services fell by 7.3% in 2020. Many parts of the service-industry are still hit by demand and supply shock. The trajectory for recovery is dependent on a supportive policy environment. A likely change in the level of technological know-how among firms and households could make way for a productivity burst. The US economy is expected to recover and grow to 5.9% in 2021 and 4.3% in 2022, as per KPMG global economic outlook, March 2021.

In China, there was a rapid but uneven economic recovery, with consumer services trailing industrial production. The revival in 2020 was mainly driven by manufacturing and exports. The Chinese economy is expected to grow at 8.8% in 2021 and 5.4% in 2022 as per KPMG global economic outlook, March 2021. Compared to that, the Japanese economy is expected to recover and grow by 2.3% in 2021 and 2.1% in 2022.

The pandemic took its toll on the Indian economy as well. In first quarter of fiscal 2021, when the first wave of pandemic was at its peak, the Indian economy contracted by 24.4% year-on-year, after which the contraction started to ease. Due to vigorous efforts to revive the economy and with gradual relaxation of lockdowns, India had pulled out of a technical recession by Q3 of fiscal 2021 and in Q4, the Indian economy grew by 1.6% over the same period of last year. For the full fiscal 2021, the National Statistical Office (NSO) has estimated that the Indian economy contracted by 7.3%.

The IMF estimates India's GDP to grow 9.5% in financial year 2021-22, the highest among emerging and advanced economies, followed by expected growth of 8.5% in financial year 2022-23. Large-scale privatization process, coupled with the target of fiscal deficit of 6.8% for financial year 2021-22, is expected to provide headway for incremental expenditures on healthcare and capital creation, enhancing the focus on sustainable economic development. However, key factors that would drive this upturn include normal monsoons, success in containment of Covid-19 pandemic and discretionary spending staying unaffected by cost pressures, particularly those stemming from high prices of petrol and diesel.

Electricity demand across the world is expected to increase by 4.5% in 2021, supported by picking up of economic activity and rapid growth of major emerging economies. A transition to a lower carbon energy system is likely to lead to fundamental restructuring of the global energy system, with more diversity in energy mix, greater consumer choice, localized energy markets and increasing levels of integration and competition. These changes reinforce the fact that global energy systems are transitioning towards lower carbons.

Indian Business Environment

India is likely to emerge as the world's fastest-growing major economy, with the IMF holding its growth forecasts at 8.5% for financial year 2022-23. The Economic Survey 2020-21 has also drawn attention to the V-shaped economic growth, a testament to the burgeoning Indian economy and its intrinsic strength.

During fiscal 2021 and beyond, RBI has brought in a slew of measures to mitigate the adverse impact of pandemic conditions. RBI announced regulatory measures such as moratorium on term loan instalments, deferment of interest on working capital facilities, easing of working capital financing, extension of resolution timelines for stressed assets and asset classification standstill by excluding the moratorium by lending institutions. RBI has also introduced Long Term Repo Operations (LTROs) and Targeted Long-Term Repo Operations (TLTROs), to augment system as well as sector-specific liquidity and to alleviate stress. Special refinance facilities were provided to select all-India financial institutions, while a Special Liquidity Facility for Mutual Funds (SLF-MF) was introduced to ease redemption pressures. Further, Cash Reserve Ratio (CRR) of all banks was reduced by 100 basis points to 3% for a period of one year ending on March 26, 2021. In the aftermath of the second wave seen in April 2021 and realizing the need to further augment the health infrastructure of the country, RBI gave leeway to banks to borrow ₹50,000 crore at repo rate, for onward lending to health care spending by hospitals, manufacturers and individuals.

The power sector in the country witnessed limited disruption due to Covid-19, as power is an essential service. Majority of States reported uptick in the demand, showing clear signs of recovery in the economy. The uptick was caused primarily due to early rise in mercury along with spurt in commercial and industrial activities, showing return to pre-Covid levels of power consumption. Renewables came into a bright spot with increase in their relative share in the generation mix.

In March 2021, power consumption in the country grew 24.35% to 123.05 billion units (BU), over the corresponding month a year ago. Power consumption in March 2020 was recorded at 98.95 BU. In the complete financial year 2020-21 vis-à-vis financial year 2019-20, electricity consumption in the country had contracted by 0.8%. This was mainly due to lower demand from the industrial and commercial sector consequent to lockdowns.

The Government of India's focus on attaining 'Power For All' has accelerated the capacity addition in the country. India's rank jumped to 22nd position in 2020 on World Bank's Ease of Doing Business - "Getting Electricity" rankings, as compared to 137th position in 2014. Further, in the financial year 2020-21, electricity production in India reached 1,234 BU.

INDUSTRY STRUCTURE AND DEVELOPMENT

Industry Overview

India is the third largest producer and second largest consumer of electricity in the world. The country's power sector is one of the most diversified, with power generation from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power and non-conventional sources such as wind, solar and agricultural & domestic waste. The total installed capacity of power stations in India as of March 2021 stood at 382 GW.

The Government is aiming to achieve significant capacity addition in renewable energy (including from solar and from wind) to reach 450 GW of renewable capacity by 2030. The Government is also preparing a 'rent-a-roof' policy, for supporting its target of generating 40 GW power through solar rooftop projects by 2022.

Industry Structure

Generation

The installed power generating capacity in the country as on March 31, 2021 was 382 GW, which included 103,869 MW (27%) in the State sector, 97,507 MW (26%) in the Central sector and 180,774 MW (47%) in the Private sector. The Plant Load Factor (PLF) in financial year 2020-21 for thermal power plants across the country was 61.78% for Central, 44.68% for State and 54.27% for Private sector plants. In terms of generation capacity by type, the installed thermal capacity was 2,34,728 MW (61.42%), installed hydro capacity (Renewable) was 46,209 MW (12.09%) and installed capacity in renewable energy (RES-MNRE) was 94,434 MW (24.7%). The nuclear capacity during the year 2020-21 stood at 6,780 MW (1.8%). RES-MNRE (Renewable Energy Sources) include small hydro projects, biomass gasifiers, biomass power, urban & industrial waste power, solar energy and wind energy.

The conventional power generation in the country declined from 1250.78 BU as on March 31, 2020 to 1234.44 BU as on March 31, 2021, registering a decline of 1.31%. The fall was mainly due to lower output from conventional sources (thermal, hydro and nuclear), which account for around 90% of the total power generation. The lower output from conventional sources was partly offset by higher generation from renewable sources, which witnessed a 5.8% increase. There was also a sharp fall in electricity demand from the industrial and commercial sectors in the period from March to May 2020, consequent to nationwide lockdown and disruption in supply of inputs, raw materials and labour shortages.

Renewable Energy

The Indian renewable energy sector is the fourth most attractive renewable energy market in the world. As of March 31, 2021, the total installed capacity for renewables was 94.43 GW. This included 40.09 GW of solar capacity, 39.24 GW of wind capacity, 10.31 GW of bio power and 4.79 GW of small hydro capacity. Further projects with total 49.7 GW capacity are at various stages of implementation and projects of 25.91 GW capacity are under various stages of bidding.

The installed generation capacity in renewables has gained pace over the past few years, posting a CAGR of 17.33% between financial years 2016-2020. The Government is having ambitious targets to achieve 450 GW of renewable energy capacity by 2030. In November 2020, the Government announced production-linked incentive (PLI) scheme worth ₹4,500 crore for manufacturing high-efficiency solar PV modules over a period of five years. In order to give further impetus to domestic manufacturing, the Government also agreed to impose basic custom duty on import of solar PV cells and solar PV modules with effect from April 1, 2022.

Transmission and Distribution

Transmission

Transmission sector works as a foundation stone holding the development of power generation and power distribution segments. An important element in the power delivery value chain, transmission facilitates evacuation of power from generating stations and its delivery to the load centres. For efficient dispersal of power to deficit regions, it is required to strengthen the transmission system network, enhance inter-state power transmission system and augment the National Grid. An extensive network of transmission lines has been developed over the years, for evacuating power produced by different generating stations and distributing the same to the consumers. The nominal Extra High Voltage lines in vogue are ± 800 kV HVDC & 765 kV, 400 kV, 230/220 kV, 110 kV and 66 kV AC lines.

The country's power transmission sector has witnessed unprecedented growth in the past five years. The private sector is expected to play an important role in achieving the country's grid expansion targets, as competitive bidding gains momentum at both inter-state and intra-state levels. Several grid-expansion programmes such as the Green Energy Corridor and cross-border links are underway to expand the physical grid infrastructure. Further, transmission utilities, at the Central and State level, are expected to invest significantly in new technologies to make grids more reliable, resilient, secure and smart. The sector is also expected to immensely benefit from major policy reforms including the Electricity Act amendments and Tariff Policy amendments.

During the financial year 2020-21, a total of 16,462 cKm (circuit kilometers) transmission lines were added, as compared to about 11,664 cKm during the previous financial year. Asset monetization has been the key focus area in power transmission. Power Grid Corporation of India Limited is sponsoring a transmission InvIT with assets worth about ₹7,000 crore. Focusing on asset monetization to create a capital pool for more projects, is one of the primary objectives of the Government for the transmission sector.

Distribution

Distribution is the most important link in the entire power sector value chain, as it interfaces between utilities and consumers. Historically, power distribution has been the domain of Government-owned utilities, and is actually in the realm of 28 State Governments, with the private sector playing only a limited part. The sector has been reeling under losses, making it crucial for the policy makers to devise various measures to make the State discoms and utilities viable.

To reduce "non-technical losses," which include electricity theft, meter tampering and non-payment by customers, the Government has taken strong reform initiatives such as revision in tariff, National Electricity Fund (NEF), Ujwal DISCOM Assurance Yojana (UDAY), installation of smart meters etc., which have started to show positive results. Further, the Government has also launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) to provide electricity connections to un-electrified households in rural and urban areas.

The Central Government had announced a liquidity infusion scheme as part of *Atmanirbhar Bharat* on May 13, 2020, in the backdrop of Covid-19 pandemic in the country. Under this scheme, REC and PFC have extended special long-term transitional loans at concessional rates to discoms, against their receivables from State Governments in the form of electricity dues and subsidy not disbursed, to enable them to clear their outstanding dues as existed on June 30, 2020 towards central public sector undertakings, generation and transmission companies, independent power producers and renewable energy generators. REC has sanctioned liquidity infusion loans of ₹60,191 crore and disbursed an amount of ₹39,116 crore to various discoms under this scheme, during the financial year 2020-21.

Power Sector Policy Environment

The Union Budget for financial year 2021-22 has introduced a slew of reforms and initiatives for the power sector. An amount of ₹22,000 crore has been allocated for power and renewable energy and 15% concessional tax rate has been decided for new power generation companies. States and Union Territories have been urged to replace conventional energy meters with prepaid smart meters in three years. Thermal plants have also been advised to shut operations if they don't meet emission norms. Further, large solar power capacity would be set up alongside rail tracks and on lands owned by Railways, as the Government aims to achieve

electrification of 27,000 km of railway tracks. Solar power plants will be developed on barren farmlands, to give a boost to the sector. In addition to the above, five new smart cities would be set up via PPP model.

In the past, the Government of India has taken significant policy measures to restructure the power sector and to improve the transmission, sub-transmission and distribution network. Starting from the changes brought in by the Electricity Act of 2003, the legal framework governing power sector has witnessed notification of National Electricity Policy, National Tariff Policy, Renewable Energy Policy, National Hydro Policy and Mega Power Policy, reflecting the Government's efforts to bring competitiveness and efficiency in the sector. Significant steps are being taken to enhance energy security in the country by fostering domestic production, through the most significant upstream reform of India's Hydrocarbon Exploration and Licensing Policy (HELP) and building up dedicated oil emergency stocks in the form of a strategic petroleum reserve.

Through Energy Research, Development & Deployment (RD&D), the Government is working to attract global companies to produce solar PV, lithium batteries, solar charging infrastructure and other advanced technologies in India. It can be a strong enabler of India's energy policy goals as well as national priorities such as "Make in India". The Government is also strengthening its innovation efforts in a broad range of energy technology areas, including cooling solutions, E-mobility, smart grids and advanced bio-fuels.

Over the last few years, Indian power sector has undergone a significant transformation, that has redefined the industry outlook through path-breaking policy initiatives like UDAY, Power For All, UJALA, among others. While discom reforms have achieved limited financial success, recent policy changes like payment security mechanism, power-cut penalization, proposed amendments in Electricity Act etc., would go a long way in bringing efficiency into the sector. India has already kick-started the privatization of its power distribution companies in union territories. Going forward, similar privatization drive may take place for State transmission companies, to free-up Government capital and to allow parity with industry efficiency. This would usher in competition, forcing discoms to improve their performance standards and adopt a more consumer-centric approach.

Apart from the above, the *Atmanirbhar Bharat* initiative of the Government puts India firmly on the path of accelerated growth, making it a compelling investment opportunity for foreign capital. A huge amount of this foreign capital is expected to flow into Indian infrastructure sector including through InvITs and REITs.

Rural Electrification Policy

The Rural Electrification Policy was notified in August 2006, with the objective of improving access and quality of electricity supply in rural areas to ensure rapid economic development, by providing electricity as an input for productive uses in agriculture, rural industries etc.

National Solar Mission

The National Solar Mission (NSM) was launched in January 2010 as a major initiative of the Government of India involving States, R&D institutions and industries to promote solar energy, while addressing energy security and the challenges of climate change of the country. Thus, it constitutes a major contribution by India to the global effort to meet the challenges of climate change. The Mission is one of the several initiatives that are part of the National Action Plan on Climate Change (NAPCC).

The objective of the Mission is to establish India as a global leader in solar energy, by creating the policy conditions for its large-scale diffusion across the country as quickly as possible, abatement of carbon emissions and creation of direct and indirect employment opportunities for both skilled and unskilled persons. The Mission has a target of deployment of 100 GW grid connected solar capacity by 2022.

Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)

PM-KUSUM scheme is one of the largest initiatives in the world to provide clean energy to more than 3.5 million farmers, by solarizing agriculture pumps. The Cabinet Committee on Economic Affairs had approved PM-KUSUM scheme in its meeting held on February 19, 2019. The scheme aims to install grid connected ground mounted solar power plants (upto 2 MW) aggregating to a total capacity of 10 GW, install 20 lakh standalone solar pumps and solarize 15 lakh grid connected agricultural pumps. Subsequently, the scheme was expanded in financial year 2020-21, to add solar capacity of 30.80 GW by 2022.

National Wind-Solar Hybrid Policy

The Ministry of New & Renewable Energy (MNRE) issued National Wind-Solar Hybrid Policy on May 14, 2018. The main objective of the policy is to provide a framework for promotion of large grid connected wind-solar PV hybrid systems for optimal and efficient utilization of wind and solar resources, transmission infrastructure and land. The policy also aims to encourage new technologies, methods and way-outs involving combined operation of wind and solar PV plants.

Wind-solar PV hybrid systems would help in reducing the variability in renewable power generation and achieving better grid stability. A wind-solar plant will be recognized as hybrid, if the rated power capacity of one resource is at least 25% of the rated power capacity of the other resource. The Central Electricity Authority (CEA) and Central Electricity Regulatory Commission (CERC) shall formulate

necessary standards and regulations including metering methodology and standards, forecasting and scheduling regulations, grant of connectivity and sharing of transmission lines etc. for wind-solar hybrid systems.

Deendayal Upadhyaya Gram Jyoti Yojana

The Ministry of Power, vide OM dated December 3, 2014, had launched “Deendayal Upadhyaya Gram Jyoti Yojana” (DDUGJY), an integrated scheme covering all aspects of rural power distribution. The scheme has an approved outlay of ₹43,033 crore, including budgetary support of ₹33,453 crore from the Government of India. Under the scheme, 60% of the project cost (85% for special category States) is provided as grant by Government of India and additional grant up to 15% (5% for special category States) on achievement of prescribed milestones. All erstwhile RE schemes (including Rajiv Gandhi Grameen Vidyutikaran Yojana i.e., RGGVY) have been subsumed in DDUGJY. Your Company is the nodal agency for implementation of DDUGJY scheme.

DDUGJY facilitates towards achievement of ‘24x7 Power For All’ in the rural areas of India, through the following project components:

- Separation of agriculture and non-agriculture feeders facilitating continuous quality power supply to non-agricultural consumers and adequate power supply to agricultural consumers;
- Strengthening and augmentation of sub-transmission & distribution infrastructure;
- Micro-grid and off-grid distribution network;
- Metering of distribution transformers/feeders/consumers; and
- Rural Electrification component (including the erstwhile RE projects).

On August 15, 2015, the Hon’ble Prime Minister had announced that all remaining 18,452 Un-Electrified (UE) villages in the country would be electrified within 1,000 days, with the help of the States. The work was taken up on a Mission mode and as on April 28, 2018, all census inhabited villages in the country stand electrified.

Further, major achievements upto March 31, 2021 include metering of 2,34,193 nos. of distribution transformers, feeder separation (including 11 kV lines) of 7,88,978 cKm, metering of 14,021 nos. of 11 kV feeders and commissioning of 7,098 nos. of sub-stations (including augmentation).

SAUBHAGYA - Pradhan Mantri Sahaj Bijli Har Ghar Yojana

With the success of village electrification, emphasis was further given to household electrification in every village and district of the country. Towards this purpose, the Government of India launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) on September 25, 2017, with a total cost of ₹16,320 crore (including gross budgetary support of ₹12,320 crore). The scheme aimed at achieving universal household electrification, which requires creation of electricity access through last mile connectivity. Wherever grid connectivity is technically not feasible and financially unviable, electrification is resorted through solar-based off-grid systems. REC is designated as the nodal agency for operationalization of SAUBHAGYA scheme.

The SAUBHAGYA scheme aims at providing:

- Last mile connectivity and electricity connection to all un-electrified households in rural areas;
- Last mile connectivity and electricity connection to all remaining economically poor un-electrified households in urban areas. Non-poor urban households are excluded from this scheme;
- Solar Photo-Voltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible villages/habitations, where grid extension is not feasible or cost effective.

Under the scheme, ₹14,109 crore (including grant of ₹9,093 crore) has been sanctioned by the Ministry of Power to 26 States and Union Territories, against which ₹8,736.90 crore (including grant of ₹5,393.59 crore) has been released till March 31, 2021. It is noteworthy that 2.82 crore households have been electrified under SAUBHAGYA, DDUGJY and State Government schemes till March 31, 2021.

Ujwal DISCOM Assurance Yojana

In financial year 2015-16, the Government of India announced “Ujwal DISCOM Assurance Yojana” (UDAY) which aims at financial turnaround and revival of power distribution companies (discoms). UDAY scheme empowers discoms with the opportunity to break even at the end of their respective MoU periods through following initiatives:

- Improving operational efficiencies of discoms;
- Reduction of cost of power;
- Reduction in interest cost of discoms; and
- Enforcing financial discipline on discoms through alignment with State finances.

The programme has already witnessed significant traction from various State Governments and discoms, as 32 State / Union Territories are now part of the UDAY fold. The scheme is showing encouraging results, as liabilities of discoms are being taken over by the State Governments, thus cleaning the balance sheets of discoms and enabling them to restart the capital expenditure cycle.

National Electricity Fund

National Electricity Fund (NEF) is an interest subsidy scheme of the Government of India, to provide interest subsidy on interest paid for loans availed by State power utilities / distribution companies, both in public and private sector, to improve the infrastructure in Distribution sector. The scheme has a provision of ₹8,466 crore (against interest subsidy and other incidental expenses), to be provided over 14 years against interest paid on loan disbursements amounting to ₹23,973 crore, for distribution schemes sanctioned during two financial years viz. 2012-13 and 2013-14. The scheme is reform-linked and interest subsidy of 3% to 7% is payable to the discoms, on achievement of reform-based parameters outlined in NEF Guidelines. REC is the nodal agency for operationalization of NEF scheme and till March 31, 2021, interest subsidy of ₹448.70 crore has been released under the scheme.

Integrated Power Development Scheme

The Government of India has approved the "Integrated Power Development Scheme" (IPDS scheme) with an outlay of ₹65,424 crore, vide Office Memorandum dated December 3, 2014, for improvement in sub-distribution and distribution networks of urban areas, comprising (i) strengthening of sub-transmission and distribution networks (ii) metering of Distribution Transformers / Feeders / Consumers and (iii) IT enablement of distribution sector and strengthening of distribution network for completion of the targets laid down under R-APDRP (Restructured Accelerated Power Development and Reforms Programme) for the XII and XIII plans by carrying forward the approved outlay for R-APDRP to IPDS programme as a separate component. For this purpose, the earlier scheme of R-APDRP and its targets have been subsumed in IPDS. The financing pattern of the scheme is similar to that of DDUGJY scheme.

Unnat Jyoti by Affordable LEDs for All

Unnat Jyoti by Affordable LEDs for All (UJALA) is a scheme launched by the Government in May 2015 for replacement of 77 crore incandescent lamps with LED (Light-Emitting Diode) bulbs, in order to promote energy efficiency in the country. Under the said scheme, Energy Efficiency Services Limited (EESL), a joint venture of your Company and three other power sector PSUs, provides LED bulbs to domestic consumers at a low cost. LEDs have a relatively longer life and are highly energy efficient as compared to incandescent bulbs and CFLs (compact fluorescent lamps), thus saving both energy and costs in the medium term. Nearly 37 crore LED bulbs, 72 lakh tubelights and 23.5 lakh energy efficient fans have so far been distributed by the Government, a move that resulted in savings of over ₹19,087 crore per year in the electricity bills of consumers, leading to reduction of over 386 lakh tonnes of carbon dioxide per annum.

Further, under the Street Lighting National Program (SLNP), EESL replaces conventional streetlights with smart and energy efficient LED streetlights across India, at its own costs, without any need for municipalities to invest. The consequent reduction in energy and maintenance cost of the municipality is used to repay EESL over a period of time. Till date, EESL has installed over 1.19 crore LED streetlights in urban local bodies and Gram Panchayats across India. This has resulted in estimated energy savings of 7.99 billion kWh per year with avoided peak demand of 1,332 MW, GHG emission reduction of 5.51 million tonnes CO₂ per year and estimated annual monetary savings of ₹5,631 crore in electricity bills of municipalities.

EESL is also implementing LED Street lighting projects in Gram Panchayats on the same service model as the SLNP for municipalities, with the objective to promote the use of efficient lighting in rural areas. So far, EESL has installed 26 lakh LED streetlights in rural areas of Andhra Pradesh, Jharkhand, Goa and Telangana.

Transparency and online Apps

Transparency has been given a key focus in all major power-sector reform initiatives taken in the recent past. The Ministry of Power has launched various mobile apps and websites, to empower the stakeholders to track the working and performance of the Ministry and the various reform initiatives taken by it. These include the 'UDAY App', which gives updates on the progress of UDAY scheme, 'UJALA App', which provides updates on the LED bulb distribution, 'Vidyut Pravah App', which gives real-time information on electricity price and availability, 'TARANG App', which monitors the progress of transmission system in India and 'Urja Mitra App', which enables the citizens to access real time and historic outage information of discoms.

In addition to the above policies and initiatives, the Government of India has taken various other steps for improving the power sector scenario, such as National Electricity Policy 2021, Draft Electricity Amendment Act, National Mission for Enhanced Energy Efficiency, Pumped Hydro Storage Policy, Energy Conservation Building Code, National E-Mobility Programme etc. The Government has readied a raft of power sector reforms, including implementing the direct benefit transfer (DBT) scheme in the electricity sector for better targeting of subsidies, promoting retail competition and instilling financial discipline at state-owned discoms. These initiatives, coupled with the Government's efforts towards promoting transparency, would redefine the power sector by making it an attractive investment destination in the near future.

OPPORTUNITIES AND STRENGTHS

REC has contributed successfully to the development of power infrastructure in the country, right from its inception in 1969. Starting with energization of pump-set irrigation systems in the initial years, to becoming a major financial institution of power sector in the current times, REC has come a long way.

While Covid-19 pandemic has presented several challenges for the business and industry as a whole, it has also presented unparalleled opportunities for improvement in the power sector. These include proposed amendments in the Electricity Act, draft Electricity Rights of Consumer Rules, real time market regulations and privatization of distribution and retail segment of Union Territories followed by State discoms. These reforms would infuse much needed transparency, accountability and efficacy in the distribution segment of the power sector value chain.

Ambitious transitioning towards renewable energy sources is lined up, as also towards hydrogen-based energy and smart metering. At the same time, there is a need to focus on traditional areas of the energy sector, such as discom revival and stressed assets. The foremost focus on discom viability has been recognized as a critical unfinished agenda. The outcome and reform-linked financial package of more than ₹3 lakh crore for discom infrastructure upgrade is a forward-looking plan spanning over five years. This will assist the development of distribution infrastructure, feeder separation and installation of smart meters. Industry looks forward to details of the nature of this package and how it supplements other Central and State schemes. The proposal to let consumers choose their electricity supplier would unleash competition and help improve efficiency, as will the Government's intent to increase private sector participation in the distribution sector.

Monetization of transmission assets through the InvIT model is a promising move that would help in adding transmission capacity to match the rapid pace of electricity generation and increasing demand. Expanding capitalization of SECI and IREDA, which are lighthouse organizations for the power sector, would also provide boost to the renewable energy segment. The proposal to make dividend payments to REIT and InvIT investors exempt from TDS and setting up a Development Financial Institution are welcome measures to encourage and facilitate investments in the power sector, besides other infrastructure.

The Government had allocated ₹111 lakh crore to the National Infrastructure Pipeline for financial years 2019-25, out of which energy sector accounts for 24%. The total capex projected for the infrastructure sectors during financial years 2019-25 is a massive ₹102 trillion, out of which outlay for conventional power and renewable energy projects is ₹11.8 billion and ₹9.3 billion respectively. While the private sector is expected to take a lead in the renewable energy investments, the investments in conventional and atomic energy would largely come from the public sector. The challenge would be to extend investment opportunities to distribution, because without a large-scale overhaul of distribution infrastructure and improvement of the finances of discoms, growing generation capacity shall be redundant and riddled with costly disputes down the line.

Expanding domestic manufacturing is necessary to support the growth of renewables. Duties on solar inverters and solar lanterns would help, provided that existing projects are protected from adverse impact. The phased local manufacturing plan for solar cells and panels would help minimize dependence on imports for solar cells and modules in the long run, and contribute towards *Atmanirbhar Bharat*. The production-linked incentive scheme for battery manufacturing would also enhance the ecosystem for storage manufacturing in the country, with positive implications for renewable energy and E-mobility sectors. Additionally, the National Hydrogen Mission would help in achieving a sustainable, futuristic energy mix and support energy storage. According to a study, the cumulative electric vehicle sales in all vehicle segments would jump to over 100 million units by financial year 2030.

Your Company is well poised for the existing and emerging opportunities presented by the economic development, emanating from leading Governmental reforms and increase in the per capita electricity demand in the country, considering its long-standing strategic positioning and expertise in the power sector.

THREATS, RISKS AND CONCERNS

REC's performance and growth of its business are dependent on the performance of the overall Indian economy. The loss caused to GDP due to the nationwide lockdown and resultant decline in economic activities also resulted in a shortfall in demand. The world is still dealing with new waves and variants of Covid-19 pandemic, which pose fresh challenges to all geographies and sectors. The power sector also faced problems like disruption of project execution schedules, delays caused due to movement of migrant workers, pressure on finances and liquidity crunch.

The socio-economic impact of Covid-19 also affected the energy markets during 2020. Negative electricity demand, lower utilization of coal-fired capacity and growing financial stress in the distribution and generation segments affected the performance of the power sector, including renewables.

Entering the power generation business requires a heavy initial investment. Further, there are bottlenecks like fuel linkages, payment security and retail distribution. Despite there being enough room for many players, shortage of inputs and regulatory hurdles has dissuaded new entrants. Trading of solar power is one segment that has not picked up yet, due to aggressive tariffs. However, this may also be an opportunity in future from the perspective of stronger payment security mechanism. Efficiency improvement

measures in the sector especially through IT enablement, promotion of renewable technologies and energy efficiency solutions are expected to provide business opportunities in the coming future to various stakeholders.

Equity constraint of promoters in private sector projects also leads to delay in project implementation and consequent cost and time overruns. The failure of borrowers in meeting their debt related obligations adversely impacts the Company's profits, thereby creating stressed assets and impacting the ability of the Company to mobilize low-cost funds. The Indian capital market is evolving continuously, as there is a shift in the pattern of power sector financing. In case borrowers start directly accessing the market, the same may affect the Company's business.

The Company is also concerned about prevailing exposure norms, financial position of discoms, limited fuel availability, high AT&C losses, entry of new players in the market, rising competition from banks and multilateral agencies, uncertain business environment, fluctuation in rupee, likely increase in cost of capital due to volatile market conditions, low power demand and no likely addition in conventional generation capacity in the next 5 years. Further, state of business and policy environment in the country also has a cascading effect on the interest-rate regime, cost and availability of raw materials, gestation period of power projects and capital outlays required for the same. General economic conditions may also have a direct bearing on the viability of power projects, which may affect the capacity of the borrowers to service their loans.

On the other hand, the Government is taking several initiatives to put the power sector on revival path. Last few years have witnessed considerable reforms including 24x7 Power For All, DDUGJY, SAUBHAGYA, UDAY, IPDS, implementation of Outage Management System, 11 kV Rural Feeder Monitoring Scheme, development of National Power Portal, announcement of package under *Atmanirbhar Bharat* and resolution of stressed assets in the sector. Such initiatives, along with raising of resources at a low cost and ensuring their deployment in avenues offering the best returns, would be the key factor for sustainable growth and profitability of the Company.

SEGMENT-WISE OR PRODUCT-WISE PERFORMANCE

REC is a leading Non-Banking Financial Company categorized as Infrastructure Finance Company by the Reserve Bank of India, servicing the financing needs of entire power sector value chain. REC's principal products are interest-bearing loans to State utilities and private-sector borrowers. The Company does not have any separate reportable segment.

During the financial year 2020-21, the Company sanctioned total loan assistance of ₹1,54,820.87 crore towards various power sector projects/schemes. The same included ₹39,613.53 crore towards Generation projects, ₹17,171.34 crore towards Renewable Energy projects, ₹19,492.75 crore towards T&D projects, ₹60,191.36 crore towards liquidity infusion scheme of the Government of India under *Atmanirbhar Bharat* and ₹4,750.00 crore towards other loans including short-term and medium-term loans. Further, outstanding dues of ₹13,601.89 crore, on which moratorium was extended pursuant to RBI directive and Board approved moratorium policy, are also included in the above sanctions.

During the financial year 2020-21, the Company disbursed a total sum of ₹92,987.49 crore, which included ₹25,929.76 crore towards Generation projects, ₹3,265.13 crore towards Renewable Energy projects, ₹19,301.22 crore towards T&D projects, ₹39,115.50 crore towards liquidity infusion scheme of the Government of India under *Atmanirbhar Bharat* and ₹3,900.79 crore towards other loans including short-term and medium-term loans, besides ₹1,475.09 crore of counter-part funding under DDUGJY, DDUGJY-DDG and SAUBHAGYA schemes of the Government of India. Further, the Company also disbursed total subsidy of ₹4,940.62 crore from the Government of India, i.e., ₹4,527.01 crore under DDUGJY, ₹25.49 crore under DDUGJY-DDG and ₹388.12 crore under the SAUBHAGYA scheme.

OUTLOOK

The power sector outlook for the year 2021 looks bright despite the situation caused by Covid-19 pandemic. Electricity generation is projected to grow by 5% to 7% in financial year 2021-22 as against financial year 2020-21. The sector is currently on the path to recovery, with a steady improvement in power demand and resumption of economic activities. The reforms announced in year 2020, such as privatization of discoms in the Union Territories and the special liquidity infusion scheme of ₹90,000 crore for distribution utilities, have increased the focus on consumer rights and set the stage for a better structured power sector.

The share of renewable energy is constantly on the rise in the country's total energy mix. The Union Power Ministry's directive to all discoms to purchase at least 21% of their total energy requirements from renewable energy sources by 2021-22 augurs well for the sector, which came across as more resilient during the lockdown last year.

The projects that suffered delay in commissioning or disruption in supply chain during 2020 are likely to observe development or completion in 2021. Privatization of discoms, along with other corrective measures, is expected to bring in greater operational efficiency and improved financial performance along with quality customer care for power consumers. The Production Linked Scheme announced in 2020 is also a welcome measure. In the long run, a well-rounded and robust power delivery system, that is scalable, market-based and engaging the private sector stakeholders, would create a triple-win model benefitting the discoms, franchisees and customers. This will also aid the Government of India's efforts to provide access to reliable and clean power for all.

Even as the electricity demand increases in financial year 2021-22, ICRA's credit outlook for the generation and distribution segments of thermal energy sector continues to remain negative. However, the transmission segment's credit outlook remains positive, because of timely payment realization and increasing share of renewables in the energy basket.

Power generation and consumption is expected to improve in financial year 2021-22, with higher levels of economic activity being anticipated, amid optimism for the vaccination programme. At the same time, uncertainty pertaining to effective control of the pandemic and likelihood of prolonged restrictions across regions, pose a risk to the sustainability in economic revival and also to power demand.

AWARDS & ACCOLADES

The Company has won various awards and recognitions during the financial year 2020-21, including Best Organization for Women Empowerment at Women Achievers Awards 2020 by Exchange4Media, 10th PSE Excellence Award for Corporate Governance (as runner-up in Maharatna & Navratna category), SKOCH Award for Response to Covid, Mahatma Award for CSR Excellence 2020, National PSU Excellence Awards in CSR, IT, Environment & HR categories and CSR Shining Star Award for Women Empowerment. REC's corporate communication team is recognized as one of the Top 30 Corporate Communication Teams in India by Reputation Today.

INTERNAL CONTROL SYSTEMS AND THEIR ADEQUACY

The Company maintains an adequate system of Internal Controls including suitable monitoring procedures to ensure accurate and timely financial reporting of various transactions, efficiency of operations and compliance with statutory laws, regulations and Company policies. Suitable delegation of powers and guidelines for accounting have been issued for uniform compliance. REC also has in place its ERP operations and E-office system, to ensure IT based operations with minimum manual interventions. In order to ensure that adequate checks and balances are in place and internal control systems are in order, regular and exhaustive internal audits of various divisions and offices are conducted by in-house Internal Audit division or external professional audit firms. Further, review audits of various regional and state offices are also conducted by the in-house Internal Audit division, for those offices where internal audit is being outsourced continuously for three years. The internal audit covers all the major areas of operations of the Company including identified critical/risk areas, as per the Annual Internal Audit Programme. The Audit Committee of Directors periodically reviews the significant findings of audits, as prescribed in the Companies Act, 2013 and in the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

FINANCIAL & OPERATIONAL PERFORMANCE

The Company gives utmost priority to the timely realization of its dues towards principal, interest etc. The amount due for recovery including interest for Standard Assets (Stage I & II) during the financial year 2020-21 was ₹71,680.23 crore (including ₹13,601.89 crore as per Covid-19 moratorium policy), as compared to ₹62,340.60 crore during the previous financial year. The Company recovered a total sum of ₹71,424.90 crore towards Standard Assets (Stage I & II) during the financial year 2020-21, as against ₹61,945.04 crore during the previous financial year. The Company achieved recovery rate of 99.64% for the financial year 2020-21.

The overdues from defaulting borrowers pertaining to Standard Assets (Stage I & II) as on March 31, 2021 were ₹1,112.46 crore. Further an amount of ₹330.50 crore has been recovered during the financial year 2020-21 from Credit Impaired Assets (Stage III), as compared to ₹614.69 crore recovered during financial year 2019-20. Your Company's Credit Impaired Assets (Stage III) continue to be at low levels. As on March 31, 2021, the Gross Credit Impaired Assets (Stage III) were ₹18,256.93 crore, i.e., 4.84% of Gross Loan Assets; and Net Credit Impaired Assets (Stage III) were ₹6,465.61 crore, i.e., 1.71% of the Loan Assets.

The operating income of REC on a standalone basis was ₹35,387.89 crore during the financial year 2020-21, as against ₹29,765.21 crore in the last financial year. The Profit Before Tax for the financial year 2020-21 was ₹10,756.13 crore, as against ₹6,983.29 crore in the last financial year. Net Profit and Total Comprehensive Income for the financial year 2020-21 were ₹8,361.78 crore and ₹8,818.30 crore respectively, as compared to ₹4,886.16 crore and ₹4,336.37 crore in the last financial year. Further, REC's Net Worth as on March 31, 2021 stood at ₹43,426.37 crore, which was 23.80% higher than its Net Worth of ₹35,076.56 crore as on March 31, 2020.

KEY FINANCIAL RATIOS

The details of changes in key financial ratios applicable and specific to the Company, are given herein below:-

Particulars	FY 2020-21	FY 2019-20
Interest Coverage ratio (times)	1.50	1.37
Debt Equity ratio (times)	7.40	7.94
Operating Profit Margin (%)	30.33	23.25
Net Profit Margin (%)	23.61	16.38
Gross Credit Impaired Assets (Stage-III) (%)	4.84	6.59
Net Credit Impaired Assets (Stage-III) (%)	1.71	3.32

The Company's operating profit for the financial year 2020-21 increased to ₹10,733.58 crore, as against ₹6,919.37 crore in the financial year 2019-20. The operating profit margin increased from 23.25% in financial year 2019-20 to 30.33% in financial year 2020-21. The net profit margin also increased from 16.38% in financial year 2019-20 to 23.61% in financial year 2020-21. The increase in operating profit and net profit margins was primarily contributed by favourable movement of foreign currency against the Indian Rupee.

Gross Credit Impaired Assets of the Company decreased from 6.59% in financial year 2019-20 to 4.84% in financial year 2020-21, due to resolution/restructuring of credit impaired assets and their resultant upgrade to standard assets. Net Credit Impaired Assets of the Company also decreased from 3.32% in financial year 2019-20 to 1.71% in financial year 2020-21, due to reduction in Gross NPA and increase in provision coverage ratio of credit impaired assets.

The Company's Return on Net Worth increased from 14.09% in financial year 2019-20 to 21.30% in financial year 2020-21, primarily due to increase in the profits of the Company, as stated above.

HUMAN RESOURCES / INDUSTRIAL RELATIONS

As on March 31, 2021, total manpower of the Company was 428 employees, which included 366 executives and 62 non-executives.

Employee training and development continued to receive key focus, even during the times of pandemic. During the financial year 2020-21, 179 employees of the Company attended various training programmes, workshops etc. for upgradation of their professional skills, achieving 329 training man-days.

The industrial relations scenario continued to be on a cordial and harmonious note. During the financial year 2020-21, there was no loss of man-days on account of industrial unrest. Regular interactions were held with the employees through online as well as in-person modes, which helped in building an atmosphere of trust and cooperation and therefore, a motivated workforce.

CORPORATE SOCIAL RESPONSIBILITY & SUSTAINABLE DEVELOPMENT

REC's Corporate Social Responsibility and Sustainable Development initiatives are pursued with a key focus on addressing community, societal and environmental concerns. The Company undertakes its CSR activities through 'REC Foundation', a society registered under the Societies Registration Act, 1860.

During the financial year 2020-21, the Company sanctioned a total amount of ₹154.47 crore towards various CSR initiatives in the fields of health care (including for old age and persons with disabilities), safe drinking water and sanitation facilities, skill development program, education, environmental sustainability, rural development program etc. The implementation of CSR projects is done in project mode with baseline survey, specific project time frame, identified milestones, periodic monitoring and impact assessment.

The disbursement towards CSR projects is linked with the achievement of pre-defined milestones and deliverables. During the financial year 2020-21, the Company disbursed a total amount of ₹147.77 crore towards various CSR projects, as against the Board-approved CSR budget of ₹144.32 crore. This included a contribution of ₹50 crore towards PM CARES Fund.

STRATEGY

On the generation front, various new business opportunities are lined up before the sector, such as powering upcoming renewable energy projects (solar, wind, small hydro, biomass), investment in large hydro projects, investment in solar roof top projects and solar parks, investment in KUSUM projects (grid connected solar power plants), renovation & modernization of existing thermal power plants, replacement of old power plants and installation of pollution control equipment such as FGD (Flue-Gas Desulfurization) etc. REC is also looking to finance dedicated upstream infrastructure for efficient supply of coal to the thermal power stations. The Company has already commenced financing operations for development of coal mines.

The transmission & distribution scenario in the country is also gearing up for more robustness to cater to the 24x7 demand for power by consumers, thus requiring new investment in network addition and augmentation, underground cabling, smart meters/equipment, AMI / AMR infrastructure and smart grid. Investment would also be needed for creation of dedicated Green Corridors and new network under the Tariff Based Competitive Bidding (TBCB) route. At the consumer end, more latent demand for power will be created, given the success of the Government's SAUBHAGYA scheme covering universal household electrification.

In order to capture the upcoming business opportunities and maximize returns for its stakeholders, REC is building close professional partnerships with national and international financial institutions, multilateral development organizations, including KfW, JICA, World Bank, IFC, Asian Development Bank, SDF etc. This would enable the Company to raise resources at competitive rates and also to align with international best practices. In the upcoming years, REC will remain at the forefront of power sector development in the country and beyond.

As a part of its business strategy, REC has sanctioned loan towards the 600 MW hydroelectric project of Kholongchhu Hydro Energy Limited in Bhutan. REC is also looking to diversify into newer emerging fields at an appropriate time, not just as a funding partner, but also through its subsidiaries and joint ventures. REC is closely following the market's ongoing and upcoming changes and would take apt decisions, in due course, to maximize the value for its stakeholders.

RISK MANAGEMENT FRAMEWORK

The Company has a comprehensive Risk Management Policy approved by the Board, covering credit risk, operational risk, liquidity risk and market risk of the organization. The Company also has a Risk Management Committee (RMC) in place. The main functions of RMC are to identify and monitor various risks of the organization and to suggest actions for mitigation of the same. Further, the Company has also appointed a Chief Risk Officer (CRO), as required under the RBI norms.

The Company has identified its various risks including credit risk, operational risk, liquidity risk and market risk; and has taken appropriate steps to mitigate them.

Credit risk is an inherent risk of the financing industry. It involves risk of loss arising from the diminution in credit quality of the borrower and the risk of the borrower defaulting on contractual repayments under a loan or an advance. Operational risk, on the other hand, arises from inadequate or failed internal processes, people and systems or external events. Liquidity risk is the risk of potential inability to meet the liabilities as they become due; and involves the inability of the Company to fund increase in assets, manage unplanned changes in the funding sources and to meet obligations when required. Market risk of the Company is defined as the risk to the Company's earnings and capital due to changes in the market interest rate or prices of securities, foreign exchange as well as volatilities of changes. It comprises of interest rate risk, foreign currency risk etc.

In order to mitigate such risks, the Company has laid down systematic risk management procedures. The Company follows institutional and project appraisal process, which includes detailed appraisal methodology, identification of risks and suitable structuring and credit-risk mitigation measures. The operational risks are measured and categorized as 'High', 'Moderate' or 'Low' risk categories, through a comprehensive Risk Register covering all functional areas, namely business, compliance, finance, human resource, information technology, legal, operational and strategy. The Company manages its liquidity risk through a mix of strategies, including forward-looking resource mobilization based on projected disbursements and maturing obligations. Further, to mitigate market risk, the Company has an Asset Liability Management Committee (ALCO) of its CMD, Directors and senior officials, which meets regularly. The Company also has an asset liability management policy and hedging policy.

Cautionary note

Certain statements in "Management Discussion and Analysis" section may be forward looking and are stated as required by applicable laws and regulations. Many factors may affect the actual results, which could be different from what the management envisages in terms of future performance and outlook.

