Management Discussion & Analysis

1. INDUSTRY DEVELOPMENTS

GLOBAL POWER SECTOR

With clean energy, and meeting net zero targets becoming imperative for the world at large, transformation of the global power sector is gaining ground. New benchmarks are being set across a range of segments and sectors, ranging from mining, automobile, telecom, IT, and so on. Decarbonisation continues to fuel exponential growth in renewable capacity installations, driven by solar and wind. Battery energy storage systems and microgrids have become mainstream grid components. Advanced nuclear power designs and hydrogen-based energy schemes are gradually progressing, and carbon capture and storage (CCS) is becoming the new norm, with a focus on climate change amidst increased pace of industrialisation. These emerging trends could thus pave a new operating path for the global power and renewables market in the coming years.

The electrification move opens up opportunities for power companies to capitalise on the trend, by tapping the innovative mindset prevalent across academic institutions, research labs and start-ups around the world that would come up with newer, encouraging and challenging technologies in future. The sector is witnessing the next level of competition across the value chain with the advent of newer technologies and the entry of non-conventional players and start-ups offering unique solutions.

Receding Impact of COVID

The year 2021 unfolded as the year of recovery, although the pandemic's grip continued over the course of the year. The year ended with downside impacts, such as emergence of the Omicron variant that held back a broader recovery. With slightly receding impact of COVID, the global GDP tread on the path towards recovery, growing at an estimated rate of 5.9% in 2021 from -3.1% in the previous year (Source: IMF World Economic Outlook, January 2022). This was accompanied by exceptional demand for electricity combined with strong economic growth and extreme weather conditions, boosting electricity demand by more than 6% in 2021 (Source: IEA Electricity Market Report, January 2022), the largest increase since 2010. The steep rise in demand strained coal and natural gas supplies, putting upward pressure on electricity prices and impacting end users across countries, especially in China, Europe and India.

Significant Energy Crisis

While economic activities recovered post COVID, supply of materials and inputs did not keep pace with the demand, causing imbalance, resulting in a series of energy shortages and rapid rise in wholesale electricity prices across several countries in 2021. Multiple electricity security events took place including the Texas power crisis in February, supply shortages in Japan and China, large-scale outages in Pakistan and Chinese Taipei. Subsequently, Lebanon suffered a complete blackout in early October 2021 due to a diesel supply shortage for the country's thermal power plants, and China and India were subject to electricity supply shortages in September and October 2021, mainly affecting industrial consumers.

Demand for natural gas and coal rose higher than expected driven by unforeseen weather-related events, while on the supply side, both gas and coal faced constraints including heavy maintenance and unplanned outages, leading to sluggish built up of inventories, thus pushing up prices to multi-year highs in the second half of 2021. Natural gas prices more than doubled compared to 2020 to $ 4.5/MBtu during H2 2021, prompting substantial gas-to-coal switching in the developed economies, especially Europe. The rise in price of coal got further accentuated by the geo-political crisis between Russia and Ukraine in February 2022. Global coal prices that stood at about $ 61/MT in 2020, increased to $ 138/MT in 2021 (Source: World Commodity Outlook, April 2022, World Bank) and further soared to above $ 200/MT in February 2022.

Management Discussion & Analysis

The energy crisis brought to the fore the importance of coal, as energy security, affordability and sustainability continue to be the centre stage of nations across the globe. After declining in 2019 and 2020, coal-fired electricity generation increased by around 9% and reached a new all-time high, contributing to more than half of the rise in demand in 2021. Renewables, on the other hand, grew by 6% in 2021, despite the unfavourable weather conditions. This rise in coal power generation can be seen as a one-off event, attributed to the exceptional year for electricity markets due to the strong growth in electricity demand, unfavourable renewable conditions and increasing gas prices, while the shift in trend towards renewables is expected to continue under normal circumstances.

Rising Climate Actions

Climate protection policies are shaping up energy transition worldwide, as governments are increasingly focused on tackling climate change issues, deploying a suite of policy measures to decarbonise their economies and electricity sectors in line with both, medium and long-term climate ambitions, including coal phase out plans and a range of carbon pricing measures. International carbon markets received a boost in 2021 with a series of commitments announced at the COP26 conference held in Glasgow in November 2021. 23 nations committed to phase out coal by 2030-2040, and a group of 25 countries along with public financial institutions signed a joint statement to end international public support to fossil fuel investments by the end of 2022. Amongst the net zero targets by the top five emitters globally, the US, and the EU undertook to meet the said target by 2050, while the developing countries like China, and Russia targeted 2060, and India committed to meet it by 2070.

Growth of RE Sources

Driven by the climate commitments and the aim towards a sustainable growth path, investment in cleaner energy sources is gaining greater prominence. Renewable energy sector remained markedly resilient in 2021, as rapid technology improvements, and decreasing renewables' costs accompanied with increased competitiveness of battery storage, helped the segment emerge as one of the most promising among other energy sources. Despite global uncertainties, renewables continued to grow and gain momentum. By the end of 2021, global renewable generation capacity amounted to 3,064 (GW), growing by 9.1 % from the previous year, with wind and solar accounting for 88% of the new renewable capacity in 2021. As per IEA's Electricity Market Report 2022, renewables are expected to provide more than 32% of the world's electricity supply (from 28% in 2021) by 2024, holding its position as the promising energy technology, going ahead.

System Flexibility Needs

The massive influx of variable renewable capacities is driving more emphasis on greater flexibility needs. Coal and natural gas generation continue to remain the cornerstones of electricity flexibility, but flexibility profiles could undergo a change in the longer term with hydropower, bioenergy, and also nuclear power plants becoming more central to system flexibility. Energy storage systems are making inroads and gaining prominence driven by declining costs, improved performance indices, and policy support, thus creating opportunities for battery storage market. Storage technologies, including batteries, pumped hydro, compressed air energy storage, gravity storage, hydrogen and ammonia energy storage, would likely play a larger role in the coming years, alongside a greater potential for demand side response as well.

Electric Vehicles (EVs) on the Rise

Electric Vehicles are growing rapidly as they play a central role in the ambitious objective of zero emission targets set by nations around the world. EV sales have been growing steadily over the past few years and 2021 seems to be a turnaround year, with EV sales more than doubling to 6.6 million, representing close to 9% of the global car market (Source: IEA). All the net growth in global car sales in 2021 came from electric cars. The segment started to see a wide range of offerings from the manufacturers like more affordable models, various choices across different brands and in different segments, enabling rise in sales. The prospect of EV adoption is getting brighter, driven by a combination of factors of policy support, improvements in battery technologies, more charging infrastructure being built, and rising commitments from automakers. The combined intent and support from all stakeholders- government's action, automakers' commitments, and customers' demand, would help catapult it to the next level in the years to come.

H2 and CCS Gaining Ground

Driven by the decarbonisation commitments with the pressing climate protection urgency, green hydrogen is emerging as a game changer for achieving climate neutrality without compromising industrial growth and development. A growing number of countries have set pathways to tap hydrogen's decarbonisation potential, with 39 countries, led by the EU, having adopted the hydrogen strategy and several others developing, or considering developing of strategies for the said purpose. The hydrogen industry growth momentum remains strong around the world, with more than 520 projects announced in 2021, up 100% compared to 2020, translating to an investment of $ 160 billion. However, of this just $ 20 billion (13%) has passed the final investment decision (FID) so far, with another $ 64 billion (40%) in the feasibility or front-end engineering and design (FEED) stage. While the sentiment remains strong, right regulatory and policy framework is required for implementation and scaling up of this technology to tap its full potential. Alongside, other newer technologies like carbon capture and storage (CCS) are also gaining momentum amid countries' efforts to limit greenhouse gas emissions across key industries. Rapid industrialisation, particularly in emerging economies, along with significant expansion of manufacturing facilities is primarily facilitating the deployment of carbon capture and storage across the globe, supported by favourable initiatives being undertaken by the government bodies.

Digitalisation Becoming Core to Power Sector

With the connected energy systems getting more complex, digitalisation plays a central part in unlocking insights, providing flexibility, and cutting costs through increased efficiency. Companies worldwide are undertaking significant digitalisation initiatives to improve plant performance, boost operations and maintenance, and improve services. As the focus shifts from being an energy provider to offering end-to-end management of a customer's energy assets and services, digitisation forms the most important element for customised offerings. This has brought about increased M&As and partnership deals between companies and with start-ups to leverage the technological knowhows and unique solutions. Thus, digitalisation, mergers and collaborations are playing a greater role in shaping the global power sector.

INDIAN POWER SECTOR

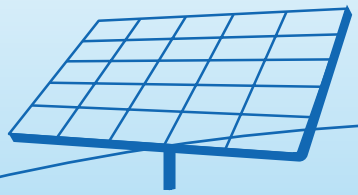
India's power market is undergoing a significant transformation, owing to the efforts taken by the government to improve electricity access in the country, along with its plans to increase the share of renewables in the country's power generation mix. India's green push gained momentum during the year, intensifying further with the COP26 Conference at Glasgow. Driven by its commitment towards climate change, India made a historic announcement of becoming net zero emitter by 2070, and having 500 GW of non-fossil capacity by 2030, meeting 50% of energy requirements from RE by the said period. While the Indian power sector was relatively less affected by the COVID-19 pandemic, it witnessed its own share of issues during the year as the lingering effects of the pandemic induced supply disruptions during the year.

FY22 began with reoccurrence of COVID that continued to impact life and economic activities for the second year in a row, with the second wave having dampening impact during the first half of the year. While increased vaccination coverage helped resume activities in H2 2021, the year ended with a new variant- Omicron making rounds. Energy demand increased by about 8% in FY22, driven by the C&I segment as industries sprung back to action with easing of lockdown restrictions. Peak power demand crossed the 200 GW mark, reaching the highest ever level in July during the year.

As power demand in India continues to be met mainly through thermal generation, a surge in power demand puts pressure on fuel supply. The unanticipated rise in demand for electricity with pickup in economic activities was not met by proportional growth in coal supplies (also in part due to sharp jump in global coal price), resulting in severe coal shortages. The coal stocks fell to critical level to as low as three days at some thermal plants in October 2021. The demand-supply gap also prompted increased demand at the power exchange, where electricity prices surged to the ceiling rate of ₹ 20/unit for some 15-minute blocks in August and October 2021. The government quickly intervened, initiating a slew of measures like utilising 6 GW capacity at Mundra that remained idle on account of PPA issue, urging utilities to use imported coal for blending and enhancing rake availability among others, to alleviate the crisis, resulting in normalisation of prices at the exchange. The average price of electricity at the exchange ranged between ₹ 3-4/unit in November and December 2021 from an average of ₹ 8/unit in October 2021.

Another pressing issue to be addressed is the turnaround of Discoms. A major focus of the government has been increased participation of the private players in the T&D space to improve

the operational efficiencies and financial performance of the Discoms. Distribution continued to be plagued by several issues like high AT&C losses, insufficient tariff hikes widening ACS-ARR gap, accumulation of regulatory assets, thus impacting the financial position of Discoms, resulting in rise of pending dues to Gencos. The state-wise ratings of Discoms by the Ministry of Power (MoP) indicated a skewed improvement of ratings with just about two states performing, while others mostly showing below average and/or poor performance over the years. The government announced multiple schemes and decisions towards addressing the issues in the distribution sector, including the Revamped Reforms Based Result Linked Power Distribution Sector Scheme worth ₹ 3 trillion, aimed at improving operational efficiencies and financial stability of Discoms, subject to stringent preconditions to avail the financial assistance. It also came up with Electricity (Amendment) Bill, 2021 proposing "delicensing" of the power distribution business to foster competition in the sector. However, progress on both, privatisation and Electricity Bill remained slow. Privatisation of UT Discoms faced hurdles. While privatisation of Chandigarh UT could not be concluded, Dadra and Nagar Haveli and Daman and Diu finally took off after a hiatus of High Court orders suspending the tender process, and the Supreme Court thereafter, lifting the stay orders. Though slow, the stage is set for privatisation to take place and may not be halted as seen from the successful takeover of Odisha Discoms that could set a trend for others to follow. The much-awaited Electricity Amendment Bill also could not be passed in the parliament, as it was surrounded by protests and its passage is likely to take some time.



Generation

India's installed generation capacity stands at 399.5 GW as on March 31, 2022, with capacity addition of more than 17 GW in FY22 compared to 12 GW during FY21. The capacity additions in FY22 happened majorly in the renewables segment, led by solar. Renewables accounted for 90% share of the incremental capacity addition in FY22, up from 61% in the previous year, with solar alone contributing to 80% of the total capacity addition in FY22-a sharp jump from 45% in the previous year.

Thermal Generation

Coal-based capacities continue to dominate India's total installed capacity, accounting for half of the capacities installed, though the share has been consistently declining over the past ten years from 56% in FY12 to about 52% in FY22. India's new thermal capacity installations have come down significantly with only 1.3 GW net additions in FY22, contributing to less than 10% of total capacities installed, indicating a slowdown of the sector with movement towards clean energy. This is also evident in the PLF of thermal plants that have witnessed a declining trend in the last decade, falling from 73.3% in FY12 to 58.8% in FY22.

Renewable Generation

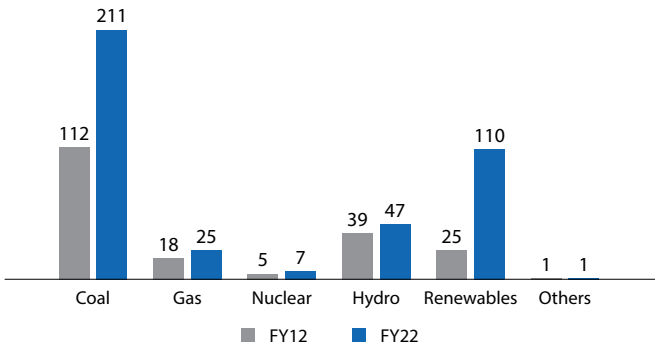
The focus on renewable energy sector has led to steady growth of India's renewable energy capacity over the years. The total installed renewable energy capacity of the country has been on the rise from 12% share in FY12 to 28% in FY22, crossing the 100 GW mark in FY22. Solar has been the mainstay of renewables growth in India over the past decade. Its share in total RE installed capacity has risen from 4% in FY12 to 49% in FY22 and its share in India's total installed capacity has increased from 0.5% to 14% during the same period.

The government-backed policy initiatives along with the consistent fall in cost of solar technology boosted solar energy sector as seen in increased participation by both, domestic and global players in project tenders. The changing dynamics driven by maturing technologies have shifted the trend from plain standalone solar and wind projects, to rising interest in more complex projects including hybrid, RTC, peak power, floating solar and storage.

The average solar tariffs discovered in auction had fallen steeply over 2014-18 at a CAGR of 19%. From 2018, the tariffs continued to drop, albeit at a slower pace. Entry of new players, declining equipment costs and gaining experience of IPPs, are leading to fall in average tariffs. However, supply disruptions caused due to COVID, hike in GST rate from 5% to 12%, imposition of 40%

Installed Capacity

(GW)



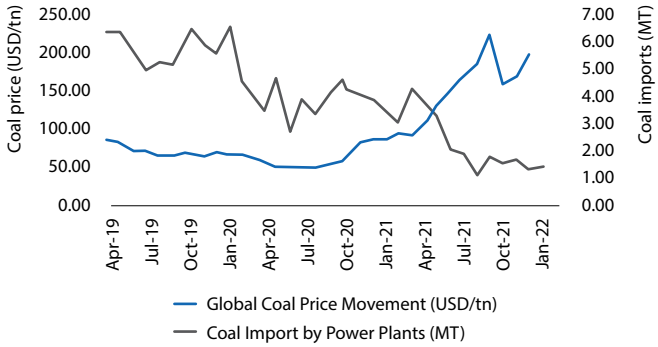
Source: CEA

Basic Custom Duty (BCD) on module imports, the application of Approved List of Models & Manufacturers (ALMM) and rising commodity prices are seen to have an upward pressure on tariffs of solar projects. Government continued with its enabling policies like net metering, ISTS waiver for renewable projects, etc. to help further boost adoption of renewables. With a push towards domestic solar manufacturing and lower import dependency, the government introduced the PLI scheme across 13 sectors including solar modules and batteries. It gave a nod to the Production Linked Incentives (PLI) scheme worth ₹ 4,500 crore for solar manufacturing, aimed at adding 10 GW manufacturing capacity of integrated solar PV modules, which was further enhanced to ₹ 24,000 crore. The sector, however, is faced with some challenges like delay in Power Purchase Agreement (PPA) tie-ups, renegotiation of PPAs, cancellation of bids, land issues, supply chain disruptions, etc. which need to be resolved for the sector to meet its targeted growth.

Fuel

Coal produced by Coal India Limited (CIL), and its subsidiaries, increased by 4.4% during FY22 to 623 MT (from 596 MT in previous fiscal). Despite improved production by the coal behemoth, domestic thermal power sector faced massive supply crisis as fuel supplies could not keep pace with the rebound in demand for electricity, as economic activities picked up post COVID. Sharp rise in global coal price (127% in 2021) deterred import of coal, putting further pressure on demand for domestic coal. The war between Russia and Ukraine has further aggravated the situation, with a sharp upward movement in global coal prices.

Global Coal Price and India's Coal Imports



Source: World Bank, CEA

Transmission

The backbone transmission system in India is mainly through 765 kV, 400 kV and 220 kV AC networks, with the highest transmission voltage level being 800 kV (HVDC). Total transmission lines and substation capacity reached nearly 4.56 lakh Ckms and 11.04 lakh MVA, respectively, reflecting an increase of about 14,895 Ckms and 78,982 MVA over the previous year. The National Electricity Plan (Volume II-Transmission) i.e., NEP-Trans, has been notified to review the development of transmission system during the 12th Plan period, the current planning period 2017-2022 and the subsequent period 2022-2027.

With changing power generation mix on account of increase in renewables, the government is emphasising on augmenting the transmission infrastructure to support demand growth. In order to expedite the development of transmission lines for solar/wind parks, the Green Energy Corridor is a series of infrastructure projects aimed at synchronising the power generated from renewable energy sources like wind, solar, hydro, etc. with the conventional national grid of India. The project is divided into two parts i.e., Phase-I and Phase-II.

Under Green Corridor Phase-I, Power Grid Corporation of India Limited (PGCIL) is responsible for strengthening transmission networks and constructing inter-state transmission network for connecting renewable energy-rich states.

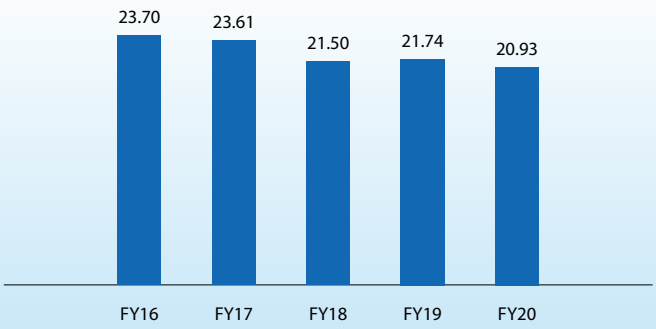
Under Green Corridor Phase-II, the government has opened-up private participation (which is still limited to 7%), and has decided to award these projects to private players through Tariff Based Competitive Bidding (TBCB). As of now, 64 TBCB projects have been awarded, amongst which, 34 have been commissioned, 22 are under construction, and the rest have not been started due to litigation or have been scrapped by Central Electricity Regulatory Commission (CERC).

Distribution

Distribution sector, the most important part of the power value chain, continues to face challenges impacting the viability of the entire power value chain. While the distribution segment was on path towards transformation on the back of several reforms and schemes announced by the government to help address the challenges faced by the sector, a trend reversal in terms of the betterment of Discom performance in the recent past is being witnessed as far as Discom dues are concerned. Overdue amount of Discoms to Gencos crossed the ₹ 1 trillion-mark again in the last quarter of FY22, indicating the stress in the sector. The segment continues to be faced with the lingering issues of high AT&C losses, widening ACS-ARR gap, insufficient tariff hikes and backlog of subsidy payments by the government, resulting in continued weakness in the operational and financial performance of Discoms. This is despite a number of schemes and reforms launched in the distribution segment in the past, implying limited success in improving the overall financial and operational performance of Discoms. One of the biggest reform packages announced in 2021 was the ₹ 3.03 trillion Revamped Distribution Sector Scheme (RDSS), aimed at improving the operational efficiency and financial sustainability through measures focussed towards smart metering, energy accounting, infrastructure works for loss reduction, modernisation and system augmentation. The central government also allowed additional borrowing space to the state governments, conditioned on them undertaking and sustaining specific reforms. The government also emphasised on Discom privatisation and competition in the distribution sector, in order to help improve the situation. However, the Discoms' privatisation drive in the UTs saw limited success so far with progress being seen only in Dadra and Nagar Haveli. Thus, the revival of the power distribution segment is contingent on the on-ground effective implementation of the reform measures, introduced under government schemes and programmes.

All India AT&C Loss

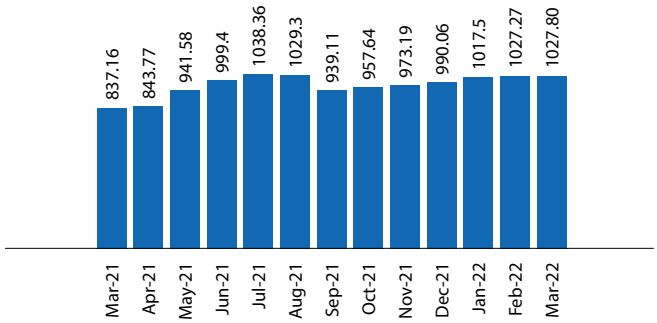
(%)



Source: PFC Report on Performance of Power Utilities 2019-20

Overdue Amount at Month end

(₹ Bn)



Source: PRAAPTI portal

Power Trading

Around 184 billion units (BUs) of electricity were traded in the short-term power market during FY22, as compared to a total of 146 BUs traded during FY21. Out of this, about 47% of trading took place using power exchange platforms. The trading margins were under immense pressure due to high competition amongst traders. The market is concentrated with 8 larger players and remaining traders operating in regional pockets, largely for trading their own power.

At ₹ 4.39 per unit, the average clearing price for spot markets in FY22 increased by 56% as compared to the previous fiscal. The increase in spot prices is largely attributable to the combined effect of surge in overall demand post second - wave of Covid-19, erratic renewable generation, increase in prices of international coal and gas, shortage in supply of domestic coal, especially during monsoons.

Regulatory and Policy Developments

Regulatory and policy reforms in the sector are critical to help avert the issues surrounding the power value chain alongside creating an enabling environment for increased investments in the sector. 2021 was a year of policy announcements across all segments of the power sector. Some of the key announcements by the government during the year included the following:

- **Net Metering-** The Ministry of Power (MoP) allowed net metering for rooftop solar systems for loads up to 500 kW, thus removing the ambiguity surrounding the rooftop segment.
- **ISTS waiver-** With a view to encourage faster capacity addition based on solar or wind energy sources, in supersession of earlier orders, MoP notified that for solar or wind, Hydro Pumped Storage Plant (HPSP) and Battery Energy Storage System (BESS) projects commissioned up to June 30, 2025, the waiver of inter-state transmission charges shall be applicable subject to certain conditions. The waiver shall be applicable

for a period of 25 years for solar, wind and hydro PSP or for a period of 12 years for BESS or for a period subsequently notified for future projects by the central government, from the date of commissioning of the power plant. Waiver is allowed for ISTS charges only, and not for loss. However, it is clarified that the waiver of losses shall be applicable for the projects whose bidding was completed up to January 15, 2021.

- **Change in Law Rules-** The MoP notified the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 vide notification dated October 22, 2021 applicable to generating company and transmission licensee affected by a 'Change in Law' (CIL) event to be restored to the same economic position as before the event by way of adjustments to the monthly tariff. Further, a formula has been provided under the Schedule to the Rules, to calculate adjustments in the monthly tariff due to the impact of CIL.
- **Curtailment Rules-** The MoP has notified the Electricity (Promotion of Generation of Electricity from Must-Run Power Plant) Rules, 2021 vide notification dated October 22, 2021, providing that a must-run power plant will not be subjected to curtailment or regulation of generation or supply of electricity on account of merit order dispatch or any other commercial consideration. It may be curtailed or regulated only in the event of any technical constraint in the electricity grid or for reasons of security of the electricity grid. In the event of a curtailment of supply from a must-run power plant, compensation will be payable by the procurer to the must-run power plant at the rates specified in the agreement for purchase or supply of electricity. The RE generator is also allowed to sell power in the power exchange and recover the cost suitably helping in realisation of revenue by the generator and power available in the electricity grid for use of consumers.
- **GDAM-** Launch of Green Day Ahead Market segment at Indian Energy Exchange Limited (IEX) exclusively for renewable energy, thus expected to deepen the green market and provide competitive price signals.
- **Automatic Pass Through-** Union Power Ministry directed state electricity regulators to adopt an 'automatic pass-through model', requiring the state-run Discoms to pay higher tariffs to power plants as soon as the cost of fuel escalates.
- **Renewable Energy (RE) Bundling-** Guidelines issued for RE bundling wherein thermal power generation companies could either set up renewable energy generation capacities themselves or through developers by inviting bids and supply power to consumers under existing PPAs.
- **National Infrastructure Monetization Pipeline-** National Infrastructure Monetisation Pipeline announced opening up opportunities for participation of private players.
- **Emission Norms-** The date for meeting the emission norms was extended based on the categorisation as per the severity of pollution. Thermal power plants within 10 km of the National Capital Region (NCR) and in cities with more than 1 million population were to comply with new emission norms by December 2022, while those within 10 km radius of critically polluted areas or non-attainment cities need to comply by December 2023, and the remaining by December 2024.
- **DSM Regulations-** CERC has notified DSM Regulations 2022. Linkage to frequency has been removed, to be controlled by System Operator by way of ancillary services. Deviation limits for over injection have been curtailed for RE. Penalty charges for under injection linked to normal rate i.e., weighted average ancillary service charge. Till such rate is available, it will be highest of the weighted average area clearing price (ACP) of the day ahead market segments of all the power exchanges, the weighted average ACP of the real-time market segments of all the power exchanges, or the weighted average ancillary service charge of all the regions for that time block.
- **Cyber Security-** Release of Cyber Security Guidelines for the power sector for the first time.
- **Green Hydrogen Mission** document has been announced. This will lead to increase in demand for RE as green hydrogen has to be produced by electrolysis process enabled by RE.
- **Hydro Purchase Obligation-** HPO notified as a separate entity within Non-Solar Renewable Purchase Obligation (RPO).

With electricity falling under the concurrent list, reforms initiated at the central level will be subject to states' Electricity Regulatory Commissions' discretion for implementation in the respective states.

2. TATA POWER BUSINESS PORTFOLIO, OPPORTUNITIES AND OUTLOOK

The Company's generation business operates under various business models across divisions in the domestic as well as international markets with the PPA / Fixed Tariff model contributing to the largest share of the generation segment. The following is a summary of the different business models under which various generation assets of the Company operate:

Model	Returns	Project	Capacity (MW)	% Overall Capacity
Regulated Tariff	Regulated Return on Equity (ROE)	Mumbai operations (Trombay and Hydro), Maithon Jojobera (Unit 2 and 3), TPDDL-Rithala	2,775	20.5
PPA / Fixed Tariff (Renewables)	Feed In Tariff+ Bid Driven	Wind and Solar Projects (Domestic), TPTCL,TPDDL	3,400	25.2
PPA / Fixed Tariff (Bid / Others)	Bilateral Agreement + Bid Driven	Jojobera (Unit 1 and 4), Mundra, Itezhi-Tezhi, Hydro Projects, Georgia Hydro, IEL-Kalinganagar	4,685	34.7
Captive	Bilateral Captive Agreement	IEL (Unit 5, PH6, KPO), CKP (Indonesia)	429	3.2
Merchant	Market Driven	Haldia, Dagachhu	246	1.8
Under Platform Management	PPA Based	Prayagraj	1,980	14.6
Total			**13,515**	**100**

The Company had significant footprint in the power distribution business in the country and is present in the following areas:

Model	Returns	Distribution Area / Entity	No. of Customers (million)
Distribution Licensee	Regulated Return on Equity (ROE)	Mumbai Distribution	0.75
Public-Private-Partnership (PPP)	Regulated + Bid conditions driven	TPDDL, TPCODL, TPWODL, TPSODL and TPNODL	11.40
Distribution Franchisee (DF)	Input energy growth and investment driven	TPADL	0.16
Total			**12.31**

The Indian market continues to remain the primary focus of business for the Company. Currently, the domestic market accounts for more than 95% of its generation capacity. As highlighted earlier, the Company has plans in place to grow in the areas of renewable generation, transmission, distribution and new and service-led businesses.

THERMAL AND HYDRO GENERATION

In line with its intent of achieving carbon neutrality by FY45, the Company plans to limit its exposure to coal-based projects and does not intend to expand its existing portfolio, offsetting the generated carbon dioxide (CO_2) storage, etc. to achieve net zero emission of greenhouse gases. the Company is promoting carbon neutrality, which will not only reduce carbon emissions constantly, but also decrease the concentration of air pollutants, thus improving air quality. The Company does not have any greenfield or brownfield expansion plans in the near term, but would continue to maintain the existing thermal and hydro operations in a sustainable manner. The Company will, however, be evaluating inorganic opportunities that might come up in hydro power generation assets. The Company is also looking at opportunities in Waste Heat Recovery (WHR) based portfolio through the JV (IEL) with Tata Steel Limited (Tata Steel).

Additionally, the Company is evaluating growth opportunities in services for thermal and hydro plants by leveraging the technical and operation expertise.

CONSUMER BUSINESSES

The Company has major plans to scale up consumer businesses, such as rooftop solar, EV charging, solar pumps, microgrids, energy efficiency solutions, and home automation.

We have collaborated with electric vehicle Original Equipment Manufacturers (OEMs) to roll out EV charging infrastructure and aim to expand our presence further in many cities of India. The Company has also developed a robust software platform for customers of EV charging, and has released a mobile-based application (Tata Power EZ Charge) for the same. This would

enable us to offer value-added services to our customers. With the increase in EV adoption, the Company plans to cover the segments of home, workplace and captive charging (including e-Bus charging) through different models and approaches. We are also actively evaluating opportunities in the electric 3-wheeler and 2-wheeler charging market.

In the space of rooftop solar, the Company has presence in more than 180 districts of India and has rolled out differentiated value-added services with its offerings across segments (residential, commercial and industrial, including corporates, owners, MSMEs, institutions and small commercial establishments). The Company has recognised the opportunities arising in rooftop solar and is developing new offerings and models to enhance its adoption among consumers, including financing solutions, extending the EPC model, recurring revenue model and other value-added offerings.

We have installed over 191 microgrids till March 2022 and are evaluating numerous approaches and models for scaling up this business. We have been successful in benefiting a rural consumer base of over 14,000 consumers. As a part of value-added services, we have launched a mobile app and EMI scheme for new connections and are providing energy efficient appliances.

The Company has identified eight business-wide Strategic Business Objectives (SBO) for a focused approach towards capitalising the opportunities. You may refer to page number ..... of the Integrated Report for a detailed explanation of these SBOs along with goals and action plans to achieve these objectives.

3. BUSINESS PERFORMANCE

Consolidated operations of the Company can be categorised into four segments: generation, transmission and distribution, renewables and others. Report on the performance and financial position of each of the subsidiaries, JVs and associate companies has been provided in Form AOC-1.

The Company's business performance in FY22 was higher mainly due to full year impact of Odisha Discoms, favourable order in RE generating companies, lower finance cost and improved performance across all business offset by higher loss in Tata Projects. A sizable portfolio of the Company's business under the regulated framework provides a steady and reliable source for its finances. Also, the Company's portfolio is suitably structured to capitalise on favourable market conditions for market-linked businesses in its portfolio, while ensuring stable returns from the regulated businesses.

Highlights of the operational performance of key entities are listed below:

RENEWABLES

TATA POWER RENEWABLE ENERGY LIMITED (TPREL & ITS SUBSIDIARIES) (2,079 MW)

Type of Entity: Wholly-owned subsidiary (TPREL, TP Wind Power, TP Kirnali and TP Solapur)

Particulars	FY22	FY21
Generation-Sales (MUs)	3,078	2,611
Revenue from Operations (₹ crore)	1,435	1,143
PAT (₹ crore)	195	13

Higher sales were due to addition of 652 MW solar capacity during the year and higher PLF from wind capacity.

PAT for the year increased on account of additional capacities commissioned, coupled with one-time impact of ₹ 126 crore pertaining to favourable tariff order, judgements and compensations.

TP Kirnali Limited is currently executing 220 MW solar PV projects under long-term PPAs in Gujarat and Maharashtra. 120 MW capacity is under execution in Gujarat with Gujarat Urja Vikas Nigam Limited (GUVNL), and 100 MW capacity is under execution in Maharashtra with Maharashtra State Electricity Distribution Company Limited (MSEDCL).

The commissioned capacity plus capacity under execution by TPREL and its direct subsidiaries at the end of FY22 was 2,299 MW, which included TPREL standalone (2,049 MW), TP Kirnali Limited (220 MW under execution) and TP Wind Power Limited (30 MW).

WALWHAN RENEWABLES ENERGY LIMITED - WREL (CONSOLIDATED) (1,010 MW)

Type of entity: Wholly-owned subsidiary of TPREL

WREL has an operating capacity of 1,010 MW, out of which 864 MW is solar power and 146 MW is wind power. A major part of the capacity is in Tamil Nadu, followed by Rajasthan, Madhya Pradesh, Karnataka and Andhra Pradesh.

The generation achieved by WREL in FY22 was 1,676 MUs, marginally higher than 1,659 MUs achieved in FY21. In FY22, the availability of wind and solar assets of WREL has improved through various initiatives taken during last two years. Wind generation has also been better in FY22 as compared to FY21.

Particulars	FY22	FY21
Generation Sales (MUs)	1,663	1,645
Revenue from Operations (₹ crore)	1,277	1,181
PAT (₹ crore)	441	320

PAT has increased mainly due to one-time impact of ₹ 56 crore pertaining to favourable tariff orders / judgements coupled with reduction in finance cost due to prepayments of borrowings made in FY21 / FY22 and downward interest rate resets.

RENEWABLES - CAPTIVE (105 MW)

Type of Entity: Subsidiary (Poolavadi, Vagarai, TP Kirnali Solar, TP Solapur Solar and TP Akkalkot)

Particulars	FY22	FY21
Generation Sales (MUs)	163	85
Revenue from Operations (₹ crore)	62	35
PAT (₹ crore)	(4)	(10)

Loss has lowered in FY22 mainly due to capacity addition during the year, full year impact of capacity commissioned in the previous year and higher generation from wind sites.

RENEWABLES - OTHERS (174 MW)

Type of Entity: Wholly-owned subsidiary (Tata Power Green, TP Saurya,TP Roofurja, Chirasthayee Saurya and TP Solapur Saurya); Division (Nivade and Visapur)

Particulars	FY22	FY21
Generation Sales (MUs)	276	263
Revenue from Operations (₹ crore)	120	127
PAT (₹ crore)	15	33

PAT has decreased in FY22 mainly due to lower rates offset by higher generation on account of higher average wind speed.

TATA POWER SOLAR SYSTEMS LIMITED – TPSSL

Type of entity: Wholly-owned subsidiary

Particulars	FY22	FY21
Revenue from Operations (₹ crore)	8,506	5,119
PAT (₹ crore)	161	208

TPSSL continues to demonstrate significant growth driven by growing demand for renewable power in the country and capabilities of the Company, which have been augmented over time.

The sales from the large projects segment, which contributes a major portion of sales for TPSSL, has increased by 54% as compared to the previous year. Further, the revenue from rooftop solar and products segments increased by approximately 2.5 times and 2 times respectively, as compared to the previous year and had an order book of 184 MW.

During the year, TPSSL has commissioned 1.5 GW of utility-scale solar projects and has an additional 3 GW under execution amounting to ₹ 12,000 crore.

During the year, TPSSL stabilised its manufacturing operations of the newly commissioned Cell and Module lines, which have significantly augmented the production capacity and capability to manufacture modules of 440 Wp.

TP RENEWABLE MICROGRID LIMITED

Type of entity: Wholly-owned subsidiary

TP Renewable Microgrid has been setting up microgrids in rural villages of Bihar (six districts) and Uttar Pradesh (seven districts). As of March 31, 2022, the Company has commissioned 191 microgrids with an installed capacity of 5.73 MW, serving more than 14,000 rural consumers.

The Company has been creating a green footprint in rural India. Various 'Do Green' initiatives are getting deployed, which reduce environmental (air and noise) pollution and reduce consumer dependence on fossil fuels and alleviate poverty. Few green flagship programs are DG to MG Conversion (migration of diesel operated motors to electrical operated motors of micro-entrepreneurs), financing for energy efficient motors (for consumers on EMI), green irrigation for farmers (diesel pumps replaced with electric pumps and linked to income generation), Nari Shakti (self-defence training for new women police cadets), empowering women entrepreneurship (green electricity with financial stimuli), development of new village level entrepreneur (VLE) for launching a new business in the rural community using microgrid supply.

The Company not only deployed various new technologies, and enabled process automation and digitalisation for business sustainability, but also showed impetus for digital transformation at the rural community level. The Company has released a microgrid power supply to UP's 1st Green, Digital and Smart Village at Rewana in Lakhimpur District, thereby benefiting more than 100 underprivileged customers. Further, to improve digital payment penetration for its rural consumers, the Company, apart from providing physical outlets for payment collection through payments bank rural outlets, has also collaborated with Common Service Centres (CSC) for payment collection at their centres and Bharat Bill Payment System (BBPS) for payment collection through mobile phones.

TATA POWER HYDROS (447 MW)

Type of entity: Division

Particulars	FY22	FY21
Generation Sales (MUs)*	1,566	1,500

*Includes sales to Company's distribution division

During the year, generation sales were higher, mainly due to increase in storage capacity in Mulshi reservoir, and increased demand for hydro power by beneficiaries. Availability for the year was 98.77% in line with previous year. Reduction in Aux Power Consumption (APC) was achieved through various energy conservation measures under sustainability initiatives and 6-Sigma projects.

MUNDRA, COAL AND RELATED INFRASTRUCTURE COMPANIES

MUNDRA THERMAL PLANT (4,150 MW)

Type of entity: Division [erstwhile Coastal Gujarat Power Limited (CGPL)]

Particulars	FY22	FY21
Generation Sales (MUs)	8,361	24,536
Revenue from Operations (₹ crore)	3,109	6,990
PAT (₹ crore)	(1,651)	(637)

Loss in FY22 was higher as compared to FY21 mainly due to lower capacity revenue on account of lower units in operation partly offset by lower fuel under-recovery, effective coal procurement strategy and reduction in finance cost on pre-payment of long-term loans.

Under-recovery of fuel cost is listed below:

Particulars	FY22	FY21
(in ₹ crore)	(527)	(1,019)
(in ₹ per kWh)	(0.63)	(0.42)

* Fuel under-recovery consists of total coal cost under recovery (Fuel revenue net of coal costs) and non-cash impact of Ind-AS 116 of ₹ 243 crore and ₹ 260 crore for FY22 and FY21 respectively..

The Company continues to engage with the procuring states to find a solution for long-term commercial viability of the plant and the supplementary PPA is in advanced stage of discussion with procurers.

Mundra is also making efforts to reduce losses through initiatives like sourcing of low-cost coal from other geographies, and increasing blending of low calorific value coal.

COAL AND INFRASTRUCTURE COMPANIES

The Company, through its subsidiaries, holds a 30% stake in PT Kaltim Prima Coal (KPC) and a 26% stake in PT Baramulti Suksessarana Tbk (BSSR), which are strategic assets to hedge imported coal price exposure at Mundra, and form an important part of the supply chain for its coal off-take requirements.

We have signed an agreement in the earlier year to sell our 30% stake in PT Arutmin Indonesia and associated companies in coal trading and infrastructure. The aggregate consideration for the stake is $ 401 million, subject to certain closing adjustments and restructuring actions. The Company received $ 243 million till March 2022, and is pursuing steps to conclude this transaction.

The mining licence for KPC has been renewed for 10 years in December 2021, with a total area of 61,543 ha. The government of Indonesia has changed several regulations effective January 1, 2022, such as royalty with tier rate depending on HBA price of coal, new corporate tax rate of 22%, obligation to pay VAT as per prevailing law, and 10% profit sharing to government.

PT Kaltim Prima Coal, Indonesia

Particulars	FY22	FY21
Coal Production (Million Tons)	52.9	59.1
Revenue from Operations* (₹ crore)	34,206	21,663
PAT* (₹ crore)	4,615	910

*Figures are on 100% basis. The Company's share is 30%

KPC's coal production was impacted due to incessant heavy rainfall during the second half of the financial year. The coal price realisation for the year was at $ 85.2/tonne as compared to $ 48.8/tonne in the previous year. KPC's profitability was higher due to an increase in the international coal price index.

PT Baramulti Suksessarana Tbk and PT Antang Gunung Meratus, Indonesia

Particulars	FY22	FY21
Coal Production (Million Tons)	13.3	10.7
Revenue from Operations* (₹ crore)	5,413	2,358
PAT* (₹ crore)	1,642	222

*Figures are on 100% basis. The Company's share is 26%

PAT is higher due to higher average price realisation at $ 55.6/tonne as compared to $ 29.7/tonne in the previous year.

PT Nusa Tambang Pratama, Indonesia (Infrastructure Company)

Particulars	FY22	FY21
Revenue from Operations* (₹ crore)	815	935
PAT* (₹ crore)	466	653

*Figures are on 100% basis. The Company's share is 30%

PAT is lower mainly due to the reduction in rates and lower tonnage of coal handled during the year.

TRUST ENERGY RESOURCES PTE. LIMITED- (TERPL)

Type of entity: Wholly-owned subsidiary of Tata Power International Pte Limited (TPIPL)

Particulars	FY22	FY21
Revenue from Operations (₹ crore)	538	1,003
PAT (₹ crore)	8	608

Post-sale of vessel in FY21, TERPL continues to perform freight services for Mundra at an optimised freight rate under the Unified Freight Contract. Revenue and PAT for FY22 has reduced on account of reduction in number of shipments due to lower offtake from Mundra.

THERMAL GENERATION

MAITHON POWER LIMITED- MPL (1,050 MW)

Type of entity: Subsidiary (Tata Power: 74%, DVC: 26%)

Particulars	FY22	FY21
Generation Sales (MUs)	7,215	5,819
Revenue from Operations (₹ crore)	2,782	2,503
PAT (₹ crore)	281	311

Profit for the FY22 is lower mainly due to one-time impact of order issued by the CERC during the year.

MPL maintained its strong financial position as evident from the ratings given by CARE and CRISIL for the long-term facilities (CARE AA Stable and CRISIL AA+) and short-term (CRISIL A1+) bank facilities. MPL started coal transportation through railway mode during the year.

The construction work for setting up of the flue gas desulphurisation (FGD) has started and expected to be completed as per the agreed timelines.

INDUSTRIAL ENERGY LIMITED- IEL (415 MW)

Type of entity: Subsidiary (Tata Power: 74%, Tata Steel: 26%) (Joint Venture under Ind AS)

Particulars	FY22	FY21
Generation Sales (MUs)	2,999	2,845
Revenue from Operations (₹ crore)	300	298
PAT (₹crore)	121	112

IEL operates a 120 MW tolling coal-based plant in Jojobera. It also operates a 120 MW co-generation plant (Powerhouse #6) in Jamshedpur, inside the Tata Steel plant, which is based on blast furnace and coke oven gas. Two out of the three units of 67.5 MW each of co-generation plant at Kalinganagar, Odisha, are also under operation by deploying production gases from Tata Steel's plant.

PAT for the year is higher due to reduction in finance cost due to scheduled repayment of loan offset by lower PLF incentives.

IEL is in an advanced stage of executing the third turbine of 67.5 MW co-generation plant at Kalinganagar, Odisha and Domjuri Solar Plant (15 MW), based on discussions with Tata Steel.

TROMBAY (930 MW)

Type of entity: Division

Particulars	FY22	FY21
Generation Sales (MUs)*	5,153	4,703

*Includes sales to Company's distribution division

Trombay plant achieved an availability of 92.1% in FY22 as compared to last year's availability of 92.3%. Higher generation in FY22 is mainly due to surge in demand post COVID period. Unit 8 LP turbine and boiler overhauling and Unit 7 STG blade replacement have been successfully completed. Trombay plant had undertaken several operational improvement measures, including reduction in make-up losses, optimising operational expenses and reducing store inventory.

JOJOBERA (428 MW)

Type of entity: Division

Particulars	FY22	FY21
Generation Sales (MUs)	2,814	2,523

Jojobera plant achieved availability of 96% in FY22 as compared to last year's availability of 93%. Higher generation in FY22 is mainly due to surge in demand post COVID period. Jojobera plant has secured 1.28 lakh MT coal through special forward e-auction for FY22.

HALDIA (120 MW)

Type of entity: Division

Particulars	FY22	FY21
Generation Sales (MUs)	792	655

Generation sales in FY22 were higher than previous year mainly due to improvement in flue gas availability from Tata Steel coke oven plant, on account of higher demand of coke. Significant improvement in PLF in FY22 of 87% compared to previous year level of 72% is due to several operational improvement measures, such as enhancing boiler and coke oven performance through collaborative approach with Tata Steel, and reduction in high energy steam loss.

TRANSMISSION

MUMBAI TRANSMISSION

Type of entity: Division

Particulars	FY22	FY21
Grid Availability (%)	99.9	99.9

The transmission assets, which are a part of the Mumbai licence area, had a grid availability of 99.9% in FY22 as against the Maharashtra Electricity Regulatory Commission (MERC) norm of 98%. Availability was maintained at high levels by proactive actions taken to reduce forced shutdowns. Key initiatives included, effective preventive maintenance practices, adoption of new technology and digitalisation initiatives for condition monitoring and optimisation of planned outages by judicious planning and execution.

POWERLINKS TRANSMISSION LIMITED – PTL

Type of entity: Subsidiary (Tata Power: 51%, PGCIL: 49%) (Joint Venture under Ind AS)

Particulars	FY22	FY21
Revenue from Operations (₹ crore)	139	117
PAT (₹ crore)	91	102

The average availability of the lines was maintained at same level as in previous year (i.e., 99.96%).

Revenue for the year is higher mainly due to recovery of way leave charges from beneficiaries. PAT is lower mainly as previous year including one-time tax impact .

DISTRIBUTION

MUMBAI DISTRIBUTION

Type of entity: Division

Particulars	FY22	FY21
Sales (MUs)	4,851	4,184
Consumer Base (Nos.)	7,47,458	7,30,515

Mumbai Distribution has added approx. 17,000 customers in FY22 and MUs sales increased by 16% during the year, mainly due to increase in demand as compared to the previous year.

Some key highlights of the Mumbai distribution business, including certain initiatives to improve customer experience, are:

- More than 16,000 consumers opted for green power tariff with annualised consumption of 176 MUs.
- Over 3.4 lakh consumers have opted for e-bills. WhatsApp bill services were launched in FY22 and 1 lakh+ consumers opted for the same.
- 42,500 smart meters installed under Smart Meter Rollout project in Mumbai.
- NABL Accreditation received as per IS 16,444 for meter testing and calibration laboratory.
- Wi-Fi devices and mobile applications were developed for meter reading and data transfer for real time billing.
- Deployment of Robotic Process Automation (RPA) in business processes.
- Social advancement for knowledge and household income -134 Sakhis enrolled for bill delivery and recovery.
- 100+ EV chargers installed in societies.
- 2,000+ lead generated for home automation.
- UJALA-Braille Electricity Supplementary Bills launched for visually impaired consumers.
- A Patent has been granted to Tata Power Mumbai Distribution for voice-assisted switchgear innovation.
- Won 3 Gold Awards in ICCQC 2021 and 6 Par Excellence Awards in NCQC.

TATA POWER DELHI DISTRIBUTION LIMITED – TPDDL

Type of entity: Subsidiary (Tata Power: 51%, Government of National Capital Territory (NCT) of Delhi: 49%)

Particulars	FY22	FY21
Distribution Sales (MUs)	8,787	8,347
Revenue from Operations (₹ crore)	7,978	7,297
PAT (₹ crore)	439	428

In FY22, TPDDL had a registered customer base of 18.82 lakh, spanning across an area of 510 sq. km. in north and north-west parts of Delhi. The AT&C losses for the year stood at 6.8% as against 7.3% last year .

TPDDL was able to reduce the System Average Interruption Duration Index (SAIDI) to a level of 13.2 hours against 16.6 hours in the previous year, an improvement of 21%. TPDDL has adopted TQM framework for taking operational excellence to the next level.

Average System Availability Index has improved from 99.80% to 99.84%.

TPDDL has also added solar generation as a part of its sustainable initiatives since 2008 and has installed 15 solar plants on the rooftop of its grid sub-stations, with a total generation capacity of 1.8 MW. It also has a total net metering cumulative capacity of 46.8 MWp. The Company is now working on setting up a smart grid with the integration of roof top solar, energy storage, e-charging of electric vehicles, home automation, etc. in its network.

Key initiatives undertaken by TPDDL during the year are:

- Digital Payment Index increased to 84% in FY22 compared to 77.5% in last year
- The Company sustained system reliability at 99.84% and touched the peak load at 2106 MW during the year. Street light functionality was 99.2%, there were 590 collection avenues, customer delight index was 96, and billing efficiency and collection efficiency were at 92.9% and 100.4% respectively, as on March 31, 2022.
- TPDDL in partnership with AutoGrid has launched a unique Incentive linked Behavioral Demand Response program to support effective utilisation of smart meters and reduce network management cost.
- TPDDL has been recognised as the first power distribution utility in the country to receive CERT-In empanelment as an Information Security Auditing Organisation (related to cyber security)
- Launched an interactive bill service through WhatsApp with audio description, six months billing history and nearby payment avenues along with existing offers and schemes.

- Launched various energy efficiency programmes such as 5-star AC replacement scheme, super-efficient BLDC fan, LED lighting products, which helped energy savings of 108 MUs and 88,480 KG CO_2 reduction since FY15
- Under the Horizon 2020 program, funded by the European Union, TPDDL is carrying out a pilot exercise of deploying an energy islanding system at one of its distribution sub-stations with the aim of creating a model for individual community-based storage systems. The project has deployed a holistic approach, including community engagement and technology deployment to create a successful model.
- Partnered with SUN Mobility to set up a network of swap points in New Delhi to cater to the growth of 2-wheeler and 3-wheeler EV market, recently established the battery swapping station in Azadpur, Delhi.
- Collaborated with Nexcharge to power up India's first grid connected Community Energy Storage System (CESS) at Rani Bagh, Delhi

TP AJMER DISTRIBUTION LIMITED – TPADL

Type of Entity: Wholly-owned Subsidiary

Particulars	FY22	FY21
Distribution Sales (MUs)	488	461
Revenue from Operation (₹ crore)	431	418
PAT (₹ crore)	(0.34)	0.36

TPADL has been operating as a franchisee for the supply and distribution of power in Ajmer, over the past five years. The total area under the franchisee is around 190 sq km. The total consumer base in FY22 is 1.57 lakh and peak demand was 97.90 MW, which has increased by 5% compared to last year.

In FY22, PAT is lower mainly due to higher O&M expenses.

For enhancing customer-centricity and reliability, various initiatives were implemented, resulting in improvement in business performance and reduction in AT&C loss to 9.5% in FY22 from 10.2% in the last year. Further reduction in provisional billing from 1.6% in previous year to 1.2% in FY22 and increase in digital payment to 55% in FY22 compared to 49% in FY21.

TP Central Odisha Distribution Limited – TPCODL

Type of Entity: Subsidiary (Tata Power: 51%, GRIDCO Limited: 49%)

Particulars	FY22	FY21*
Distribution Sales (MUs)	6,722	5,226
Revenue from Operations (₹ crore)	4,070	2,999
PAT (₹ crore)	29	7

* Acquisition date June 1, 2020

In FY22, TPCODL has a registered consumer base of 29.38 lakh spanning over an area of 29,354 sq.km in central part of Odisha. The AT&C loss stood at 26.7%.

PAT for the year has increased mainly due to full year operation coupled with lower AT&C losses.

The key initiatives taken up by TPCODL are as under:

- 96,605 new connections with a load of 310.5 MW have been energised during the year
- Booked theft load of 90.5 MW and recovered ₹ 22.4 crore during FY22
- Integrated 113 primary substations during the year. Cumulatively, 169 substations are being remotely monitored, out of which 86 are controlled from Central PSCC, Bhubaneswar. In FY22, 51 substations have been unmanned
- 21 Area PSCC (APSCC) have been made operational in TPCODL for better monitoring of non-automated sub stations. Works related to 33 kV and 11 kV are carried out through PTW (Suraksha Kavach application). All breakdown-related trippings are entered into the application for near real time information
- 3.9 lakh defective and mechanical single- phase meters have been replaced in FY22. This has led to an overall meter replacement of 6.1 lakh
- 660 'Gaon Chalo' Programs and RWA meets conducted to reach out to rural customers. Various Pay and Win schemes introduced to enhance digital payment. 9 CCC (total 14) across various divisions. Mobile cash collection van introduced.
- 8 trolley mounted mobile sub stations have been introduced to mitigate any emergency
- Rebar Lacing Pole has been tested at CPRI Bangalore and can withstand 300 km/ hr. It is lighter and cheaper than H Pole and can be now used for disaster resilient network

TP Northern Odisha Distribution Limited – TPNODL

Type of Entity: Subsidiary (Tata Power: 51%, GRIDCO Limited: 49%)

Particulars	FY22
Distribution Sales (MUs)	4,392
Revenue from Operations (₹ crore)	2,722
PAT (₹ crore)	74

During the year, the Company acquired 51% stake in TP Northern Odisha Distribution Limited as a licensee to carry out the function of distribution and retail supply of electricity, covering the distribution circles of Balasore, Bhadrak, Baripada, Jaipur and

Keonjhar in the state of Odisha for a period of 25 years effective from April 1, 2021. This added a further 19.10 lakh to the Company's customer base.

In FY22, TPNODL had a registered customer base of 20.89 lakh, spanning across an area of 28,000 sq. km. in northern parts of Odisha. The AT&C losses for the year stood at 23.1%.

TPNODL achieved the System Average Interruption Duration Index (SAIDI) to a level of 455 hours and System Average Interruption Frequency Index (SAIFI) of 680 Nos.

Key initiatives undertaken by TPNODL during the year are:

- AT&C losses - 23.1% - reduction of 2%+ in the very first year of operation
- 24 x 7 call centre and customer care centre started in 5 circles and launched 'My Tata Power' app with features of OCR based self-meter reading/billing, bill payment, billing and payment history, online complaint registration, and others
- 18 primary substations mapped under unmanned SCADA operation and 30 integrated
- Received 'Original Business Leader of the Year Award' for innovative project of the year - aerial meter reading for rural and lift irrigation customers
- Suraksha portal launched for reporting safety incidents/near miss/unsafe situation/unsafe acts/others
- Booked theft load of 72.2 MW and recovered ₹ 19.6 crore during FY22

TP Southern Odisha Distribution Limited – TPSODL

Type of Entity: Subsidiary (Tata Power: 51%, GRIDCO Limited: 49%)

Particulars	FY22	FY21*
Distribution Sales (MUs)	3,021	686
Revenue from Operations (₹ crore)	1,689	338
PAT (₹ crore)	69	22

* Acquisition date January 1, 2021

In FY22, TPSODL had a registered customer base of 23.82 lakh, spanning across an area of 48,751 sq. km. in the southern part of Odisha. The AT&C losses for the year stood at 32.5%.

TPSODL achieved the SAIDI of 155 hours and SAIFI of 233 Nos.

Key initiatives undertaken by TPSODL during the year are:

- 3 lakh single phase and 12,000 three phase defective meters were replaced
- 25 digital payment avenues made available to the consumers
- 500 smart meters installed for government consumers
- SCADA,GIS and 50-seater call centres made operational
- Achieved reduction in energy theft to 53 MW against target of 50 MW
- New Load added: 134 MW against target of 83 MW

TP Western Odisha Distribution Limited – TPWODL

Type of Entity: Subsidiary (Tata Power: 51%, GRIDCO Limited: 49%)

Particulars	FY22	FY21*
Distribution Sales (MUs)	7,493	1,562
Revenue from Operations (₹ crore)	4,243	839
PAT (₹ crore)	64	(1)

* Acquisition date January 1, 2021

In FY22, TPWODL had a registered customer base of 21.10 lakh. It has a vast distribution area in western part of Odisha covering 48,373 sq. km across nine revenue districts of Odisha, such as Bargarh, Bolangir, Deogarh, Jharsuguda, Kalahandi, Nuapada, Sambalpur, Sonepur and Sundergarh.

AT&C losses for the year stood at 27.7%. TPWODL has established Power System Control Center (PSCC) in TPWODL for complete remote monitoring of the distribution network for any abnormalities and helps in taking corrective measures within the stipulated time frame.

SAIDI is measured to 424 hour and SAIFI is 600 Nos.

Key initiatives undertaken by TPWODL during the year are:

- 'My Tata Power,' mobile application launched to digitally empower 2.1 million electricity consumers and to generate their Electricity Bills online by providing self-meter reading and instantly paying option, in addition to getting a chance to claiming a rebate of 4%
- Basic SCADA System was implemented to control and monitor the 33/11 KV network
- 24x7 call centre was established for 3 languages (Odia, Hindi and English) IVRS, and auto-forwarding of complaints and acknowledgments over SMS
- Exclusive E- Care Centre has been set up for responding to consumer queries, requests, complaints, and grievances through e-mails, letters and social media
- Interactive Voice Response System (IVRS) was developed for capturing mobile numbers and e-mail ids to improve consumer reachability and other service-related communications
- Load of 416 MVA added

- 1,34,817 man-hours of safety training provided and safety practices created in 17 divisions
- Constructed 427 DTR fencing for public safety and elephant corridor
- Enforcement load of 80.9 MW booked and recovered ₹ 19.1 crore

TATA POWER TRADING COMPANY LIMITED - TPTCL

Type of Entity: Wholly owned subsidiary

Particulars	FY22	FY21
Traded (MUs)	19,433	10,626
Revenue from Operations (₹ crore)	374	265
PAT (₹ crore)	55	33

TPTCL's sales volumes are 19,433 MUs in FY22 with an increase of 83% over last year. Further, PAT is also 65% higher than last year's actuals on account of higher volumes due to high demand and increased participation through tenders as well as in power exchange. There is optimum utilisation of the working capital cycle along efficient receivable management, resulting in negligible finance costs and higher interest incomes. TPTCL has no long-term or any short-term borrowings and can be termed as a debt free company.

OTHER BUSINESSES SERVICES

In FY22, the services division of T&D worked on assignments in diverse geographies in India and abroad. T&D services added large scale implementation projects in India, which include smart metering of 37 lakh consumers for KSEB Kerela, and smart grid implementation for BEST, Mumbai. International advisory assignments during the year include consulting for smart metering for Oman, and management and technical advisory for Tajikistan.

CONSUMER BUSINESSES- EV CHARGING

The Company has made a significant impact in developing an EV ecosystem and we are encouraging EV adoption in the country. The Company is committed to playing a key role along with other stakeholders in achieving the national goal of transition to electric-mobility. Tata Power partnered with Tata Motors, Morris Garages India Limited and Jaguar Land Rover for developing EV charging infrastructure for their customers and dealers and installed 2,253 charging points across the country, including those for e-buses used by multiple state transport utilities. During the year, the Company rolled out Version 2.0 of its software platform and mobile app that plays a crucial role in EV charging by helping customers in locating EV charging stations, charging EVs and making bill payments online. Tata Power EV charging points are now present in more than 352 cities and various key highways under various business models and market segments. The Company aims to increase its presence, both in terms of a greater number of charging stations and larger geographical presence across the country.

CONSUMER BUSINESSES- HOME AUTOMATION

The Company has developed IoT-based home automation solutions and introduced home automation products as a part of its smart energy management tool. The purpose is to encourage customers to implement efficient and cost-effective home automation solutions to manage their electricity usage. These products enable customers to monitor, operate and schedule any kind of home appliances such as AC, geyser, light and fan from anywhere through EZ home app and can also be operated through voice-enabled devices The Tata Power EZ home products sold across India through some solar rooftop channel partners. In addition, we have also initiated sales of our home automation products through e-commerce platforms and modern retail stores. The annual sale of FY22 was 33,373 units.

INTERNATIONAL BUSINESSES

DAGACHHU HYDRO POWER CORPORATION LIMITED - DHPC (126 MW)

Type of Entity: Associate (Tata Power 26%, DGPC & Affiliates: 74%)

Particulars	FY22	FY21
Generation Sales (MUs)	587	536
Revenue from Operations (₹ crore)	184	181
PAT (₹ crore)	34	65

*Figures are on 100% basis. The Company's share is 26%

ADJARISTSQALI NETHERLANDS BV (ABV)

Type of Entity: Joint Venture
(TPIPL: 50%, Clean Energy Invest: 50%)

Adjaristsqali Georgia LLC (AGL) is wholly owned subsidiary of ABV. AGL has developed a 187 MW hydropower project (Shuakhevi and Skhalta projects) on the Adjaristsqali river and its tributaries in Georgia. This is one of the largest infrastructure investments in Georgia.

Management Discussion & Analysis

Based on the operational performance in the last two years, the Company, during the year, reassessed the recoverability of its investment in ABV and accordingly, has recognised an impairment provision of ₹ 150 crore in the consolidated financial results. Investment in ABV is shown as 'assets held for sale' during the year.

DIGITAL INITIATIVES

The Company is focussed on leveraging digital technologies and solutions across the different business segments to achieve operational efficiency, enhance consumer experience, create competitive differentiation by providing digital platforms and support the business growth. All of these have led to a significant increase in digitalisation across the Company.

Tata Power Digital and IT services have aligned with the accepted global benchmarks with its sustained certification for Integrated Management System (IMS) comprising ISO 27001:2013 and ISO 9001:2015 for digital and IT in March 2020, and will go for recertification in FY23 after successful closure of two cycles of surveillance audits.

Some of the key initiatives across business/functions during the year are as follows:

Initiatives to enhance customer experience

- **Smart meter consumer analytics:** Personalised insights regarding the consumption trends and savings potential provided on the customer portal. Self-service facility has also been enabled for the consumers to subscribe / unsubscribe to alert notifications
- **Prepaid metering and billing:** Implementation of prepaid metering using smart meter interfaces like daily meter reading, meter operational state, remote disconnection and remote reconnection post recharge
- **Transmission lines image analytics:** Use of AI / ML to build a model that provides analytics for predictive decision-making and also to derive valuable insights and actionable items for eliminating safety hazards
- **Consumer sentiment analysis:** Feedback received from consumers through various digital channels is collated and analysed using Natural Language Processing (NLP) and classified into 3 categories viz. positive, negative and neutral. This has enabled the customer relationship team to provide better services by diagnosing the problems and taking informed decisions
- **WhatsApp integration:** WhatsApp integration has been completed for sending bill generation messages to consumers, who have provided their consent for availing the facility

Initiatives to enhance employee productivity, experience and learning

- **Employee Mobile App:** Single mobile app available for employees that enables to fetch information and carry out various tasks on mobility
- **Do Green App:** Mobile App to enable employees to contribute towards the organisational goal of carbon reduction
- **Stakeholder Suraksha App:** Has improved safety awareness in vendors / contractor workforce, which in turn has led to improve the safe working environment and safety indices of the plant

Initiatives for business growth

- Enabled the EV platform with new booking / cancellation facility, customer review, RFID card-based charging, additional payment channels for customers, etc. Also, added features for housing society and home accounts
- New features added for rooftop platform, like channel partner account statement, tracking of leads, smartruck salesforce integration for shipment tracking, monitoring and management of the entire field sales team
- Mobile app and consumption analytics launched for home automation customers with dashboard, developed for call centre agents to resolve customer queries quickly

Initiatives to enhance operational efficiency (asset performance and digitalisation of processes)

- **Field Force Automation:** Deployment of meter installation, replacement and removal app, which is integrated with GIS and various map functionalities
- **Robotic Process Automation:** Robotic Process Automation (RPA) implemented in various functions of consumer billing and meter reading, finance and HR, which has reduced the cycle time and also improved workforce productivity
- **Condenser Vacuum Optimisation:** Predictive analytics for vacuum level of condensers and real time monitoring to reduce losses and improve power plant operations

4. FINANCIAL PERFORMANCE – STANDALONE

The Company recorded a profit after tax of ₹ 2,783 crore during the financial year ended March 31, 2022 (PAT was ₹ 294 crore in FY21). Both the basic and the diluted earnings per share were at ₹ 8.61 for FY22. During the year, National Company Law Tribunal (NCLT) issued an order for merger of Coastal Gujarat Power Limited (CGPL) and Af-taab with the Company effective April 1, 2020 and accordingly previous year figures are restated.

The analysis of major items of the standalone financial statements is shown below.

REVENUE

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Revenue from Operations	11,108	13,169	(2,061)	(16)
Regulatory Deferral Balances including deferred tax recoverable/(payable)	134	300	(166)	(55)
Total	**11,242**	**13,469**	**(2,227)**	**(17)**

The decrease in revenue is mainly due to lower generation in Mundra due to unit shutdown on account of higher coal prices.

OTHER INCOME

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Interest Income	250	180	70	39
Dividend Income	2,640	998	1,642	165
Gain/(Loss) on Investments	8	23	(15)	(65)
Other Non-operating Income	89	59	30	51
Total	**2,987**	**1,260**	**1,727**	**137**

The increase in Other Income is mainly due to higher dividend income from foreign subsidiary.

COST OF POWER PURCHASED AND COST OF FUEL

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Cost of Power Purchased	798	581	217	37
Cost of Fuel	6,569	7,842	(1,273)	(16)

Cost of power purchased was higher on account of increase in power purchase price. Cost of fuel was lower mainly due to lower generation in CGPL.

TRANSMISSION CHARGES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Transmission Charges	259	258	1	0.4

Transmission charges is in line with PY.

EMPLOYEE BENEFIT EXPENSES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Employee Benefit Expenses	738	697	41	6

Employee benefit expenses are higher mainly due to normal increment.

FINANCE COSTS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Finance Costs	2,189	2,497	(308)	(12)

Finance costs were lower mainly due to refinancing of borrowings at lower interest rates.

DEPRECIATION AND AMORTISATION

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Depreciation and Amortisation	1,134	1,235	(101)	(8)

Depreciation has decreased mainly due to sale of winds assets to TPREL and Tata Power Green Energy Limited (TPGEL).

OPERATIONS AND OTHER EXPENSES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Repairs and Maintenance	479	441	38	9
Others	718	628	90	14
Total	**1,197**	**1,069**	**128**	**12**

Repairs and maintenance expenses are higher mainly due to repairs work related to SCADA projects in MO-Transmission being charged off to P&L account, based on MERC order. Other expenses are higher due to forex loss.

EXCEPTIONAL ITEMS- CONTINUED OPERATION

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Gain on sale of Investment in Subsidiary	1,519	Nil	1,519	NA
Standby Litigation	Nil	(109)	109	(100)
Provision for Impairment of Investments	(107)	Nil	(107)	NA
Total	**1,412**	**(109)**	**1,521**	**(1,395)**

Gain on sale of investment in subsidiary

During the year, the Company has sold its investment in TERPL, a wholly owned subsidiary of the Company to TPIPL another wholly owned subsidiary of the Company for a consideration of ₹ 2,127 crore ($ 286 million) and recognised a profit amounting to ₹ 1,519 crore in the financial results.

Provision for impairment of investments

During the year, the Company has reassessed the recoverability of its investment in ABV, held through its wholly owned subsidiary TPIPL based on the current operational performance and accordingly, has recognised an impairment provision of ₹ 107 crore as an exceptional item in the financial results.

Standby litigation

In the previous year, MERC vide its order dated March 30, 2020 allowed the recovery of part of the total standby litigation amount from consumers. During the previous year, MERC vide its order dated December 21, 2020, revised its earlier order and disallowed the recovery of said standby charges. Consequently, the Company has recognised an expense of ₹ 109 crore (including carrying cost) and disclosed it as an exceptional item.

EXCEPTIONAL ITEMS- DISCONTINUED OPERATION (Strategic Engineering Division)

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Impairment Loss on Remeasurement to Fair Value	(468)	(160)	(308)	193

During the previous year, the Company had sold its Strategic Engineering Division (SED) to Tata Advanced Systems Limited (TASL). During the year, the Company has reassessed the fair value of the contingent consideration receivable and recognised an impairment loss of ₹ 468 crore as an exceptional item in the financial results (₹ 160 crore in previous year).

TAX EXPENSES / (CREDIT) FOR CONTINUED OPERATIONS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Current Tax	(105)	207	(312)	(151)
Deferred Tax	(9)	(105)	96	(91)
Deferred Tax Relating to Earlier Year	(739)	Nil	(739)	NA
Remeasurement of Deferred Tax on Account of New Tax Regime (net)	360	Nil	360	NA
Total	**(493)**	**101**	**(594)**	**(588)**

Current tax

Subsequent to the merger of the erstwhile CGPL with the Company with effect from April 1, 2020, the Company has reassessed its provision for current taxes and has written back an amount of ₹ 105 crore during the current year pertaining to earlier year.

Deferred tax

During previous year, the Company entered into a Business Transfer Agreement with TPREL and TPGEL, wholly-owned subsidiaries, for the transfer of renewable assets (forming part of renewable segment) as a 'going concern' on a slump sale basis effective on or after April 1, 2021. Consequently, as per the requirement of Ind AS 12, the Company has reassessed its deferred tax balances including its unrecognised deferred tax assets on capital losses and has recognised gain of ₹ 131 crore.

Deferred tax relating to earlier year

The Company has also reassessed the recoverability of unabsorbed depreciation and brought forward tax losses post merger and has recognised deferred tax asset amounting to ₹ 969 crore and has written off deferred tax asset on capital losses amounting to ₹ 230 crore during the current year.

Remeasurement of deferred tax on account of new tax regime (net)

The Company has transitioned to the new tax regime effective April 1 2020 and accordingly, the Company had remeasured its tax balances and reversed the deferred tax asset amounting to ₹ 360 crore.

TAX EXPENSES FOR DISCONTINUED OPERATIONS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Current Tax	Nil	(101)	101	(100)
Deferred Tax	Nil	(72)	72	(100)
Total	**Nil**	**(173)**	**173**	**(100)**

During FY21, the Company completed sale of its SED business to TASL.

PROPERTY, PLANT AND EQUIPMENT, INVESTMENT PROPERTY AND INTANGIBLE ASSETS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Property, plant and equipment	20,875	21,602	(727)	(3)
Right of Use Assets	2,834	2,831	3	0.1
Intangible Assets	37	61	(24)	(39)
Capital Work-in-Progress	965	322	643	200
Total	**24,711**	**24,816**	**(105)**	**0.4**

The above assets decreased mainly due to transfer of renewable assets to TPREL and TPGEL in FY22 offset by increased capex spending.

NON-CURRENT INVESTMENTS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Investment in Subsidiary, JV and Associate	9,543	9,236	307	3
Statutory Investments	124	168	(44)	(26)
Others	1,044	558	749	87
Total	**10,711**	**9,962**	**749**	**8**

Non-current investments increased mainly due to infusion of additional investments in Tata Project for future growth, acquisition of TPNODL and reclassification of Tata Teleservices (Maharashtra) Limited (TTML) from assets held for sale.

CURRENT INVESTMENTS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Mutual Funds (Unquoted)	68	247	(179)	(72)
Total	**68**	**247**	**(179)**	**(72)**

Current investment is lower mainly due to redemption of investment in mutual funds during the year.

TRADE RECEIVABLES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	Nil	Nil	Nil	Nil
Current	1,027	1,580	(553)	(35)
Total	**1,027**	**1,580**	**(553)**	**(35)**

Decrease in trade receivables is mainly due to lower billing in Mundra on account of lower generation and higher recovery of dues in Mumbai operations.

LOANS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	453	454	(1)	(0.2)
Current	1,328	1,336	(8)	(0.6)
Total	**1,781**	**1,790**	**(9)**	**(0.6)**

No major change in the loan balance during the year.

FINANCE LEASE RECEIVABLE

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	521	530	(9)	(2)
Current	43	37	6	16
Total	**564**	**567**	**(3)**	**(0.5)**

Finance lease receivable reduced due to recovery of lease rentals offset by new contracts undertaken in EV business segment during the year.

OTHER FINANCIAL ASSETS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	97	658	(561)	(85)
Current	1,987	147	1,840	1,252
Total	**2,084**	**805**	**1,279**	**159**

Other financial assets increased mainly due to dividend receivable from Bhira, offset by reversal of contingent consideration receivable from sale of SED business.

OTHER ASSETS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	1,649	1,342	307	23
Current	213	192	21	11
Total	**1,862**	**1,534**	**328**	**21**

Other assets increased mainly due to increase in recoverable from consumers in Mumbai Regulated Business, higher pre-paid expenses and increase in capital advances in Mundra, Jojobera and SRA projects.

ASSETS CLASSIFIED AS HELD FOR SALE

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Land	301	301	Nil	Nil
Building	1	9	(8)	(89)
Investments	276	276	Nil	Nil
Investment carried at fair value through Other Comprehensive Income	Nil	179	(179)	(100)
Loan and other receivables (including interest accrued)	23	23	Nil	Nil
Transmission Lines	Nil	9	(9)	(100)
Total	**601**	**797**	**(16)**	**(25)**

Assets held for sale reduced mainly due to reclassification of TTML to investment and receipt of reimbursement of expenses incurred for Vikhroli Transmission lines from MERC.

LIABILITY CLASSIFIED AS HELD FOR SALE

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Other Liabilities	114	114	Nil	Nil
Total	**114**	**114**	**Nil**	**Nil**

This liability pertains to advance received towards sale of Dehrand land.

REGULATORY DEFERRAL ACCOUNT – ASSET/ (LIABILITY)

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Regulatory Deferral – Asset	726	574	152	26
Less: Regulatory Deferral – Liability	Nil	Nil	Nil	Nil
Total Regulatory Deferral – Asset (Net)	**726**	**574**	**152**	**26**

Regulatory Deferral Assets (Net) pertains to regulatory receivables in the Mumbai Distribution Business. The same has increased mainly due to increase in power purchase cost and higher carrying cost on regulatory assets.

TOTAL EQUITY

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Equity Share Capital	320	320	Nil	Nil
Unsecured Perpetual Securities	Nil	1,500	(1,500)	(100)
Other Equity	10,560	8,059	2,501	31
Total Equity	**10,880**	**9,879**	**1,001**	**10**

Total Equity has increased mainly due to higher profit during the year on account gain on sale of TERPL's shares to TPIPL, higher dividend from coal companies and tax income on account of merger offset by higher losses in Mundra. During the year, the Company has exercised the call option to redeem the unsecured perpetual securities along with interest.

BORROWINGS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	18,088	16,583	1,505	9
Current	6,620	7,878	(1,258)	(16)
Total	**24,708**	**24,461**	**247**	**1**

Current borrowings is refinanced by Non-current borrowings to improve liquidity risk profile.

LEASE LIABILITY

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	2,555	2,460	95	4
Current	304	289	15	5
Total	**2,859**	**2,749**	**110**	**4**

Lease liability has increased mainly due to remeasurement of future lease liabilities on account of change in CERC Index pertaining to Mundra.

TRADE PAYABLES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	Nil	Nil	Nil	Nil
Current	4,080	3,282	798	24
Total	**4,080**	**3,282**	**798**	**24**

Trade payable increased mainly on account of payable for fuel in the Mundra and Mumbai Regulated Business.

OTHER FINANCIAL LIABILITIES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	13	12	1	8
Current	2,761	2,208	553	25
Total	**2,774**	**2,220**	**554**	**25**

Other Financial Liabilities increased mainly due to higher factoring liability pertaining to receivables of Mundra and Mumbai Generation Business.

OTHER LIABILITIES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	757	667	90	13
Current	555	500	55	11
Total	**1,312**	**1,167**	**145**	**12**

Other liabilities increased mainly due to increase in deferred revenue liability pertaining to Mundra and increase in statutory liabilities and statutory consumer reserve.

PROVISIONS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	274	275	(1)	(0.3)
Current	45	39	6	15
Total	**319**	**314**	**5**	**2**

No major movement in provisions during the year.

TAX ASSETS/(LIABILITY)

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-Current Tax Assets	338	144	194	134
Deferred Tax Assets	250	Nil	250	NA
Deferred Tax Liability	Nil	(135)	135	(100)
Current Tax Liability	(108)	(135)	27	(20)
Total	**480**	**(126)**	**606**	**(481)**

The Hon'ble NCLT has approved the composite scheme of arrangement for merger of erstwhile CGPL along with the capital reorganisation with the Company effective April 1, 2020.

During the current year, subsequent to the merger of the erstwhile CGPL, the Company has reassessed its recoverability of unabsorbed depreciation and brought forward tax losses and has recognised deferred tax asset amounting to ₹ 969 crore and has written off deferred tax asset on capital losses amounting to ₹ 230 crore during the year. Further, the Company has transitioned to the new tax regime effective April 1, 2020 and accordingly, the Company had remeasured its tax balances and reversed the deferred tax asset amounting to ₹ 360 crore during the year.

During the previous year, the Company entered into a Business Transfer Agreement with TPREL and TPGEL, wholly-owned subsidiaries, for the transfer of renewable assets (forming part of renewable segment) as a 'going concern' on a slump sale basis effective on or after April 1, 2021. Consequently, as per the requirement of Ind AS 12, the Company reassessed its deferred tax balances including its unrecognised deferred tax assets on capital losses and has recognised gain of ₹ 131 crore.

5. Financial Performance – Consolidated

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Revenue from Operations*	42,576	33,239	9,337	28
Depreciation & Amortisation	3,122	2,745	377	14
Finance Costs	3,859	4,010	(151)	(4)
Exceptional Items	(618)	(269)	(349)	(130)
Profit Before Taxes	2,535	1,767	768	43
Profit for the year	**2,156**	**1,439**	**717**	**50%**

*Includes Regulatory Income/ (Expenses)

- Revenue from Operations increased primarily due to full year impact of Odisha Discoms and execution of solar EPC projects
- Depreciation increased primarily due to increased capitalisation
- Finance costs were lower mainly due to refinancing of loans, and reduction in interest rate
- Exceptional items in FY22 included impairment of Georgia assets and reversal of contingent consideration in SED
- Exceptional items in FY21 included disallowance of recovery of standby charges by MERC and reversal of contingent consideration in SED

PROPERTY, PLANT AND EQUIPMENT, INVESTMENT PROPERTY AND INTANGIBLE ASSETS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Property, plant and equipment	50,503	45,356	5,147	11
Right to use assets	3,662	3,682	(20)	(0.5)
Intangible Assets	1,366	1,345	21	2
Capital Work-in-Progress	4,635	3,270	1,365	42
Total	**60,166**	**53,653**	**6,513**	**12**

The above assets increased mainly on account of increased spending in renewables business, acquisition of Odisha Discoms, increased capitalisation in TPDDL and Mumbai Regulated Business.

GOODWILL

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Goodwill	1,858	1,795	63	4

Goodwill increased on account of acquisition of TPNODL during the year.

NON-CURRENT INVESTMENTS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Investments in Joint Ventures & Associates	12,580	11,921	659	6
Statutory Investments	124	168	(44)	(26)
Others	1,046	561	485	86
Total	**13,750**	**12,650**	**1,100**	**9**

Increase in non-current investment is mainly due to additional infusing of equity in Tata Projects to fund the future expansion plan and reclassification of TTML from assets held for sale.

CURRENT INVESTMENTS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Statutory Investments	56	Nil	56	NA
Investments in Mutual Funds	355	500	(145)	(29)
Total	**411**	**500**	**(89)**	**(18)**

Current investments are lower mainly due to lower investment in mutual fund in Tata Power & MPL offset by increase in investment in WREL and TPWODL.

TRADE RECEIVABLES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	686	605	81	13
Current	5,980	5,200	780	15
Total	**6,666**	**5,805**	**861**	**15**

Increase in trade receivables was mainly due to increase in receivables in Odisha Discom offset by higher collection in Mundra and TPSSL.

LOANS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	3	5	(2)	(40)
Current	9	8	1	13
Total	**12**	**13**	**(1)**	**(8)**

There is no major movement in loans during the year.

FINANCE LEASE RECEIVABLE

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	589	599	(10)	(2)
Current	47	41	6	15
Total	**636**	**640**	**(4)**	**(1)**

There is no major movement in finance lease receivable during the year.

OTHER FINANCIAL ASSETS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	1,685	1,919	(234)	(12)
Current	501	330	171	52
Total	**2,186**	**2,249**	**(63)**	**(3)**

Non-current financial assets has decreased mainly due to reversal of contingent consideration in SED division, conversion of advance against equity for acquisition of TPNODL offset by increase in deposit balances on account of acquisition of Odisha Discoms. Current financial assets increased mainly due to increase in advances in TPREL, Mumbai T&D Business and new business in Tata Power.

OTHER ASSETS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	1,850	1,459	391	27
Current	1,480	914	566	62
Total	**3,330**	**2,373**	**957**	**40**

Non-current Assets increased mainly due to increase in recoverable from consumers in Mumbai Regulated Business and increase in capital vendor in MPL on account of FGD projects. Current Assets increased mainly due to increase in advances to vendors in TPSSL and Orissa Discoms and higher pre-paid expenses in Tata Power.

ASSETS/ (LIABILITY) CLASSIFIED AS HELD FOR SALE

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Assets Classified as Held for Sale	3,047	3,047	Nil	Nil
(Less): Liability Classified as Held for Sale	(114)	(140)	26	(23)
Total (Net)	**2,933**	**2,907**	**26**	**23**

Net movement in assets/ (liability) classified as held for sale due to completion of sale transaction of TCL Ceramics Limited during the year.

REGULATORY DEFERRAL ACCOUNT – ASSET/ (LIABILITY)

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Regulatory Deferral – Asset	6,811	6,222	589	10
Less: Regulatory Deferral – Liability	(635)	(99)	(536)	541
Total Regulatory Deferral – Asset (Net)	**6,176**	**6,123**	**53**	**1**

Regulatory deferral assets (net) pertains to regulatory receivables in TPDDL, Odisha Discoms and Mumbai Distribution Business. This has marginally increased in Delhi Discom, Mumbai Discom, and Odisha Discoms.

TOTAL EQUITY

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Equity Share Capital	320	320	Nil	Nil
Unsecured Perpetual Securities	Nil	1,500	(1,500)	(100)
Other Equity	22,122	20,503	1,619	8
Total	**22,442**	**22,323**	**119**	**1**

Total equity has increased mainly due to higher profit during the year offset by the repayment of unsecured perpetual securities.

BORROWINGS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	32,730	30,045	2,685	9
Current	14,860	13,126	1,734	13
Total	**47,590**	**43,171**	**4,419**	**10**

Increase in borrowing is mainly due to funding for growth projects in renewables and T&D business and to fund the repayment of perpetual securities.

LEASE LIABILITY

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	3,208	3,142	66	2
Current	397	395	2	1
Total	**3,605**	**3,537**	**68**	**2**

Lease liability has increased due to remeasurement of future lease liabilities on account of change in CERC index pertaining to the Mundra during the year.

TRADE PAYABLES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	Nil	2	(2)	(100)
Current	10,460	7,146	3,314	46
Total	**10,460**	**7,148**	**3,312**	**46**

Trade payable increased mainly in TPSSL on account of being payable to vendors for execution of solar EPC projects, increase in fuel payable in Mundra and Tata Power and higher power purchase payable in Delhi and Orissa Discoms.

OTHER FINANCIAL LIABILITIES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	1,157	1,371	(214)	(16)
Current	9,632	7,648	1,984	26
Total	**10,789**	**9,019**	**1,770**	**20**

Other financial liabilities have increased mainly due to acquisition of Odisha Discoms and advance received from sale of investments in PT Arutmin.

OTHER LIABILITIES

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	8,139	5,987	2,152	36
Current	2,779	2,481	298	12
Total	**10,918**	**8,468**	**2,450**	**29**

Other liabilities have increased mainly due to deferred revenue on account of service line contribution and deferred revenue grant pertaining to Orissa Discoms and increase in statutory liabilities in Orissa Discom and Tata Power.

PROVISIONS

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current	1,218	667	551	83
Current	345	163	182	112
Total	**1,563**	**830**	**733**	**88**

Provision has increased mainly due to the increase in provision for employee benefits in Orissa Discoms and increase in provision for rectification works in TPSSL during the year.

TAX LIABILITIES / (ASSETS)

(₹ in crore)

Particulars	FY 22	FY 21	Change	% Change
Non-current Tax Liability	3	3	Nil	Nil
Current Tax Liability	147	198	(51)	(26)
Deferred Tax Liabilities (Net)	1,033	976	57	6
(Less): Non-current Tax Assets	(521)	(360)	(161)	45
(Less): Deferred Tax Assets	(335)	(184)	(151)	82
Total (Net)	**327**	**633**	**(306)**	**(48)**

The Hon'ble NCLT has approved the composite scheme of arrangement for merger of erstwhile CGPL along with the capital reorganisation with the Company effective April 1, 2020.

During the current year, subsequent to the merger of the erstwhile CGPL, the Company has reassessed its recoverability of unabsorbed depreciation and brought forward tax losses and has recognised deferred tax asset amounting to ₹ 969 crore and has written off deferred tax asset on capital losses amounting to ₹ 380 crore during the year. Further, the Company has transitioned to the new tax regime effective April 1, 2020 and accordingly, the Company had remeasured its tax balances and reversed the deferred tax asset amounting to ₹ 360 crore during the year.

During the previous year, the Company entered into a Business Transfer Agreement with TPREL and TPGEL, wholly-owned subsidiaries, for the transfer of renewable assets (forming part of renewable segment) as a 'going concern' on a slump sale basis effective on or after April 1, 2021. Consequently, as per the requirement of Ind AS 12, the Company reassessed its deferred tax balances including its unrecognised deferred tax assets on capital losses and has recognised gain of ₹ 131 crore.