

FPO Note

January 24, 2023

Adani Enterprises Limited





Issue Snapshot:

Issue Open: Jan 27 – Jan 31, 2023

Price Band: Rs. 3112 – 3276 (Retail discount of Rs 64)

**Issue Size: 20,000.0 cr (including employee reservation of Rs 50 cr) – payable 50% now

Reservation for:

QIB upto 50% eq sh
 Non-Institutional atleast 15% eq sh
 ((including 1/3rd for applications between Rs.2 lakhs to Rs.10 lakhs))
 Retail atleast 35% eq sh

Face Value: Rs 1

Book value: Rs 317.34 (September 30, 2022)

Bid size: - 4 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity: Rs. 114.00 cr
 **Post issue Equity: Rs. 120.11 cr

Listing: BSE & NSE

Book Running Lead Managers: ICICI Securities Ltd, Jefferies India Private Ltd, SBI Capital Markets Ltd, Axis Capital Ltd, BOB Capital Markets Ltd, IDBI Capital Markets & Securities Ltd, JM Financial Ltd, IIFL Securities Ltd, Monarch Network Capital Ltd, Elara Capital (India) Private Ltd

Sponsor Banks: Axis Bank Ltd and ICICI Bank Ltd

Registrar to issue: Link Intime India Private Ltd

Shareholding Pattern

Shareholding Pattern	Pre issue %	Post issue %
Promoter and Promoter Group	72.63	68.94
Public & Employee	27.37	31.06
Total	100.0	100.0

**=assuming issue subscribed at higher band and post payment of full money. Currently 50% is payable and the rest can be called upon later by the company in one or more calls.

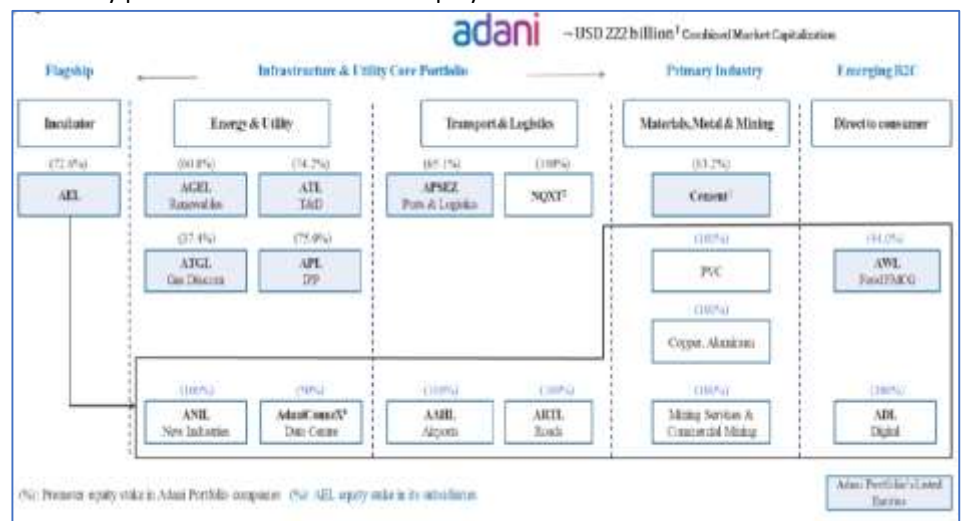
Source for this Note: RHP

Background & Operations:

Adani Enterprises Limited (AEL) is a part of the Adani group, which is among India's top business houses with an integrated energy and infrastructure platform in India and a long track record of successfully executing large-scale projects. It is one of India's largest listed business incubators in terms of market capitalisation and is driven by the philosophy of incubating businesses in four core industry sectors - energy and utility, transportation and logistics, consumer, and primary industry. It represents an effective complement of established and developing businesses which address the needs of India.

AEL has, over the years, seeded new business interests for the Adani group, developed them into sizeable and self-sustaining business verticals and subsequently demerged them into independently listed and scalable platforms, thereby unlocking value for its shareholders. It has a demonstrated track record of creating sustainable infrastructure businesses since 1993. The Company has emerged as an incubator by investing, maturing and eventually demerging various diversified businesses. Since inception, it has incubated six decacorn businesses and successfully listed them, including by way of demergers, as Adani Ports and Special Economic Zone Limited, Adani Power Limited, Adani Transmission Limited, Adani Green Energy Limited, Adani Total Gas Limited and Adani Wilmar Limited. As of December 31, 2022, the Adani group had a market capitalisation of Rs. 18,402 billion (approximately US\$222 billion), and are one of the largest listed group by market capitalization in India.

The structure chart below provides an overview of the Adani group's infrastructure and utility portfolio and the role that it plays:



AEL's current business portfolio includes:

Energy and utility: It develop data centers with an aim to retain and drive India's internet-derived data in India. It is also developing infrastructure projects that enhance **water** treatment and use efficiency.

Transport and logistics: As part of airports business AEL manage prominent airports in India. It currently develops, operate and manage seven operational airports across the cities of Mumbai, Ahmedabad, Lucknow, Mangaluru, Jaipur, Guwahati and Thiruvananthapuram, and one greenfield airport in Navi Mumbai. It also develops infrastructure projects such as roads in India. As of September 30, 2022, AEL had 14 road assets in India of which three assets has started commercial operations.



Consumer: AEL manufacture, market and brand food FMCG products. Additionally, it is developing a super-app, “Adani One”, as part of its digital business to complement Adani group’s consumer serving businesses.

Primary industry: AEL offers mining services which involves contract mining, development, production-related services and other related services to mining customers primarily in the coal and iron ore industries. To cater to the high demand for coal in India, it offers integrated resource management services of coal which involves the access of coal from diverse global pockets and providing just-in time delivery to Indian customers. Under industrials, it intends to manufacture petrochemicals, copper and similar metals, and manufacture strategic military and defence products that enhance India’s self-reliance.

Businesses is at various stages of development and in line with AEL’s strategy it intends to expand, diversify and develop these businesses. As of September 30, 2022, revenue from its established businesses, which include integrated resource management, mining services and developing airports, constituted majority of its revenue from operations.

Its revenue from operations has grown at a compound annual growth rate (CAGR) of 16.9% from ₹43,402.56 crores in Fiscal 2020 to ₹ 69,420.18 crores in Fiscal 2022. Its EBITDA has grown at a CAGR of 16.8% from ₹2,967.96 crores in Fiscal 2020 to ₹4,725.71 crores in Fiscal 2022.

Objects of Issue:

AEL proposes to utilise the Net Proceeds towards funding of the following objects:

Fresh Issue

- Funding capital expenditure requirements of some AEL’s Subsidiaries in relation to (a) certain projects of the green hydrogen ecosystem; (b) improvement works of certain existing airport facilities; and (c) construction of greenfield expressway;
- Repayment, in full or part, of certain borrowings of the Company and three of its Subsidiaries, namely, Adani Airport Holding Limited, Adani Road Transport Limited, and Mundra Solar Limited; and
- General corporate purposes.

Utilisation of Net Proceeds

Rs in crores

Sr.No	Particulars	Total estimated cost/ Estimated utilisation from Net Proceeds
1	Funding capital expenditure requirements of some AEL’ Subsidiaries in relation to (a) certain projects the green hydrogen ecosystem; (b) improvement works of certain existing airport facilities; and (c) construction of greenfield expressway;	10869.0
2	Repayment, in full or part, of certain borrowings of the Company and three of its Subsidiaries, namely, Adani Airport Holding Limited, Adani Road Transport Limited, and Mundra Solar Limited; and	4165.0
3	General corporate purposes	*

Competitive Strengths

AEL is a business incubator with a demonstrated track record of incubating sustainable infrastructure businesses in India with a focus on enhancing stakeholder value: AEL is one of India’s largest listed business incubators in terms of market capitalisation. It represents an effective complement of established and developing businesses which address the needs of India. It started operations in 1993 and incubated the ports business in 1998, and has since expanded its portfolio to cover diversified businesses across many industry verticals including energy and utilities, transport and logistics, primary industry and consumer. It has over the years, seeded new business interests for the Adani group, developed them into sizeable and self-sustaining business verticals and subsequently demerged them into independently listed and scalable platforms, thereby unlocking value for its shareholders. It continues to add new companies to its portfolio with an objective to address the growing needs of India. These businesses possess a complement of scale, strategic importance, sustainable processes and technology sophistication.

Demonstrated track record and expertise in project execution and management: AEL has incubated several companies across many verticals in the infrastructure sector and has built a distinctive specialization in project execution and has successfully executed all projects that it has undertaken to date. Through AEL, it focuses on the underpenetrated infrastructure sector in India that it has high potential for growth. By leveraging the Adani group’s multi-decade pool of managerial experience across a range of competencies for executing projects, it recognizes opportunities early, bid for or acquire projects, and aims to successfully execute projects. AEL develop



and operate businesses with an aim for these businesses to lead in their respective sectors, offers customers a superior price value proposition, widen markets, and contribute to the sustainable development of the nation. As a result, its businesses not only serve existing markets but are built and operated with an aim to enlarge markets, enhance lifestyles, further sustainability and foster prosperity.

AEL leverages Adani group's multi-decade pool of managerial experience across a range of competencies for executing projects. It executes projects under Adani group's project management team, Project Management and Assurance Group ("PMAG"), which recognizes potential growth opportunities, conceptualizes a project from the bidding stage and ensures the overall development of the project within timelines at low costs. At the origination stage it conduct thorough market analysis to identify the strategic value of an opportunity. Based on its analysis it bid for projects or acquire them depending on the industry vertical with the aim of winning the bid and ensuing seamless integration within the Adani group.

Depending on the industry and sector, AEL forms strategic alliances to support the growth of the businesses. It has a long and successful history of forming strategic alliances with industry players for project execution which can be demonstrated through its over two decade long joint venture with Wilmar International to form Adani Wilmar Limited, a leading FMCG company. More recently it formed a partnership with Total Energies through its subsidiary, Adani New Industries Limited ("ANIL") for its green hydrogen ecosystem. In addition, it has partnered with EdgeConneX to build a reliable network of data centers in India through joint venture AdaniConneX Private Limited.

Tapping on the growing green hydrogen potential in India to build a fully-integrated green hydrogen ecosystem in India: India is expected to overtake the European Union as the world's third largest energy consumer by 2030 and will account for nearly one quarter of the global energy demand growth over 2019 to 2040. However, dependence on conventional sources alone to meet this requirement will not only result in higher import expenses but also higher emissions. In 2016, India signed the Paris Agreement to reduce the emissions intensity of its GDP by 45% by 2030. In 2021, India set its target for decarbonisation through the "Panchamrit" (which means five nectar) outlined by India's prime minister, Shree Narendra Modi, during his address at the UN Climate Change Conference, Glasgow ("COP 26 summit"), where he said that India is aiming to be net zero by 2070, for renewable power to constitute more than 50% of total power consumed by 2030, to reduce carbon intensity by 45% by 2030 (over 2005 levels), for non-fossil fuel capacity to be increased to 500 gigawatts ("GW") by 2030 and to reduce India's carbon emissions by one billion tonnes by 2030. Further, at UN Climate Change Conference, Egypt ("COP 27 summit"), India submitted its long-term low emission development strategy to the United Nations Framework Convention on Climate Change in which the importance of hydrogen along with electric vehicles and ethanol for achieving decarbonisation was emphasized.

Currently, AEL has a solar and wind equipment manufacturing facility at Mundra SEZ. It commissioned India's largest vertically integrated solar Photovoltaic ("PV") facility as of September 30, 2022 and had the largest market share of 28% in terms of installed capacity for PV cell manufacturing. It offers products and services across the PV spectrum and manufacture passivated emitter and rear cell ("mono-p-pERC") and passivated emitter rear totally diffused ("n-PERT") bifacial cells besides the multi-metal catalysed chemical etching ("MCCE") wafer-to-cell on a commercial scale. Its solar manufacturing facility, currently covers the manufacture of cells, modules and ancillary products, has an installed capacity of 3.5 GW per annum (including 2 GW per annum monocrystalline capacity and 1.5 GW per annum of multi-crystalline technology, which is planned to be replaced with tunnel oxide passivated contact or TOPCon). It is expanding its solar manufacturing capabilities to be fully backward integrated that covers the manufacture of primarily components of a solar module from silicon to ingots, to wafers, to cells and to the module itself, and related ancillary products.

AEL has installed and is currently testing a wind turbine prototype of up to 5.2 MW at Mundra SEZ. It has a technology license for the turbine with the nacelle and rotor blade engineered and developed utilizing glass fibre that provides the capability to utilize thinner aerodynamic profiles. The tower is designed in-house with the support of third-party design consultants. All components of the wind turbine are assembled in-house. Its prototype is accredited by the German accreditation body (Deutsche Akkreditierungsstelle). It also has a WindGuard Certification. To further bolster its green hydrogen ecosystem, in 2022, it partnered with TotalEnergies pursuant to which they have agreed to acquire 25% minority interest in ANIL. This partnership is based on the complementarity of the two groups. Adani group's portfolio will contribute its knowledge of the Indian market, execution capabilities, and operations and capital management, and TotalEnergies will offer its understanding of the global markets, expertise in renewable technologies and large-scale industrial projects, and financial strength, enabling ANIL to lower its financing cost.

Airport assets of national importance are strategically located and are supported by a stable regulatory framework and concession terms: The expansion of India's population and middle class, low air trips per capita than other developing nations, improving aviation ecosystem in India, a land mass that is the world's seventh largest, India's ideal geographical location between the eastern and western hemisphere, aspiration to travel on leisure, narrowing price differential between air tickets and railway airconditioned second tier tickets, coupled with increased disposable incomes due to an expanding economy are expected to propel growth in the aviation sector.



India recorded the highest year-on-year change in domestic passenger traffic growth in 2019 compared to other large domestic markets such as China, United States and Russia. In Fiscals 2020, 2021 and 2022, and in the six months ended September 30, 2022, passenger traffic in India was 341 million, 115 million, 189 million and 150 million, respectively.²⁸ International passenger traffic in India represented 19.5%, 8.8%, 11.7% and 17.2% for Fiscals 2020, 2021, 2022 and six months ended on September 30, 2022, respectively.

Tapping on this opportunity, AEL won mandates to modernize and operate six airports in Ahmedabad, Lucknow, Mangaluru, Jaipur, Guwahati and Thiruvananthapuram through the Airports Authority of India's ("AAI") globally competitive tendering process. It acquired the Mumbai International Airport Limited in 2021, and thereby won the contract for Navi Mumbai International Airport. As of December 31, 2022, its portfolio comprises seven operational airports and one greenfield airport. It has emerged as the largest private operator of airports based on number of airports. The airports benefit from a diversified passenger base from various markets, including passengers from nearby states. As of September 30, 2022, it serviced 32.9 million passengers, 252.9 thousand air traffic movement and 0.43 MMT of cargo across its all airports.³¹ Total incomes from its airports business accounted for 0.3%, 3.6%, 2.0% and 3.2% in Fiscals 2021 and 2022, and in the six months ended September 30, 2021 and 2022, respectively.

AEL's airports are city airports located adjacent to and well connected with large cities with easy access by bus, taxi, automobile and other public transportation modes. This has contributed to traffic at its airports being relatively resilient to the effects of seasonality and economic cycles affecting specific regions and tourism traffic. Operations are supported by a stable regulatory framework in India. AEL is subject to price regulation by Airport Economic Regulatory Authority ("AERA"). This involves the setting caps every five years on the amount that its airports can charge from the airlines using its facilities. The price caps are set taking into account forecast passenger traffic, operating costs and other revenues at each airport as well as allowing recovery of capital costs and a return on capital. The Government of India also plays other important roles with respect to its business, including through regulatory, supervisory, operational coordination and contractual counterparty roles across many aspects of its airport operations and other activities. Given the pivotal importance of air travel to India's economic development, AEL expects to benefit from the ongoing initiatives of the Government, such as the implementation of the National Civil Aviation Policy 2016 that includes entering into "open sky" air service agreements on a reciprocal basis with member countries of the South Asian Association for Regional Cooperation and privatization efforts to modernize and promote airport standards in India. In addition to this favourable regulatory environment, the long-term tenor of its contracts of 50 or more years provides it with operational advantage and gives an opportunity to implement various long-term plans. It also gives lenders flexibility to determine financing terms, such as substitution rights, termination payments and trust and retention accounts, as applicable.

Robust environmental, social and governance ("ESG") focus enhancing value in a responsible way: The long-term sustainability of AEL's businesses is built on the foundation of delivering sustained value for its stakeholders. Its journey of value-creation for all its businesses rests on an integrated approach of taking into account ESG principles. It reflects enhanced financial capital, manufactured capital, human capital, intellectual capital, social and relationship capital and natural capital.

Environment: The environment component addresses the world's priority that businesses consume the natural resources responsibly, consume an optimal quantum, reduce, re-use and recycle waste, consume a modest quantum of finite fossil fuels and build resistance to climate change thereby moderating the carbon footprint. The Adani group's portfolio companies have been set up with an aim to build sustainable businesses in line with India's decarbonisation agenda and has set up a green infrastructure with integrated ports, renewable power generation and sustainable power and gas transmission infrastructure. The green infrastructure is a demonstration of the Adani group's portfolio companies' dedication to nation-building and evidence of its desire to contribute to the upliftment of its communities.

Social: The social component addresses the need to invest in employee, vendor, customer and other partner relationships, and community welfare. It has formulated a robust corporate social responsibility ("CSR") Policy which encompasses its philosophy and guides its sustained efforts for undertaking and supporting socially useful programmes for the welfare and sustainable development of the society. In Fiscal 2022, it spent Rs. 15.60 crores on CSR initiatives which span across education, community health, sustainable livelihood development and community infrastructure.

Governance: AEL has instituted various corporate governance policies and committees including its Corporate Responsibility Committee ("CRC") consisting solely of independent directors tasked with keeping the Board of Directors informed about the ESG performance of businesses. Its ESG approach is based on well-thought out goals, commitments and targets which are independently verified through an assurance process.

As a result of these initiatives, AEL is the only company in India, in its sector to be included in the Dow Jones Sustainability Index ("DJSI") Emerging Market index and were ranked seventh in its global peer group (135 companies selected by S&P Global). It also embarked on



its maiden carbon disclosure project (“CDP”) disclosure in Fiscal 2022 and were given a “B” rating for taking coordinated action on climate issues.

One of the leading global players in integrated resource management: Integrated resource management is one of AEL’s core current business activities. It is one of the leading suppliers of imported coal in India with 64.4 MMT of coal volumes sold during Fiscal 2022. As part of integrated resource management business it provides customers with a one-stop-shop for their energy needs by managing the entire supply chain of services from sourcing of coal, managing the finances for the voyage time, providing port handling services, managing inland transportation of coal and delivery of the coal at customers’ doorstep. It has a diversified trading portfolio with storage facilities at both outbound and inbound ports along with the requisite infrastructure to efficiently manage sea borne and inland multi-modal logistics movement.

AEL’s competitive advantage is derived from the synergies between Adani group’s various business verticals, including the ports terminals on both the east and west coasts of India, which provide a strong infrastructure for efficient logistics management. Further, its experience spanning several decades in handling commodity trading and its long standing business relationship with the coal suppliers in Indonesia, Australia and South Africa further provides the relevant purchasing power to manage such large coal volumes at a competitive price. Some of its major integrated resource management customers include state and central government power utilities as well as private power generators. In its efforts to seek geographical diversification, AEL has established presence in emerging coal markets such as Sri Lanka, Thailand, Vietnam, China, and Dubai. With global offices and branches, it is well poised to expand its footprint in other emerging markets.

Experienced promoters and strong leadership: AEL is led by its Promoters, Mr. Gautam S. Adani and Mr. Rajesh S. Adani, supported by an able and experienced senior management. It has an experienced management team with experience across sectors such as mining services, manufacturing, green hydrogen, water management, airports and roads, FMCG and digital offerings, among others. Its board of directors have a collective experience of over many decades. Its highly experienced and professional management team provides it with a key competitive advantage. Most members of its senior management have extensive experience in the industries it operates in. This results in effective operational coordination and continuity of business strategies. In addition, the commitment of workforce at every level has allowed AEL to ensure operational efficiency and development and operation of its businesses.

Scalable financial structure and demonstrated financial performance: AEL has created a robust financial foundation of owned and borrowed funds. This makes it possible for it to mobilize resources from lenders at favorable costs. It has demonstrated consistent growth in terms of revenues and profitability. Its consolidated revenue from operations for Fiscals 2020, 2021, 2022 and in the six months ended September 30, 2021 and 2022 was Rs. 43,402.56 crores, Rs.39,537.13 crores, Rs. 69,420.18 crores, Rs. 25,796.79 crores and Rs. 79,019.48 crores, respectively, growing at a CAGR of 16.9% between Fiscal 2020 to Fiscal 2022. its consolidated EBITDA for Fiscals 2020, 2021, 2022 and the six months ended September 30, 2021 and 2022 was Rs. 2,967.96 crores, Rs.3,258.85 crores, Rs.4,725.71 crores, Rs.2,209.98 crores, and Rs.4,100.15 crores, respectively, growing at a CAGR of 16.8% between Fiscal 2020 to Fiscal 2022. It focuses on maximizing the utility of its assets to optimize capital efficiency, while ensuring quality of its products and services.

Business Strategy:

Focus on incubating and expanding green hydrogen ecosystem to support a low carbon future: AEL intends to set up a fully integrated green hydrogen ecosystem in India to enable access to low cost renewable power and produce low cost green hydrogen at scale, and manufacture downstream products. It intends to invest approximately up to US\$50 billion over the next 10 years in the green hydrogen ecosystem for production of up to 3 MMT of green hydrogen. In the initial phase, it plans to develop green hydrogen production capacity of up to 1 MMT. For that, it plans to be fully backward integrated in solar module manufacturing to achieve supply assurance and cost efficiencies. AEL plans to expand its solar module manufacturing capabilities at Mundra SEZ to up to 10 GW per annum and cover the manufacture of metallurgical grade (“mg”) silicon, poly silicon, ingots, wafers, cells and the module itself. It intends to develop ecosystem of critical ancillary producers for manufacturing modules in-house, such as, ethylene vinyl acetate (“EVAs”), back sheet, frames, glass, junction box, sealant, potting material, inter connectors and copper, among others using high efficiency technologies. For wind energy equipment, AEL intends to operationalize its wind turbine in phases and reach a wind turbine manufacturing capacity of up to 3 GW per annum. A number of factors contribute to reducing the cost of green hydrogen, which include, low cost of power including low transmission and distribution costs, improvement in electrolyser efficiency, and low operating costs. Considering the foregoing, AEL intends to reduce the cost of hydrogen to less than approximately US\$2 per kilogram.

The Company plans to transport the green hydrogen produced through a 42 inch diameter pipeline to Mundra SEZ close to the green hydrogen facility, where the downstream products will be manufactured, both for the domestic market and exports. At Mundra SEZ, it plans to set up a green ammonia production facility, a green urea production facility and a green methanol production facility comprising of a green hydrogen compression and storage facility, an ammonia, urea and methanol synthesizer, and a green ammonia,



urea and methanol storage and compression facility. It also intends to develop a downstream products supply infrastructure to ensure seamless transportation of green fuel across India and internationally. Managing the manufacturing process in-house and at proximate locations offers significant cost efficiencies enabling it to achieve low cost green hydrogen and related green downstream products.

Development of the airports business with focus on consumers: AEL's airports portfolio comprises seven operational airports, an effective platform to build a network effect for new routes. It intends to re-define India's airports infrastructure sector through gateway development, regional footprint growth, focus on consumers and non-passengers and a deeper investment in digital technology interventions that widen consumer choice and delight and intends to continue leveraging the Adani group's existing businesses to develop world-class renewable energy infrastructure that helps moderate the carbon footprint of its airports. It plans to accelerate digital investments leading to "Pranaam" services, passenger self-service solutions, centralized airport control center, airport operations system, customer relationship management, real-time airport community monitoring and management system with functions such as queue and flow management, bio-metric identification, tracking and analytics, AI and digital assistance and technology-oriented services, such as virtual shopping screens, robotics powered porter service or navigation support, virtual food ordering services and smart fitness centers). AEL also intends to deliver a contactless end-to-end travel experience using advanced technologies such as facial recognition, self-baggage drops and self-boarding gates, apply 5G technology, provide digitized advertising channels, such as 3D holographic projections and interactive games. Its outlook is underpinned by the fact that India is expected to emerge as the third largest aviation market by 2025. It is already the third largest domestic passenger market and is expected to be among the fastest growing domestic air passenger markets over the next decade. It intends to increase air routes and passenger traffic by:

- Increasing international flights to long haul western and the Association of Southeast Asian Nations ("ASEAN") destinations;
- Increasing airline connectivity to new and underserved destinations;
- Attracting airlines to make the airports as their hubs by offering a series of incentives, such as night maintenance and airplane parking bays, and to operate long haul flights from its airports;
- Increasing dwell time of airlines at airports by establishing the "mini-hub" structure;
- Developing air cargo associated infrastructure such as cargo villages, perishable pack houses and logistics parks;
- Focusing and developing location specific commodity driven import/export volumes of perishables, textiles, pharma, valuable and general cargo;
- Taking advantage of and developing ecommerce domestic air freight, both inbound and outbound;
- Developing international scheduled and ad hoc freighter operations;
- Developing airport cargo operations as transshipment, consolidation, and deconsolidation hubs in India; and
- Developing and operating bonded road feeder services ("RFS") and network of air freight stations ("AFS") to integrate the airport cargo operations with its ports and logistics business network.

Drive growth in non-aeronautical services revenues and commercial property development at airports: The terms of AEL's concession agreements for its airports provide it with flexibility in developing non-aeronautical services, which are generally not subject to government tariff regulation. These non-aeronautical services include food and beverage outlets at airports, retail and other services such as foreign exchange and advertising and promotions, operation of car parks and sale of duty-free products and lounges. In addition, non-aeronautical services revenues include revenue earned from the lease of commercial space such as offices and airline lounges. AEL expects to generate revenue from the commercial development of property surrounding airports of approximately 650 acres.

It also intends to continually develop its airports to create a positive and conducive environment for brands to use its airports and increase exposure by optimizing inside-airport passenger movements. It plans to enhance and re-work the layout of the existing commercial area at the airports and channel passenger footfall in the desired directions. It aims to build and operate the high yielding key businesses at the airports, e.g., duty free, advertising, ground transportation and parking, lounges, fuel farm and cargo handling. It intends to continue to attract and retain airlines flying out high valued passengers by developing key routes and offering attractive and peak hour slots. The Company aims to continue engaging with all passenger segments by developing the right shopping and relaxing environment, the right lay-outs, the right flows and product categories and brands to suit their needs and requirements. It plans to deploy special focus on the development of non-passenger areas which will not only attract city dwellers but also offer the right entertainment for meeters and greeters. It also plans to engage with all passenger segments and attract high paying passengers through a focused airline marketing strategy, and analyse and understand passenger consumption behaviours.

Continue to grow data center business: India's digital economy is expected to reach US\$1 trillion in value by 2025 with the Government of India planning to treble India's installed power capacity for data centers. Indian SaaS ecosystem was valued at US\$3.5 billion. With more firms moving towards a SaaS platform and hybrid cloud environment the need for robust and scalable data centers became a necessity to accommodate future demand. The Indian data center industry is at an inflection point where accelerated digitization and rapid cloud adoption are driving the growth of the industry. As part of the digitization strategies, the industries are shifting their



information technology infrastructure to the cloud to enhance user experience and reduce costs. India's data center industry is expected to add approximately 320 MW to 340 MW capacity in Fiscal 2023. This capacity addition will be on account of the growing internet penetration, increase in data consumption, rising adoption of cloud and internet of things and big data analytics by corporates, significant usage of social media and messaging services, increased use of smart devices and increased adoption of internet-of-things. Government of India initiatives like "Digital India" and emphasis on data protection and data localization will also play a significant role in the capacity addition.

AEL's aim is to leverage the vast quantum of data generated by its various consumer facing businesses that interface every day with millions of customers. For that, it intends to set up secure data centers across India. It partnered with EdgeConneX to build a reliable network of data centers in India. The Adani group possesses extensive experience in delivering critical and large infrastructure across sectors and on the other hand, EdgeConneX brings unique capabilities in operating and designing over 50 global data centers in more than 40 markets. It intends to build data centers with an aggregate capacity of up to 1 GW by 2030, supported by ongoing land acquisition and construction activities across Chennai, Noida, Navi Mumbai, Hyderabad, Vizag, Pune, Kolkata and Bangalore.

Expand and diversify roads business: India has the second largest road network in the world, aggregating 6.2 million kms. Roads are the most common mode of transportation and account for about 87% of passenger traffic and close to 63% of freight traffic. Currently, it builds and operate roads in India and expect to expand into rail and metro eventually, in line with its strategies. It entered the business of road construction, development and maintenance in 2018 and has since built a portfolio of 14 road assets spanning over 5,000 lane kms across 10 states in India. As of December 31, 2022, three road assets are operational and the others are under various stages of development. In line with the vision to contribute towards nation building the Company tap opportunities in the road sector by developing national highways, expressways, tunnels, among others in India. These projects are developed under a combination of the Hybrid Annuity Model ("HAM"), Build Operate Transfer ("BOT") and Toll Operate Transfer ("TOT"), providing it with stable cash flows from HAM projects, while also benefiting from the upside from BOT and TOT projects as traffic on the roads increase. Adani group's presence across India provides it with valuable data enabling to evaluate and bid for strategic road assets. AEL intends to continue maintaining a comprehensive mix of road assets as it continue to its journey towards building portfolio of 12,000 lane kms of road assets. It will continue to evaluate and bid for attractive opportunities in the road, rail and metro transportation sector.

Build a seamless digital ecosystem: As part of digital business, AEL intends to digitalise Adani group's consumer-facing portfolio to meet customer needs with improved customer engagement, increased monetisation and a faster time-to-market. It intends to develop an integrated Adani platform or super app (called Adani One App) to provide a seamless experience to customers of various Adani group's businesses. It plans to achieve this with support from partners and concessionaires across its business verticals. It has deployed this super app first in the airports business to enhance airport travel experience by combining solutions to all the key service needs of passengers under a single app. Customers will be able to book flights, check real-time flight status, book taxis, avail the Pranaam service, book lounge access, shop at airport duty-free and avail other services through a single app. Over time, AEL expect to cover other consumer facing businesses of the Adani group, such as electricity distribution, city gas distribution, FMCG, among others.

Pursue strategic alliances and partnerships: AEL intends to pursue strategic alliances to enhance its capabilities, address specific industry opportunities, develop its technical expertise and price its products and services more competitively. It has demonstrated the capacity to operate joint ventures with partners in the data centers, agro-products, FMCG and mining services, among others. It possesses a culture of specialisation in projects execution, one of the most challenging segments in India, marked by the ability to execute projects faster than the sectorial average by drawing on a validated Group level managerial experience. The Company's experience in project execution, and its multi-decade cross industry experience, positions it well to form businesses of scale with strategic partners.

Focus on incubating and expanding petrochemicals and copper businesses: India grew at a rate of approximately 7.8% in Fiscal 2022. Over Fiscals 2023 to 2027, polyvinyl chloride ("PVC") demand is expected to grow at a CAGR of 8%-10% on account of increased spending on infrastructure and various government initiatives, and the demand would be driven by sectors such as agriculture with increased land under irrigation, infrastructure aided by water supply and sanitation, housing segment with growing focus on housing for all, and other key segments aiding demand growth would be pharmaceutical and packaging segments. The current production capacity in India at 1,580 kilo tonnes per annum ("KTPA") represents only about half of the domestic demand. Even with 1,200 KTPA capacity is expected to come on stream, demand is expected to reach 4,700-4,800 KTPA by end Fiscal 2027 leading overall imports to stay above approximately 50%. High level of imports is typically unsustainable owing to ever-changing geopolitical circumstances and possibility of dumping by various nations, therefore impressing on the need for ramping domestic production. To this end, AEL will leverage the Adani group's resources at Mundra SEZ to build a state-of-the-art petrochemicals industry to enhance PVC import substitution. There is a growing opportunity to consume green fuels and moderate national carbon footprint. Accordingly, it intends to build and operationalise the first phase of the PVC project of up to 2 Million Metric Ton Per Annum ("MMTPA"), leveraging group resources and the Mundra SEZ's locational advantage with a project size.



India's long-term copper market appears to be attractively optimistic on account of the extensive under penetration. AEL's vision is to emerge as a globally aligned copper business committed to building India and enhance value for stakeholders through trust and courage. Copper is a key raw material linked to the Adani group's infrastructure portfolio (energy and transportation), which strengthens national self-reliance and securing its supply chain. It will manufacture copper and by-products, precious metals (gold and silver) and sulphuric acid, which can be partly converted to phosphoric acid. It may also explore value-added downstream opportunities like copper tubes.

Continued focus of ESG: AEL is fully committed to ESG aspects and has a robust ESG framework. Its ESG focus area and priorities are identified based on a detailed materiality assessment exercise conducted in Fiscal 2022. The material topics were identified based on an exhaustive stakeholder engagement survey with its internal and external stakeholders, after considering various other relevant factors such as industry research, peer reviews, referring to key ESG frameworks and ratings. Its ESG framework is backed by a robust assurance program.

Industry:

Green Hydrogen

As per the International Energy Agency's ("IEA") energy outlook for the Indian market (India Energy Outlook 2021, IEA) under its Stated Policies Scenario ("STEPS"), India is expected to overtake the European Union ("EU") as the world's third largest global energy consumer by 2030 and will account for nearly a quarter of global energy demand growth over 2019-2040. Under the same scenario, the IEA expects the country's primary energy consumption to reach 1,123 million tonne ("MT") of oil equivalent by 2040. However, dependence on conventional sources alone to meet this requirement will not only result in higher import bills but also higher emissions. In line with this, during the 26th United Nations Climate Change Conference of Parties ("COP26") summit, the Government of India presented the following five nectar elements of India's climate action known as 'Panchamrit'

- Reach 500GW non-fossil energy capacity by 2030.
- 50% of its energy requirements from renewable energy by 2030.
- Reduction of total projected carbon emissions by one billion tonnes from now to 2030.
- Reduction of the carbon intensity of the economy by 45% by 2030, over 2005 levels.
- Achieving the target of net zero emissions by 2070.

Further, in the 27th United Nations Climate Change Conference of Parties ("COP27"), India submitted its long-Term Low Emission Development Strategy to the United Nations Framework Convention on Climate Change ("UNFCCC"), in which importance of hydrogen along with electric vehicles and ethanol to achieving decarbonisation has been emphasized. Hydrogen is becoming increasingly crucial to achieving decarbonisation, especially in hard-to-abate sectors such as steel, fertilisers, refining, shipping, etc. This has resulted in increased momentum around the globe for deploying clean hydrogen based projects, with the global investment pipeline surpassing US\$500 billion in mid-2021, as per the Hydrogen Council. More than 40 countries have set up or are in the process of setting up national strategies or roadmaps for hydrogen adoption. The surge in volatility of commodity prices, especially over the past three years owing to the COVID-19 pandemic and more recently due to the Russia-Ukraine war has further exacerbated the urgency of the major economies to reduce fossil fuel dependence. This has fuelled the governments to incentivise hydrogen adoption. Despite the active interest in hydrogen adoption by governments and corporates alike, major challenges remain. The cost of low carbon hydrogen production is at least two to six times higher than that of fossil-based hydrogen production. For instance, the cost of producing renewable hydrogen in India currently varies from US\$3 to US\$6 per kg, compared with US\$2.5 per kg for the natural gas-based process. However, declining renewable prices as well as electrolyser capex costs promise to make green hydrogen economical in the future. Until there is cost parity between low carbon hydrogen and fossil based hydrogen, the industry will need handholding by the governments to achieve decarbonisation. Another major challenge for hydrogen adoption is supply chain complexity as transporting hydrogen involves safety risks.

There are four types of electrolyzers: Alkaline and polymer electrolyte membranes ("PEM") are already commercial, while anion exchange membranes ("AEM") and solid oxide, now at the research and development ("R&D") stage, promise a major step forward.

Alkaline: electrolyzers are the most used hydrogen generators in the industry. In alkaline technology, the water is split into its constituents in the presence of a caustic electrolyte solution. This leads to a reaction between two electrodes. And when sufficient voltage is applied, water molecules take electrons to make hydroxide ("OH") ions and a hydrogen molecule. The OH ions travel through the solution toward the anode, where they combine and give up their extra electrons to make water, hydrogen, and oxygen. Recombination of hydrogen and oxygen at this stage is prevented by means of an ion-exchange membrane, which was historically made of porous white asbestos. However, membranes have advanced significantly in recent years.



PEM: technology is the electrolysis of water in a cell equipped with a solid polymer electrolyte (“SPE”) to separate hydrogen and oxygen. PEM electrolysis creates a reaction using an ionically conductive solid polymer rather than a liquid. When voltage is applied between two electrodes, negatively charged oxygen in the water molecules produces protons, electrons, and oxygen at the anode. The H+ ions travel through a polymer membrane towards the cathode, where they take an electron and combine to make hydrogen. The electrolyte and two electrodes are sandwiched between two bipolar plates, which transport water to them or gases away from them, conduct electricity, and circulate a coolant fluid to cool down the process.

Solid oxide electrolysis (“SOCE”): These operate at high (700–850 °C) temperatures, which enables the favourable kinetics that allow the use of relatively cheap nickel electrodes, a lower electricity demand, and the potential for reversibility (for operating as a solid oxide fuel cell). On the downside, thermo-chemical cycling, especially during shutdown or ramping periods, leads to faster degradation and shorter lifetimes. Other issues related to stack degradation include challenges related to sealing at higher differential pressures, electrode contamination by silica used as sealants, and other additional contaminant sources from piping only deployed at the kW-scale, although some current demonstration projects have already reached 1 megawatt (“MW”).

Anion Exchange Membranes (“AEM”): This is the latest technology, with only a few companies commercialising it and limited deployment. It’s a combination of a less harsh environment from alkaline electrolyzers with the simplicity and efficiency of a PEM electrolyser. Also, it allows the use of non-noble catalysts and titanium-free components and, as with PEM, operation under differential pressure. However, AEM membrane has chemical and mechanical stability problems, leading to unstable lifetime profiles and lower-than-expected performance, mostly due to low AEM conductivity, poor electrode architectures, and slow catalyst kinetics. Performance enhancement is typically achieved by tuning the membrane conductivity properties or by adding a supporting electrolyte. Such tuning could lead to decreased durability.

After hydrogen is produced using any of the technologies, it can either be transported directly (which is a risky and costly affair) or converted to ammonia, which would be referred to as “green ammonia”. Conversion to ammonia has two main advantages: (A) It can be used as a feedstock to manufacture urea and complex fertilisers. (B) Or it can be exported to other countries, where it can be directly used or reconverted to hydrogen.

The production of green ammonia will need the following two additional steps after Hydrogen is produced:

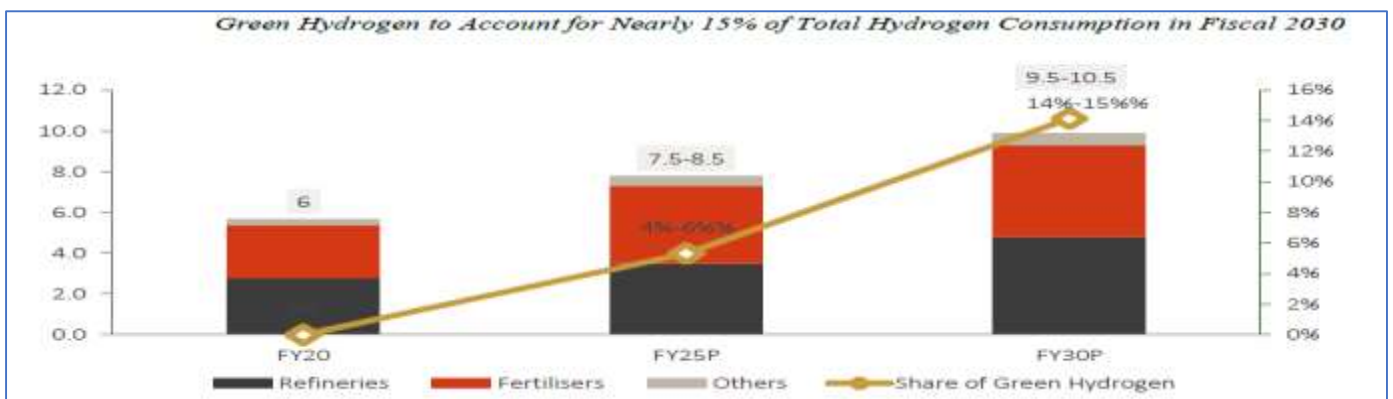
Air separation: It is the most common process used to extract one or all of the main constituents of atmospheric air. The three main components are nitrogen (78.1%), oxygen (20.9%) and argon (.9%). nitrogen is created in a cryogenic air separation unit, which utilizes the differing condensing/boiling points of the components of air to enable separation by distillation at cryogenic temperatures.

Habers-bosch process: It is basically one of the most efficient and successful industrial procedures to be adopted to produce ammonia. The Haber Bosch process converts nitrogen to ammonia by a reaction with hydrogen using a metal catalyst. A tonne of ammonia requires nearly 176 kilograms (“kg”) of hydrogen and 824 kg of nitrogen.

After the production of ammonia, which is usually in anhydrous form, it is converted to liquid to be stored in tanks or transported in anhydrous form

Domestic Demand

Currently, India’s hydrogen demand is approximately 6 million tonne, mainly contributed by the fertilisers and refining sectors. Almost all the hydrogen produced uses fossil fuels, mostly natural gas, along with other sources such as coal and naphtha. Additionally, a small quantity of hydrogen is also used in methanol production.





Hydrogen demand is expected to reach 8 MT and 10 MT by Fiscal 2025 and Fiscal 2030, respectively, due to expansion in the fertiliser sector and increased demand for hydrogen in refining.

Fertilisers

Hydrogen demand in the fertilisers industry will largely be driven by India’s push to attain self-sufficiency in fertilisers by 2025, which will lead to capacity expansions in the urea, DAP, and NPK segments. The Government of India has already initiated the process of commissioning seven new urea plants by 2025, which will add about 8 million metric tonnes ("Mmt") of new capacity.

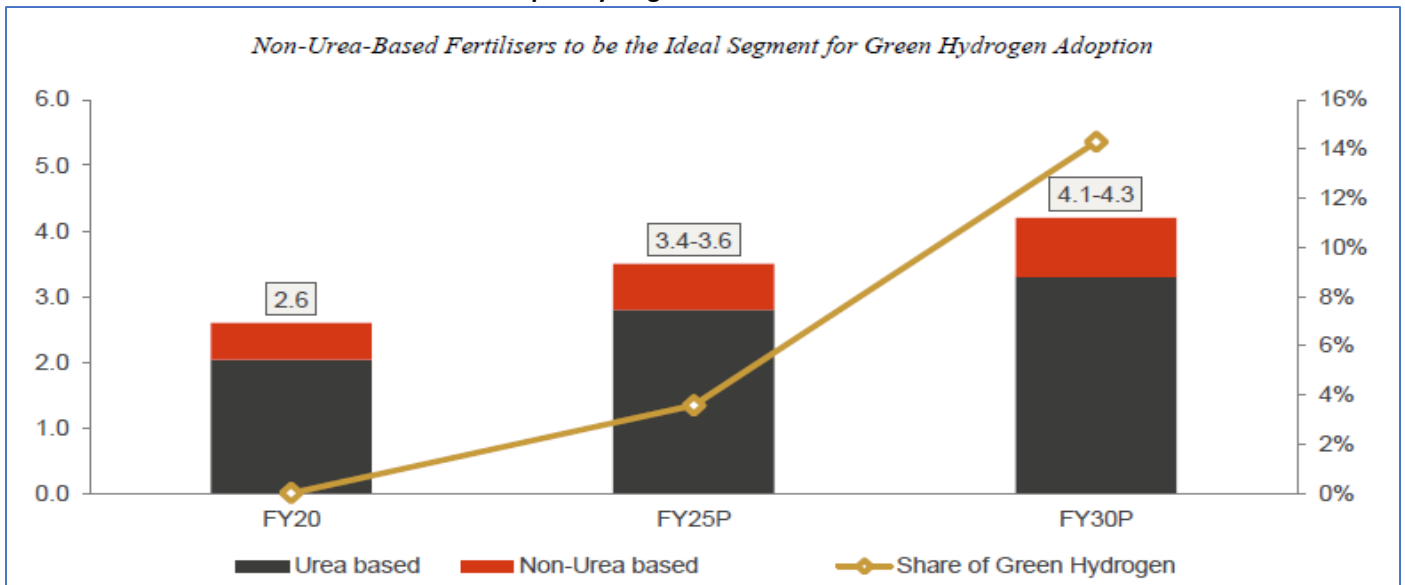
Hydrogen is used as a feedstock to manufacture ammonia, which is largely used to produce fertilisers such as urea, DAP, NPK, etc. Domestic ammonia demand from the fertiliser industry is expected to be 17 MT in Fiscal 2020, with urea production accounting for nearly 82%.

Hydrogen is a feedstock to manufacture ammonia. Typically, this is produced in-house through conventional methods such as SMR or coal gasification methods. Further CO₂, released during the conventional process, is recovered and combined with ammonia to form urea (CH₄N₂O). Thus, in switching to green hydrogen, an external source of CO₂ is required as an additional process, which will push up the cost of production. Thus, hydrogen production is an integral part of the urea manufacturing process, and a switch to green hydrogen is some time away.

However, ammonia required for other fertilisers (18% of ammonia demand) is mostly imported from the Middle East and is ideal for green ammonia substitution.

Hydrogen demand from the non-urea segment is expected to increase from 0.5 MT in fiscal 2020 to 0.9 MT in Fiscal 2030. It expect at least 90% of this to be met by local green hydrogen production.

Break-up of Hydrogen Demand from Fertilisers



Currently, the imports of ammonia are largely from regions like Saudi Arabia, Qatar, Oman, Egypt, Iran, etc., which have abundant and cheap gas resources. However, natural gas prices have recently surged and remained extremely volatile post the Russia-Ukraine war, leading to ammonia prices rising by 77% over the past year.

Refining

Production and the recovery of hydrogen in the context of refining operations are essential to processes that convert crude oils into light, high-quality products. The product slate of a refinery, therefore, is closely correlated with the availability and consumption of hydrogen. Recent years have seen higher demand for hydrogen from the oil refineries owing to declining crude quality as well as stricter emission norms. In refineries, some hydrogen is produced as a by-product during the refining process, but in most cases, it is insufficient to meet total refinery hydrogen demand. Hence, additional on-site hydrogen production is often required, using natural gas or naphtha reforming. The natural gas reforming units are typically built on-site to meet the overall demand for hydrogen at the refinery over the course of its lifetime. Hydrogen consumption in the refineries was estimated at 2.8 Mmt in Fiscal 2020. This is expected to grow at a CAGR of 6% until Fiscal 2030 to reach 4.5–4.7 Mmt, driven by lower crude quality as well as stricter emission norms.



Other Sectors

Apart from fertilisers and refining, a small amount of hydrogen is also required in methanol production. This segment in India is relatively small, with a demand of 1.5–2 Mmt, of which nearly 90% is imported. This is the result of a large portion of methanol production coming from natural gas, which is abundantly available in the Middle East at extremely low prices. However, the Indian government is rapidly pushing coal-based methanol production not only to reduce imports but also to displace other oil products across major end-use sectors such as transport and residential. Additionally, green hydrogen-based methanol production can also be explored as a low-carbon-intensive option. However, as with urea production, this process requires an external CO₂ source. Thus, green hydrogen adoption in the methanol segment is some time away.

Cost of Green Hydrogen

A major hindrance for the uptake of green hydrogen is the cost of production, which is estimated at US\$3–6/kg, nearly twice that of grey hydrogen. Major cost drivers in the manufacturing process are electrolyzers and renewable energy. While electrolysis as a technology is not a new phenomenon, deployments of the same have been relatively scarce due to more cost-effective alternatives using coal and natural gas. However, in the current decarbonization trend, electrolysis has made a comeback due to its zero-emission merit if powered through renewable energy. The cost of electrolyser deployment is expected to fall over the next few years, driven by technological development and economies of scale.

Review and Expectations of Policy Announcements

Globally, more than 30 countries have launched national hydrogen strategies. Local availability of renewable energy and ease of access to hydrogen are keys to determining the potential opportunities and challenges a country will face. This includes a country's unique potential to become a large-scale energy exporter or importer. Thus, the degree of focus on hydrogen strategies varies across countries based on their positioning in the overall hydrogen value chain. For instance, Japan's hydrogen policy is shaped around the country becoming a large clean hydrogen importer due to its low renewable energy generation capabilities. Hence, the focus is on direct investments in electrolyser technology development, fuel-cell technologies, and overcoming challenges in hydrogen transportation and storage, with almost negligible focus on green hydrogen production. Similarly, Chile's hydrogen strategy is almost entirely focused on becoming a green hydrogen manufacturing and export hub due to its high solar power potential.

Risks and challenges to green hydrogen adoption in India

High cost of production: Producing green hydrogen is currently more expensive compared with fossil-based hydrogen. Going forward, the cost is expected to reduce on account of falling renewable energy costs, as well as breakthroughs in electrolyser technologies, coupled with the realisation of economies of scale. However, significant risk remains to these assumptions, which may result in a lower-than-expected decline in costs. Electrolyser capex cost reductions need significant investment, research, and development, as well as active policy support. Moreover, renewable energy tariffs, despite being competitive, are still higher than those of other global peers due to transmission charges. Additionally, as these charges vary for every state, the landed tariffs are not uniform across the country, which adds significant uncertainty for players wanting to set up green hydrogen plants.

Muted demand uptake: Hydrogen is currently being positioned as a decarbonisation solution for hard-to-abate sectors such as steel, refining, and chemicals. However, these industries currently use fossil-based solutions, which cost significantly less than green hydrogen-based ones. Hence, demand uptake remains a significant challenge. Active policy support is crucial for the industry to create markets, at least over the next decade.

Technological obsolescence: The green hydrogen sector is rapidly evolving, with frequent technological breakthroughs, especially in electrolyzers. This poses a significant risk, as any new breakthrough technology to reduce production costs will affect investments already made in existing technologies.

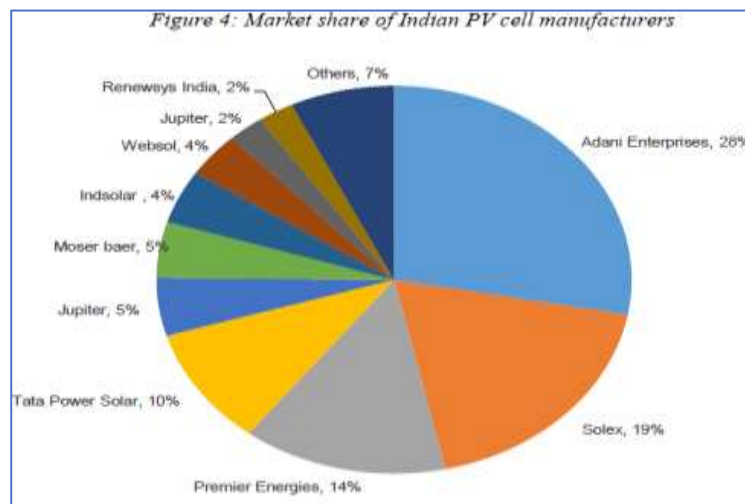
Higher transportation cost: The majority of low-cost renewable energy resources are located away from potential demand centers. For instance, renewable-rich states such as Gujarat, Maharashtra, Karnataka, and Tamil Nadu are in the western region, while heavy industries such as those for steel are in the eastern region, requiring players to choose between transporting renewable energy or hydrogen. Transporting hydrogen is expensive and comes with safety concerns. Hence, in the near to medium term, it is believed players will prefer to set up hydrogen plants closer to demand centres and source renewable energy from the eastern region, which will drive up landed tariffs for renewable energy.

Solar PV Modules In Union Budget 2021-22, the Government introduced provisions for the renewable energy sector with an outlay of ₹4,500 (tranche I) for, inter alia, high-efficiency solar PV modules. The scheme also incentivised new GW scale solar PV manufacturing facilities in India. In Budget 2022-23, with an aim to establish a larger manufacturing base for solar PV modules, the government announced an additional allocation of ₹19,500 crore (Tranche II) for PLI for manufacturing high-efficiency modules, prioritizing fully



integrated manufacturing units for products ranging from polysilicon to solar PV modules. This was also approved by the Union Cabinet in September 2022.

With the world gaining momentum on renewable energy usage, the installed renewable base stood at 295-298 GW as of 2021 and is expected to push through the 300 GW mark in 2022, as per IEA. The global installed solar capacity witnessed an addition of approximately 454 GW between calendar years 2017 and 2021, led by government support to renewables in the form of clean energy penetration mandates, taxation and other incentives, and subsidised tariffs set for renewables, along with government-led renewable project allocations to drive additions in the segment. During the period, India added approximately 31 GW of solar capacity, and its renewable energy installed capacity reached 165 GW as of September 2022, with solar capacity comprising approximately 70% of the total installed base. This is propelled by the country enjoying about 5,000 trillion kilowatt hour ("kWh") per year of solar energy incident over its land area, with most parts receiving 4-7 kWh per square metre per day.



The installed base for solar power rose sharply to approximately 54 GW at end- March 2022 (versus a negligible 0.02 GW on March 31, 2011). However, domestic module manufacturers could not capitalise on high demand, as they lacked cost competitiveness, compared with their global counterparts. The absence of backward integration and a smaller operating scale have rendered Indian manufacturers uncompetitive. While India has begun to make its mark across various levels of the domestic value chain, it is largely import-dependent. Similarly, global dependence on China also remains significant in PV component manufacturing. While a small percentage of these components can be sourced outside China, the global solar PV supply chain is predominantly dependent on China for modules and upstream components like polysilicon, ingots, wafers, and cells.

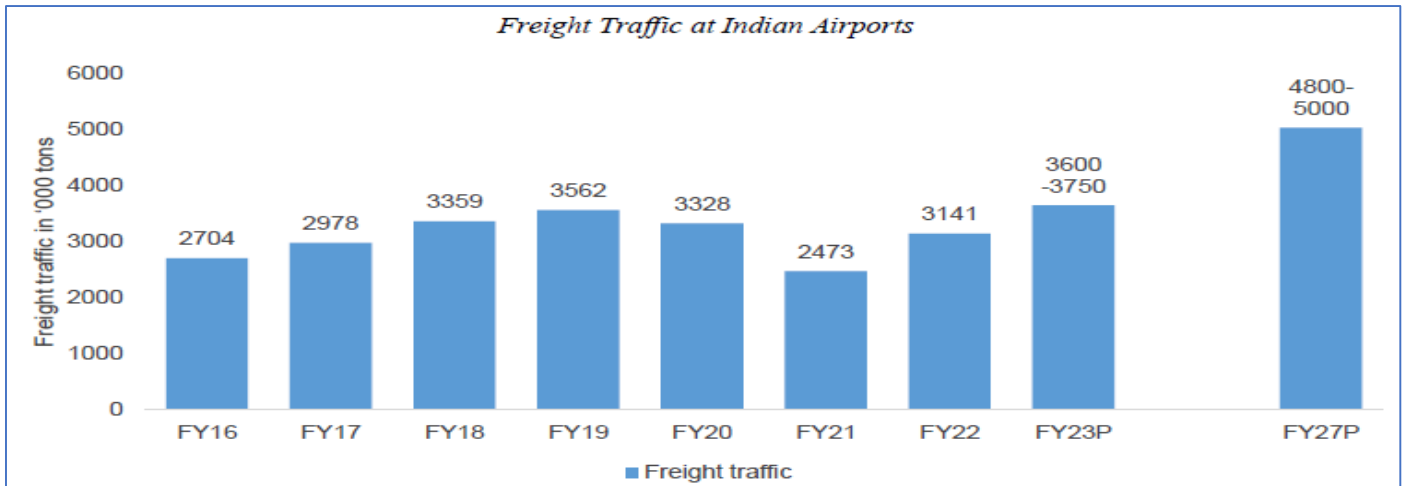
Airports

Overview

India was the fifth largest aviation market based on airline passengers as of 2019. The country is poised to emerge as the third largest by 2025. It is already the third largest domestic passenger market and is expected to be among the fastest growing domestic air passenger markets over the next decade (source: IATA). The factors that boost the domestic aviation sector are: (1) the country's population that is the second largest and increasing per capita income; (2) low air trips per capita than other developing nations; (3) improving aviation ecosystem; (4) a land mass that is the world's seventh largest; and (5) the country's ideal geographical location between the western and the eastern hemisphere. India has seen massive growth in the airport sector with investments from both the government and private sector. As per an International Civil Aviation Organisation ("ICAO") study, the output multiplier and employment multiplier for the aviation ecosystem are 3.25 and 6.10, respectively.

Freight Traffic

Over Fiscals 2023-2027, freight traffic is projected to record a 7-8% CAGR, higher than the 5% recorded over Fiscals 2016- 2020, attributable to the rising prominence of air transport, rising e-commerce penetration necessitating quick cargo movement, expected rise in trade with India after signing of FTAs with various countries and airlines focussing on the cargo market. The operationalisation of the dedicated freight corridor, improved highway network, operationalisation of additional national waterways and expected reduction of ocean supply chain clogs would prevent further growth for air freight in the long term.



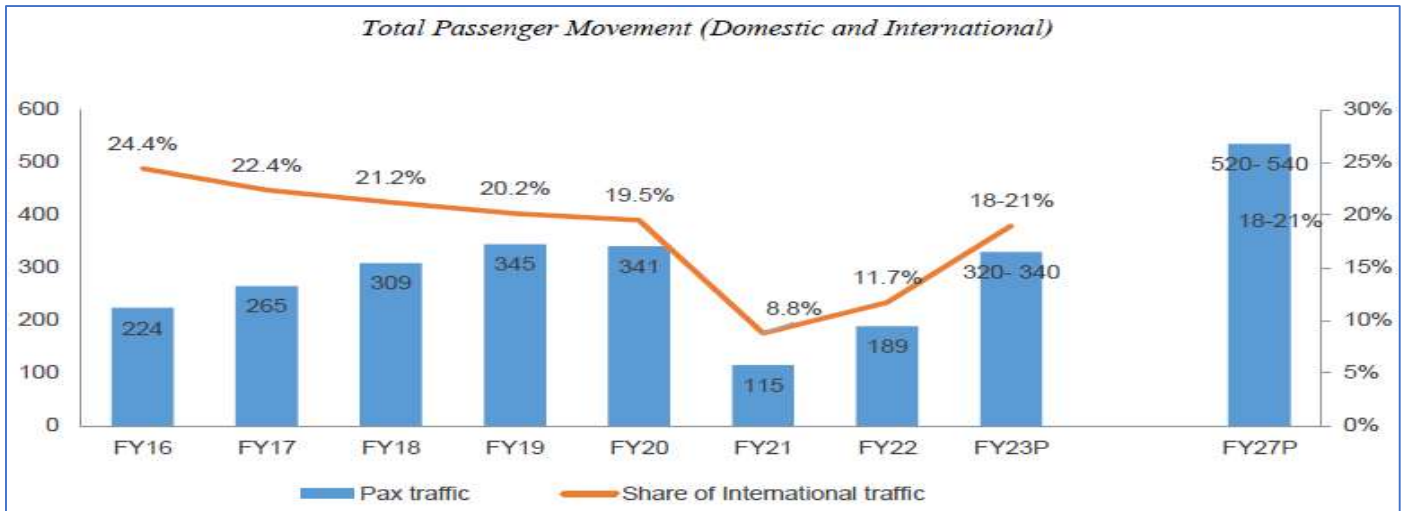
Domestic freight traffic has outgrown international freight traffic between Fiscals 2016 and 2020 with domestic traffic recording a CAGR of 6% and international traffic a modest 5%. The share of international traffic in overall freight traffic at Indian airports reduced from 61% in Fiscal 2016 to 60% in Fiscal 2020 attributable to rising demand in domestic traffic led by the e-commerce sector and expansion by dedicated freighter operators, such as Blue Dart Express and SpiceXpress. Domestic freight traffic recorded a 28% decline in Fiscal 2021, hitting the Fiscal 2015 levels. International traffic declined 24% returning to the Fiscal 2015 levels, too. In Fiscal 2022, with further opening of the economy and tailwinds for the freight segment, domestic freight traffic rose 24% to 1.2 million MT, similar to Fiscal 2018 levels while international passenger traffic rose 29% to 2.0 Mmt just below the Fiscal 2018 levels. This Fiscal, both domestic and international freight traffic is projected returning to pre-COVID-19 highs seen in Fiscal 2019. By Fiscal 2027, the share of international freight traffic in overall freight traffic is seen at 62- 65%.

Passenger Traffic

Passenger traffic at Indian airports recorded a 9% CAGR over Fiscals 2016-20. In the pandemic-impacted fiscal 2021, passenger traffic at airports declined 66% to 115 million passengers, similar to Fiscal 2008 levels, attributable to (i) suspension of domestic air services from March 25, 2020 to May 24, 2020, and international services from March 23, 2020, onwards; (ii) apprehension among passengers about flying upon resumption of air services in May 2020 (leisure and business travel was avoided, and only essential and some Visiting Friends and Relatives ("VFR") traffic was seen); (iii) suspension of scheduled international services, with international flights restricted to Vande Bharat and air-bubble flights; (iv) caps on domestic flight capacity imposed by the Ministry of Civil Aviation; and (v) higher caseloads in some states, mandating passengers to carry negative RTPCR test reports and thereby negatively impacting traffic.

In Fiscal 2022, passenger traffic rose 64% on-year on a low base to 189 million passengers, similar to Fiscal 2015 levels, aided by rising vaccinations boosting travel sentiment, end of capacity caps mid-October 2021 onwards, the wider population having learnt to live with the virus and pent-up demand from leisure travel. The numbers would have been higher but for the severe second wave of the pandemic in the first quarter of Fiscal 2022, which saw a sharp drop in passenger numbers, and the third wave in the fourth quarter of the fiscal, which handicapped passenger recovery that had reached 80% of pre-COVID-19 levels in December 2021.

Passenger traffic is expected to rise 70-80% on-year to 320-340 million in Fiscal 2023, almost returning to the levels recorded in Fiscals 2019 and 2020. The rise would be led by domestic passengers, with domestic passenger traffic seen returning to pre- COVID-19 levels owing to pent-up demand across leisure and VFR, return of business travel and Meetings, Incentives, Conferences and Exhibitions ("MICE"), and vaccination-induced confidence among domestic passengers. International passenger traffic lags as scheduled services were only allowed to commence on March 27, 2022, and because of delays in processing tourist visas across countries due to application backlogs during the pandemic. These projections, however, are based on assumption of no or mild further waves of the pandemic in India, with no local lockdowns or suspension of air services between countries and expectation of scheduled international services to continue. Over Fiscals 2023-27, passenger numbers are expected to log a 12-14% CAGR, led by an expanding market for air travel with rising incomes and increased propensity to spend; rising connectivity across the nation and internationally; and narrowing of price differential between air and rail tickets.



In Fiscal 2022, flight count reached 1.75 million — 67% of pre-COVID-19 levels (Fiscal 2019) and 47% higher than in the pandemic-impacted Fiscal 2021. International departures accounted for 12% of total aircraft movement in Fiscal 2022, attributable to suspension of scheduled international services till March 27, 2022. Air traffic movement is expected to recover in Fiscal 2023 in line with passenger traffic recovery, and the entry of new players will result in fleet addition, thereby increasing the flight count. Akasa has already placed an order for 72 aircrafts. Tata’s takeover of Air India coupled with the merger announcement of Air India with Vistara and AirAsia India with Air India Express and the re-launch of Jet 2.0 would also add to the fleet of Indian carriers in the near future. As per Airbus, India would need about 2,210 aircraft in the next 20 years to serve its growing aviation market. This would mean 6.6% annual growth in fleet, higher than the global average of 3.9%. Domestic passenger traffic rose to 98% of pre-COVID-19 levels in May. However, because of high airfares and the onset of seasonally weak second quarter of the fiscal, passenger traffic dropped to 88% of pre-COVID-19 levels in September and reached 98% in October 2022.

Data Centres

Changing Digital Landscape Makes India a Data Centre Hub

Digital solutions being implemented across a range of social and economic sectors and activities will help make India a US\$ 1 trillion digital economy by 2025. Indian SaaS ecosystem was valued at US\$3.5 billion in Fiscal 2020. New business models are emerging within the SaaS landscape, leading to further diversification and potential growth opportunities. It is expected that by 2025, the pure play SaaS industry has the potential to grow six times to US\$13-15 billion. With more firms moving towards a SaaS platform and hybrid cloud environment, the need for robust and scalable data centres became a necessity to accommodate future demand.

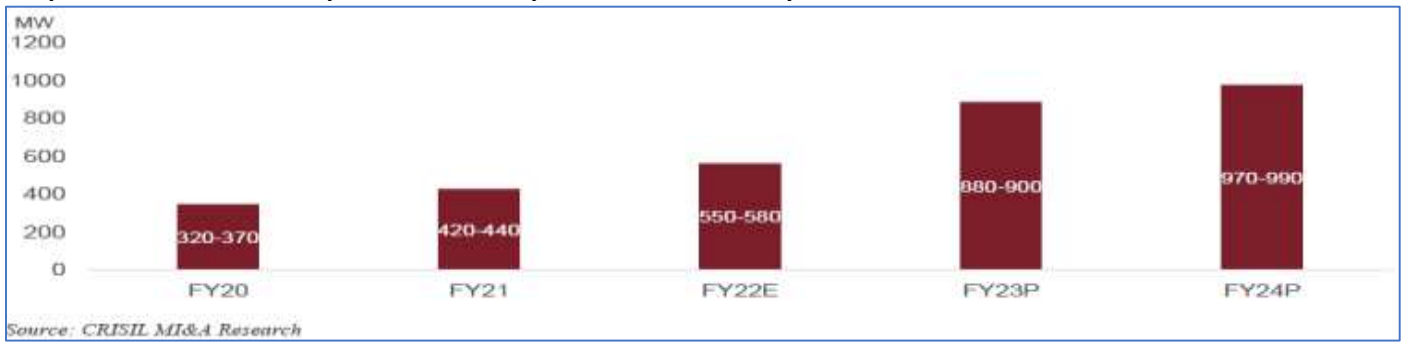
The Indian data centre industry is at an inflection point where accelerated digitalisation and rapid cloud adoption are driving growth of the industry. As part of the digitalisation strategies, industries are shifting their information technology ("IT") infrastructure to the cloud to enhance user experience and reduce costs. The industry stood at approximately US\$2.1 billion in Fiscal 2022, after growing at a CAGR of 19-21% between Fiscals 2018 and 2022. Growth was supported by the Digital India initiatives and growth of sectors like e-comm, Banking Financial Services and Insurance ("BFSI"), technology and media. The industry is expected to clock approximately 20% CAGR between Fiscals 2022 and 2025, led by robust investments by Indian as well as global players.

India hosts approximately 164 data centres spread across nine cities. Total installed capacity as of Fiscal 2022 was 550–580 MW and 320-370 MW in Fiscal 2020. With the pandemic-induced challenges, digital transformation became a necessity, and the demand for hybrid cloud and colocation models surged. Data usage also increased, creating more demand for data storage and transformation of the data centre industry to a large and strategically important segment.

India’s data centre industry is expected to add 320-340 MW capacity in the current fiscal. This capacity addition will be on account of the growing internet penetration, increase in data consumption, and rising adoption of cloud and big data analytics. Government initiatives like Digital India and emphasis on data protection and localisation will also play a significant role in the capacity addition. India holds high potential to become the data centre hub in the Asia-Pacific region on account of the low power tariff, presence of undersea cable landing stations, and high bandwidth speed.



Capacity to Grow 970-990 MW by Fiscal 2025 Led by Investments from Players Across the Globe



In India, data centres are buoyant in key cities like Mumbai, Chennai, Bengaluru, Hyderabad, Pune and Delhi. Mumbai accounts for approximately 50% of the installed capacity. The presence of undersea cable landing stations, proximity to corporate houses, and well-distributed fibre connectivity, which act as the backbone network that provides interconnectivity between them all, increase the prominence of the city. The city is witnessing strong demand from the BFSI segments as they move to hyper scales and the regulations about the data storage of BFSIs.

Chennai, which hosts 65-75 MW of the data centre capacity, is an emerging data centre hub in the country. The state data centre policy, which offers financial incentives in taxes and power, along with the presence of undersea cables and availability of surplus power, makes the city attractive. The demand is largely from IT firms and e-commerce segments. Pune, an upcoming IT hub preferred by multinational corporations, gained prominence as a data centre hub as the disaster recovery location for banking and financial services due to its proximity to Mumbai. The installed capacity is 40-50 MW. Hyderabad, which is the headquarters of global cloud providers, hosts 35-45 MW of capacity. Tax incentives introduced by the government to attract hyperscale data centres are boosting investments in the city.

Government Policies and Digitalisation are Leading Growth Drivers

Data Protection Bill

Over the past decade, there has been an explosive rise in the creation and consumption of digital data. Total digital data in India grew to 2.3 million petabytes in 2020 from an estimated approximately 40,000 petabytes in 2010. The Data Protection Bill suggests protecting the citizen's data by storing it locally. It also helps the government form better policies for the citizens. With this policy, the need for local data centres was realised and central as well as state governments came up with data centre policies.

The central government's data centre policy was focused on the following aspects:

- Infrastructure status for data centres, which improved the ease of doing business
- Declared data centres under 'essential services' under the Essential Services Maintenance Act, 1968, which ensures ensure reliable power, internet connectivity and business continuity
- Setting up of data centre economic zones for creating an ecosystem for hyper scalers, cloud providers, IT firms, and other allied businesses to operate and benefit

As the data localisation rules come in the current capacity will be highly constrained so the development of more hyper-scale data centres is necessary to cater to this incremental data storage and data processing demand.

Rising Internet Subscriber Base

India has the second largest internet user base globally. The subscriber base grew to 740 million in Fiscal 2022 from 473 million in Fiscal 2018.7 This accelerated growth was because of the pandemic-induced challenges as more people moved online, and more businesses digitalised. The average monthly consumption per user of data was 0.6 gigabytes ("GB") in Fiscal 2016, and it reached 17 GB in Fiscal 2022.8 With the launch of the 5G services, the quantum of data created, consumed, and processed will grow multifold. As the bandwidth increases, users will get access to more quality content like full high definition ("HD") videos. Edge data centres will act as the intermediary between the large amounts of such data-to-data processing.

Rising Cloud Adoption

Government initiatives to accelerate delivery of e-services and partnerships with cloud service providers will boost cloud adoption by enterprises. The pandemic also sparked interests of government agencies to migrate workloads to cloud environments, increasing demand for private and hybrid clouds.



Big Data and Internet of Things ("IoT")

With rapid adoption of artificial intelligence, IoT and big data analytics, demands for more bandwidth and more reliable and scalable data centres surged. By 2025, the number of IoT devices is expected to reach approximately 75 million and big data analytics will reach \$68 billion.⁹

Roads

Total length and break-up into national, state and rural roads

India has the second largest road network in the world, aggregating 6.4 million km. Roads are the most common mode of transportation and account for about 87% of passenger traffic and close to 63% of freight traffic. In India, national highways, with a length of close to 140,995 km, constitute a negligible percentage of the road network but carry about 40% of total road traffic. On the other hand, state highways, city roads, rural roads and major district roads are the secondary system of roads; they carry another 60% of traffic and account for nearly the entire road length.

Budget 2022

The Fiscal 2023 capital allocation for Ministry of Road Transportation and Highways ("MoRTH") stood at ₹1,99,107.71 crore, which is the highest-ever for the ministry. In Fiscal 2022, this stood at ₹1,08,230 crore. The total allocation, including revenue expenditure, for Fiscal 2022 stood at ₹1,18,101 crore, up from ₹1,01,823 crore in Fiscal 2021. Of the total allocation, the National Highways Authority of India ("NHAI") will get ₹1,34,015 crore (approximately 67%), up from ₹57,350 crore (revised estimate) in Fiscal 2022. Between Fiscals 2018 and 2022, the NHAI borrowed an average of ₹63,300 crore per year. Due to the excessive borrowings, the NHAI's leverage has increased considerably. To limit the rise in borrowings, the NHAI's budgetary support in the form of cess and toll plough-back was increased by 106% for Fiscal 2022 (budgeted) and its Internal and Extra Budgetary Resources ("IEBR") was kept at nil.

Impact

The increase in allocation is expected to improve road connectivity across the country, and will have favourable spillover effects on allied sectors such as construction-focused companies as well as boost demand for steel and cement.

Overview of National Highways Development Program ("NHDP") and Bharatmala

National Highways Development Program

The NHDP encompasses building, upgradation, rehabilitation, and broadening of existing national highways. The project is executed by the NHAI, in coordination with the public works departments of various states. The NHAI also collaborates with the Border Roads Organisation to develop certain stretches. The NHDP is being implemented in seven phases. NHDP projects are awarded to private players either on Engineering Procurement Construction (cash) or Build Operate Transfer basis, and now on the newly introduced Hybrid Annuity Model. NHDP cash contracts are mainly financed through budgetary allocations from the Central Road Fund, negative grants/premium received and toll revenue. Loans and grants are also received from the World Bank and Asian Development Bank.

Bharatmala Pariyojana ("BMP")

The BMP is a new umbrella scheme, superseding the existing NHDP. The programme envisages construct approximately 65,000 km of highways under the following categories: national corridor (north-south, east-west and Golden Quadrilateral), economic corridors, inter-corridor roads, feeder roads, international connectivity, border roads, coastal roads, port connectivity roads, and expressways. This will include the existing NHDP programme as well.

Key Growth Drivers for Toll Traffic at National Highways

The key drivers for growth in toll traffic at national highways are outlined below:

- Industrial and economic development in areas surrounding the national highways and the corresponding increase in economic activity is a major driver for traffic growth
- Improved quality of roads would reduce the risk of accidents and enable vehicles to move faster. This would make highways a preferable mode of transport and act as a tailwind for traffic on national highways
- Four- and six-laning of national highways would increase the capacity of Indian highways and reduce congestion, enabling a greater number of vehicles to use the highways without a delay in travelling time
- Higher surveillance and security on national highways would increase safety and reduce the occurrence of theft. This would improve the acceptability of highways as a mode of transport and encourage more drivers to use the national highways
- Less frequent toll plazas and a reduction/waiver in toll fees would make transportation through highways more favourable, which would lead to more people using the national highways for transportation. In this regard, FASTag has also helped by facilitating easy identification, quicker turnaround times at toll plazas and plugging leakages. An increase in FASTag penetration will be further beneficial for traffic on the national highways
- A pick-up in tourism activities in areas in and around the national highways would lead to an increase in the recreational/passenger traffic on national highways



Water

Wastewater Treatment Market Overview

In India, use of water is broadly for two purposes: domestic (household purposes) and industrial usage. The water treatment industry comprises activities related to the provision of fresh and clean water and management of wastewater for commercial/residential customers and industries. About 0.13 million MLD of wastewater is estimated to be generated in India in Fiscal 2025. Wastewater can be classified into that generated from sewage and from industrial segments. Wastewater treatment includes sewage treatment and effluent treatment.

Sewage treatment includes treating wastewater produced by community of people, which can be characterised based on volume, physical conditions, chemical and toxic constituents, and its bacteriological status. The Central Pollution Control Board ("CPCB") carries assessment of quantities of sewage generation and its treatment with the help of state pollution control boards.

Effluent treatment includes waste generated from the industrials segment. CPCB has set regulations and guidelines such as limits for various impurities, biological oxidation demand ("BOD") and chemical oxidation demand ("COD") for different industries in India depending on which, effluent treatment plants ("ETP") plants are set up by these industries. Namami Gange Policy was launched in 2014-2015 to treat River Ganga and its tributaries, under which it plans to have one city, one operator framework to maintain all STPs in the city along the river.

Copper Domestic copper demand logged 1.9% CAGR between Fiscals 2017 and 2022. The share of secondary copper is seeing rising gradually since 2017 owing to better scrap availability and increasing primary copper prices. Overall domestic demand increased 4.2% CAGR between Fiscals 2017 and 2019 before falling marginally by 0.4% on-year in Fiscal 2020. The demand fell sharply by 12.6% in Fiscal 2021 owing to nationwide lockdown in first half of Fiscal 2021 amid the pandemic. Demand revived 16% in Fiscal 2022 owing to strong revival from end-user industries.

Key End-Use Industries

Power: Over Fiscals 2023-2027, the power sector is likely to clock a CAGR of 6-8% mainly driven by renewable energy grid projects focused on solar and wind projects undertaken by the Power Grid Corporation of India, supported by state transmission projects. While financial stress on discoms is likely to be a deterrent for demand in the short term, the ₹3.03 trillion distribution company reform scheme launched in June 2021 will support demand growth in the long term.

Transport: The transport segment is expected to grow 13%-15% CAGR between Fiscals 2023 and 2027. Production of cars and utility vehicles is expected to clock 6%-8% CAGR during this period. Copper intensity is also expected to increase in various components to improve fuel efficiency. Production of two-wheeler is expected to register 8-10% CAGR owing to better domestic demand, especially from rural areas and healthy export orders. Production of tractor is expected to remain robust with 4%-6% CAGR in export orders and 5-7% CAGR in domestic demand owing to better rural income. During the period, increasing railway electrification and adoption of electric vehicles are expected to drive the growth for this segment.

Building & construction: Over Fiscals 2023-2027, copper demand from the construction sector is expected to record a healthy 6%-8% CAGR primarily driven by increasing housing schemes under the Pradhan Mantri Awas Yojna. As the Government is targeting house for every citizen, it will be a key driver for copper demand from this segment.

Infrastructure: Over Fiscals 2023-2027, copper demand from the infrastructure segment is expected to see a decline in growth of 2%-4% CAGR owing to higher usage of optical fibre in the telecom industry. However, the decline is expected to be limited owing to increasing electrification of roads, airports, and ports.

Capital goods: Over Fiscals 2023-2027, the capital goods segment is expected to log 4%-6% CAGR owing to healthy production of industrial machinery and material handling equipment amid the government's focus on improving domestic manufacturing. The Government's Make in India scheme will be a key monitorable for copper demand from this segment.

Consumer durables: Over Fiscals 2023-2027, the consumer durables segment is expected to clock an 8.5%-10.5% CAGR owing to robust production amid improving income and affordability, especially from rural areas. Copper usage in the segment is expected to be driven by higher copper intensity in various consumer durables, such as air conditioners, refrigerators and washing machines.

Polyvinyl Chloride

Demand review, Fiscals 2017 to 2022

The polyvinyl chloride ("PVC") market demand in India stood at 3,559 kilo tonne per annum ("ktpa") at the end of Fiscal 2020. It logged 2.4% CAGR between Fiscals 2017 and 2020, on account of growing demand from the infrastructure segment. However, COVID-19-



related restrictions resulted in a de-growth of approximately 18% in Fiscal 2021. In Fiscal 2022, demand rose approximately 7.8% on-year on a low base. The rebound was due to rising offtake from the pipes and fittings segment, as construction spends rose across infrastructure sub-sectors. However, demand from the agriculture segment remained subdued owing to an extended monsoon. Any further demand increase was also restricted by unavailability of PVC in the global markets (India meets approximately 55% of its requirement from imports) because of tight supply and the subsequent steep rise in prices. The price hikes led to a shift in demand from PVC to polyethylene ("PE"), further impacting demand for PVC.

Demand outlook, Fiscals 2023 to 2027

PVC demand is set to increase 7-8% on-year in Fiscal 2023 to 3,350-3,450 ktpa. However, it will continue to be lower than 3,559 ktpa recorded in Fiscal 2020. A large part of the rise will be on account of higher demand from the pipes and fittings segment, which comprises more than two-thirds of PVC offtake. Further increase in demand would be restricted owing to decadal high PVC prices and subsequent shift in demand from PVC to PE. Over Fiscals 2023 to 2027, PVC demand is expected to clock 8-10% CAGR, on account of increased spending on infrastructure and various government initiatives. The demand would be driven by sectors such as agriculture with increased land under irrigation, infrastructure aided by water supply and sanitation, housing segment with growing focus on housing for all. Other key segments aiding demand growth would be pharmaceutical and packaging segments.

Outlook on Share of India PVC Demand by Key Application

PVC products are widely used in various industries due to its superior strength, non-flammability and ease of processing and moulding. Various government initiatives are also likely to aid the demand growth under each segment. The growth of PVC has historically been driven by the agriculture and infrastructure segments, which is evidenced by the significant contribution of the pipe and fittings segment in the overall demand mix for PVC.

Opportunities for Adani Enterprises Limited in India's PVC segment

Between Fiscals 2023 and 2027, demand is expected to grow from all key end-use segments, led by pipes and fittings (8.5- 9.5% CAGR), supported by favourable government measures. Other segments such as films and sheets, profiles, wires, and cables are expected to log 7-9% CAGR, driven by consumer driven growth. Calendering segment is also expected to grow 5.5- 6.5%, driven by pharmaceutical demand. Thus, overall PVC demand is projected to log 8-10% CAGR in this period. The current production capacity in India at 1,580 ktpa represents only about half of the domestic demand. Even with 1,200 ktpa capacity is expected to come onstream, demand is expected to reach 4,700-4,800 ktpa by end Fiscal 2027 leading overall imports to stay above approximately 50%. With growing demand, imports is expected to play an important role in supply-mix. Japan, China, Taiwan, and Korea are the major suppliers to India for PVC, and overall imports are expected to grow at 4-5% CAGR between Fiscal 2023 and 2027. Such high level of imports is typically unsustainable owing to ever-changing geopolitical circumstances and possibility of dumping by various nations. To sustain domestic production capacity, the Government had imposed anti-dumping duty, but this has to be brought down due to rising demand this calendar year 2022.

Mining - Coal and Iron Ore

An Overview of India's Coal Sector

As of Fiscal 2021, India has coal reserves of approximately 352 billion, of which approximately 35 MT is coking coal, while approximately 317 MT is non-coking coal. Coal deposits are mainly concentrated in eastern and south-central parts of the country. The states of Jharkhand, Odisha, Chhattisgarh, West Bengal, Madhya Pradesh, Telangana and Maharashtra account for approximately 98% of the total coal reserves in the country.

In this segment, participants for whom this may not be a core business operation often contract third party mine developers and operators ("MDO") who help in mining and production of coal from such blocks. The operator enters into arrangements with third parties who have been allocated coal blocks, where it is responsible for developing the mine, mining the coal, washing the coal, transporting and dispatching the washed coal to the required destination. The primary difference here is in terms of ownership, an MDO would be in most cases, a third party contractor engaged to carry out mining and associated operations while the mine ownership would rest elsewhere. This is different from commercial or captive mining. Captive mining refers to mines owned and utilised by entities for captive coal production and consumption. Commercial mine allocations, which the government has introduced recently in the sector, is where mine ownership is being allocated to interested bidders (private and otherwise) for mining of coal for sale in the market at large. Both a captive and a commercial mine owner may then engage a third party contractor, such as an MDO, to handle the operations as defined above.

Coal Resource Management

Coal supply also requires appropriate management of sourcing from suppliers and logistics of the same. This involves the responsibility and accountability of sourcing resources (such as coal) from suppliers, managing sea-borne logistics, providing an intermediate holding



facility at discharge ports and delivering resources to customers. Efficiency in such activities may result in cost and resource savings, especially in logistics, aiding sustainability in operations.

Aluminium

Domestic aluminium demand logged 3.3% CAGR between Fiscals 2017 and 2022 to 3.9 MT. Share of primary aluminium and secondary aluminium changed drastically from 72% and 28%, respectively, in Fiscal 2017 to 57% and 43%, respectively, in Fiscal 2022 owing to better scrap availability and increasing primary aluminium prices. Domestic aluminium demand logged 9.2% CAGR between Fiscals 2017 and 2019 before falling 6.8% on year in Fiscal 2020. The demand fell a further 7.7% in Fiscal 2021 owing to nationwide lockdown in the first half of the year after the spread of COVID-19. The demand revived 14.6% in Fiscal 2022 owing to strong revival in the end-user industries.

New-Age Industries

Renewable energy: This sub-segment in the power segment will be a major factor in aluminium demand growth over the medium term. The metal is used to make solar panels and wind turbines. As of now, India imports most of its solar modules requirement. China has more than 85% share in the imports. However, after the Government published the Approved List of Module Manufacturers ("ALMM") for the projects approved after April 10, 2021, more than 50% of the module demand has the potential to be met through domestically produced solar modules over the medium term. This will boost overall aluminium demand from the segment. Over Fiscals 2023-2027, the country is expected to add 18-20 GW wind energy capacity with over ₹1.43 trillion investments. The Government also aspires to reach 134 GW wind capacity by Fiscal 2032 under its NEP which will also as a significant factor in boosting aluminium demand.

Electric vehicles: This sub-segment in the transport segment will be a paly a major rose in boosting aluminium demand over the medium term. Aluminium usage in EVs is significantly higher than in conventional vehicles as the metal is lighter but is as strong as steel. So, using aluminium will be a crucial factor that improves the overall driving range of EVs. As of Fiscal 2021, EV adoption in cars segment stood at 0.2%, in two-wheelers at 0.3%, buses 3% and other commercial vehicles 0%. These are expected to reach 2-4%,11-14%,4-6% and 0-2%, respectively, by Fiscal 2027.

Key Concerns

- If AEL is not able to successfully manage growth, its business and results of operations may be adversely affected.
- The limited operating history of some of AEL's businesses may not serve as an adequate basis to evaluate its future prospects, results of operations and cash flows.
- Integrated resource management business primarily depends on an increasing demand for imported coal in India and its ability to maintain a diverse supplier base.
- Certain companies within the Adani group are involved in various legal, regulatory and other proceedings which could have an adverse impact on the business and reputation.
- Promoter Group does not include certain immediate relatives of the spouses of the Promoters.
- AEL's mining services business depends on its ability to increase its customer base and its failure to do so may adversely impact its operations.
- AEL's airport operations and the fees charged for aeronautical services are regulated by the Government of India and the terms of its concession agreements. Accordingly, government regulations and the terms of its concession agreements (including with respect to the determination of tariffs for its aeronautical services) have materially affected, and will continue to materially affect, its results of operations, cash flows and financial condition.
- AEL's revenue from its airports business depends on levels of air traffic, which in turn depend in part on factors beyond its control, including economic and political conditions and the regulatory environment.
- Any failure to execute on AEL's green hydrogen strategy could have an adverse impact on its operations.
- AEL intends to expand its data center business and any failure to do so could impact its operations.



- AEL requires certain approvals, licenses and permissions to conduct business. Its inability to obtain such approvals, licenses or permissions, and any non-compliance with the conditions specified under its existing approvals, licenses or permissions, may adversely affect its operations.
- AEL depends on the government based competitive bidding process for its infrastructure assets. Its inability to effectively bid for projects could impact its operations and financial condition.
- AEL faces a variety of risks in connection with its reliance on concessions and other contracts where the counterparties are central and state government companies.
- Currently roads and airports businesses are primarily dependent on projects in India undertaken or awarded by governmental authorities and AEL derive majority of its revenues from contracts with a limited number of government entities.
- A decline in road traffic volumes and revenue would materially and adversely affect the business, prospects, financial condition, cash flows and results of operations.
- AEL faces significant competition in its FMCG business, which may limit its growth and prospects.
- Businesses are subject to extensive and evolving Indian law and regulations.
- AEL is exposed to fluctuations in currency exchange and interest rates.
- The impact of the COVID-19 pandemic on business and operations is uncertain and it may continue to have an adverse effect on its business, operations and its future financial performance.
- AEL's operations face the risk of interruption and casualty losses and its insurance does not cover all potential losses, liabilities and damage related to its business and certain risks are uninsured or uninsurable.
- AEL may fail to identify or successfully acquire target businesses and its acquisitions could prove difficult to integrate which could disrupt its business and strain its resources.
- A slowdown or shutdown in manufacturing operations or under-utilization of manufacturing facilities could have an adverse effect on the business, results of operations and financial condition.
- AEL is dependent on its Promoters, Directors and other Key Managerial Personnel. Any loss of or its inability to attract or retain such persons could adversely affect the business, results of operations and financial condition.
- Competitiveness depends on ability to attract and retain employees and skilled workers. Moreover, AEL may be subject to labor disputes which could adversely affect its business, financial condition, results of operations and cash flows.
- The operation of businesses is highly dependent on information technology, and AEL is subject to risks arising from any failure of, or inadequacies in, its information technology ("IT") systems.
- Ability to pay dividends in the future will depend upon the future results of operations, financial condition, cash flows and working capital and capital expenditure requirements.
- AEL's substantial indebtedness could adversely affect its business, prospects, financial condition, results of operations and cash flows.
- AEL and its Subsidiaries have unsecured loans that may be recalled by the lenders at any time and the Company may not have adequate funds to make timely payments or at all.
- AEL utilize the services of certain third parties for its operations and any deficiency or interruption in their services could adversely affect the business and results of operations.



- AEL conduct certain of its operations through unconsolidated joint ventures with independent third parties. These investments involve risks and are highly illiquid.
- Data center business is subject to evolving laws regarding privacy, data protection and other related matters. Many of these laws are subject to change and could result in claims, changes to its business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, which may harm its business.
- Security breaches, cyber-attacks, computer viruses and hacking activities may cause material adverse effects on AEL's business, financial performance and results of operations and expose it to liability, which could adversely affect its business and its reputation.
- AEL has certain contingent liabilities and sub-ordinate debt and its financial condition may be adversely affected if these contingent liabilities materialize.
- Continuing success depends on the reputation of the Adani group, and any damage to their reputations could adversely affect the business, results of operations and future prospects.
- Technical failures of solar modules and cells could cause delays and adversely impact the operations.
- A shortage or non-availability of electricity, fuel or water may adversely affect manufacturing operations and have an adverse effect on the business, results of operations and financial condition.
- AEL is exposed to operational risks which, if materialize, may have a material adverse effect on the business, financial condition, cash flows, results of operations and prospects.
- Results of operations may fluctuate from period to period due to the cyclical and seasonal nature of the air transportation and agriculture industry.
- If AEL is unsuccessful in implementing its strategies, particularly its growth strategy, its business, financial condition, results of operations and cash flows may be adversely affected.
- Financial difficulty and other problems relating to financial institutions in India could have a material adverse effect on AEL's business, results of operations, cash flows and financial condition.
- Ability to raise foreign capital may be constrained by Indian law.
- Business, financial condition and results of operations could be adversely affected by any change in the extensive central and state tax regime in globally applicable to it and its business.
- Business may be affected by sanctions, export controls and similar measures targeting Russia and other countries and territories as well as other responses to Russia's invasion of Ukraine, including indefinite suspension of operations in Russia and Belarus by many multi-national businesses across a variety of industries.

**Profit & Loss**

Particulars (Rs in crores)	H1FY23	FY22	FY21	FY20
Revenue from operations				
Revenue from operations	79019.5	69420.2	39537.1	43402.6
Other Income	488.4	1012.5	753.8	683.7
Total Income	79507.9	70432.7	40290.9	44086.2
Total Expenditure	75407.7	65707.0	37032.1	41118.3
Cost of Materials Consumed	1614.2	2502.7	1948.9	1750.2
Purchases of stock-in-trade	64957.4	55148.6	27842.2	32600.0
Change In Inventories of Finished Goods & Work-In-Progress	-3576.4	-3933.8	456.7	310.1
Employee Benefits Expenses	955.8	1180.6	829.3	682.5
Operating and Other Expenses	11456.8	10808.9	5955.0	5775.4
PBIDT	4100.2	4725.7	3258.9	2968.0
Interest	1849.0	2525.9	1376.9	1572.3
PBDT	2251.2	2199.8	1882.0	1395.6
Depreciation and amortization	948.5	1247.8	537.1	472.1
PBT	1302.7	952.0	1344.9	923.6
Exceptional items	0.0	0.0	-258.9	198.8
Tax (incl. DT & FBT)	453.1	476.7	339.7	324.3
Current tax	405.4	391.0	123.7	240.6
Tax expense related to earlier years	-0.2	0.4	-1.1	0.8
Deferred tax (credit)/charge	47.9	85.3	217.0	83.0
PAT	849.6	475.4	746.3	798.0
Share of Profit from Jointly Controlled Entities & Associates	51.4	312.3	299.4	242.0
Non-Controlling Interests	-29.4	11.1	123.1	-98.2
Adj PAT	930.4	776.6	922.6	1138.2
EPS (Rs.)	8.2	7.1	8.4	10.4
Face Value	10	10	10	10
OPM (%)	4.6	5.3	6.3	5.3
PATM (%)	1.2	1.1	2.3	2.6

Balance Sheet

Particulars (Rs in crores) As at	H1FY23	FY22	FY21	FY20
Non-current assets				
Property, plant and equipment	31,995.97	19,599.1	5,143.0	5,734.6
Capital work-in-progress	15,036.84	19,564.2	8,686.3	7,231.1
Right of use assets	1,546.85	1,175.6	504.5	712.1
Investment Property	48.25	46.6	31.4	31.9
Goodwill	300.92	300.9	152.0	139.1
Other Intangible assets	5,872.48	9,000.5	5,006.8	3,858.7
Intangible assets under development	4,283.43	3,980.3	139.2	115.6
Financial assets				
Investments	4,670.87	4,229.2	5,473.4	1,897.5
Loans & Advances	6,697.06	6,236.53	3,199.01	945.87
Other Financial Assets	3,188.58	2,972.79	2,238.0	948.1
Deferred tax assets (net)	135.01	173.8	76.5	272.8
Income tax assets	404.77	357.7	238.9	278.0
Other non-current assets	5,159.08	3,177.6	790.7	550.0
Total non-current assets	79,340.1	70,814.8	31,679.6	22,715.4
Current assets				
Inventories	10,021.23	6,788.3	1,757.0	2,562.4
Financial assets				
Investments	160.05	63.0	29.5	55.0
Trade receivables	15,974.38	13,712.2	11,982.7	13,146.5
Cash and cash equivalents	1,143.65	912.2	666.2	2,124.7
Other Bank Balances	2,807.43	3,003.6	1,144.7	1,252.0
Loans & Advances	5,927.90	1,452.8	1,413.1	1,959.9
Other financial assets	2,735.68	1,751.4	1,382.5	1,463.8
Other current assets	4,980.85	3,261.8	1,587.7	1,618.7
Total current assets	43,751.2	30,945.4	19,963.3	24,182.9



Total assets	123,091.3	101,760.2	51,642.9	46,898.4
EQUITY & LIABILITIES				
Equity				
Equity share capital	114	110.0	110.0	110.0
Instruments entirely Equity in nature	141.56	640.0	0.0	0.0
Other Equity	31,296.81	21,506.53	17,048.59	16,836.59
Equity attributable to owners of the Company	31,552.37	22,256.5	17,158.6	16,946.6
Non-Controlling Interest	4,624.03	4,671.9	1,751.4	1,263.4
Total equity	36,176.4	26,928.4	18,910.0	18,209.9
Liabilities				
Non-current Liabilities				
Financial Liabilities				
<i>Borrowings</i>	26,336.63	20,803.4	9,523.3	3,515.8
<i>Lease liabilities</i>	911.76	516.6	163.1	432.3
<i>Other financial liabilities</i>	3,888.88	3,386.2	1,190.7	787.4
<i>Provisions</i>	282.33	279.0	76.8	63.0
Deferred tax liabilities (net)	2,579.29	2,606.3	26.1	23.3
Other non-current liabilities	3,862.42	3,390.6	269.7	577.8
Total non-current liabilities	37,861.3	30,982.0	11,249.8	5,399.5
Current liabilities				
Financial liabilities				
<i>Borrowings</i>	13,686.87	20,220.3	6,528.1	9,089.1
<i>Lease liabilities</i>	255.59	63.6	12.5	18.7
<i>Trade payables</i>				
<i>Total outstanding dues of micro and small enterprises</i>	111.76	131.0	47.9	35.1
<i>Total outstanding dues other than (iii) (a) above</i>	28,443.15	17,516.9	11,708.5	11,778.6
Other financial liabilities	3,908.76	3,276.1	1,606.6	398.0
Other current liabilities	2392.3	2,378.5	1,490.5	1,858.5
Provisions	108.4	95.7	64.8	61.5
Current tax liabilities (net)	146.74	167.7	24.3	49.5
Total current liabilities	49,053.6	43,849.8	21,483.1	23,288.9
Total liabilities	86,914.9	74,831.8	32,732.9	28,688.4
Total equity and liabilities	123,091.3	101,760.2	51,642.9	46,898.4

Source: RHP

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