



Futuristic strategy of the steel industry in Odisha

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Table of contents

1. Executive summary	05
2. Strategic imperative: The role of steel in India's economic growth	09
3. Growth story of the Odisha steel sector until now	15
4. Roadmap to become the steel hub of India by 2030	25
5. Current challenges for steel capacity expansion in Odisha	32
6. Future strategy for the steel industry in Odisha	38
7. Potential socioeconomic impact	43
8. Conclusion	45
9. Glossary	46
10. Connect with us	48
11. About ISA	49

List of figures

Figure 1: Historical steel consumption FY14–FY25	10
Figure 2: State-wise finished steel consumption in FY24	13
Figure 3: Historical steel consumption and steel production for Odisha	16
Figure 4: Steel-making capacity by production route.	17
Figure 5: GSDP and steel production for Odisha	17
Figure 6: Current steel industry landscape in Odisha	19
Figure 7: Contribution of Odisha to India's mineral production.	21
Figure 8: Sector classification for policies and incentives in Odisha.	22
Figure 9: Steel consumption and GSDP growth outlook.	28
Figure 10: State per capita income ('000 at constant prices)	29
Figure 11: Steel capacity projections for Odisha until FY31	30
Figure 12: Steel production projections for Odisha until FY31	31
Figure 13: Annual growth in steel production capacity since FY19	32
Figure 14: OMC's contribution to the exchequer as percent of revenue from operations	35

List of tables

Table 1: Correlation between GDP and steel consumption for major steel-consuming countries	10
Table 2: Ranking of states based on steel consumption	14
Table 3: Industry clusters and demand centres in Odisha	18
Table 4: Major players with existing capacity and production	19
Table 5: List of iron ore mines in Odisha	20
Table 6: Expansion plans of major ISPs	30
Table 7: Global comparison for royalty rates on iron ore	35
Table 8: Steel capacity additions and employment generation for Odisha until FY31	44

1. Executive summary

Steel is a critical enabler of economic development, serving as the foundational input for the infrastructure, construction, mobility, manufacturing and energy sectors. As India advances towards becoming a US\$5 trillion economy by 2027,¹ the steel industry is expected to drive capital formation and industrial competitiveness. Aligned with this ambition, the National Steel Policy (NSP) 2017 aims to achieve 300 MT of installed crude steel capacity in India by 2030–31.² With crude steel production reaching 151.9 MT in FY25,³ India is the world's second-largest producer,⁴ and Odisha occupies a key position in this national trajectory. As the largest producer of iron ore and crude steel, Odisha contributed 25.8 MT of crude steel output in FY24.⁵ The state has outlined an ambitious vision to expand its installed capacity to 130 MT by FY31, accounting for over 40 percent of the national target.⁶ This report, *Futuristic strategy of steel industry in Odisha*, presents an integrated analysis of the state's existing production ecosystem, capacity expansion plans, emerging demand drivers and existing challenges. It further outlines policy recommendations to address challenges related to raw material security, land acquisition, logistics infrastructure, energy transition and industrial linkages, aiming to position Odisha as a globally competitive hub for sustainable steel manufacturing.

1.1 Strategic context

Odisha's emergence as a strategic pillar in India's steel sector is underpinned by its large mineral resource base, integrated industrial policies and sustained efforts to enhance its manufacturing competitiveness. The state possesses 33 percent of India's total iron ore reserves, 24.8 percent of coal, 98.4 percent of chromite and 67.6 percent of manganese, making it one of the most resource-rich regions in the country.⁷ In FY24, Odisha accounted for 57 percent of India's iron ore production⁸ and emerged as the leading producer of crude steel in FY24 with an output of 25.8 MT.⁹ This dominant position has attracted consistent investment from

integrated steel producers. To catalyse industrial growth, the state has implemented progressive policy frameworks such as the Industrial Policy Resolution (IPR) 2022, which offers streamlined land acquisition, fiscal incentives and facilitative regulatory mechanisms. Developing industrial corridors, dedicated steel and downstream parks, and Special Economic Zones (SEZs) has further reinforced Odisha's attractiveness as a destination for large-scale steel investments. Companies such as JSW, Tata Steel, Jindal Steel and Power Ltd. (JSPL) and ArcelorMittal-Nippon Steel have committed substantial capital towards greenfield and brownfield expansions. Collectively, these developments form the strategic backdrop for Odisha's 130 MT capacity vision,¹⁰ aligning the state's industrial aspirations with India's broader manufacturing and export growth trajectory.

1.2 Odisha's growth story

Over the past two decades, Odisha has steadily transformed from a resource-rich state into a key contributor to India's steel manufacturing capacity. This transformation has been anchored in deliberate policy shifts, infrastructure investments and strategic capacity building. Between FY18 and FY24, crude steel production in Odisha rose from 16.97 MT to 25.80 MT,¹¹ driven by improved capacity utilisation, operational efficiency and higher feedstock availability through pelletisation. The state's steel demand, which reached 8.04 MT in FY24,¹² remains infrastructure-driven, with infrastructure and construction accounting for nearly 70–75 percent of steel consumption.¹³ Economic indicators reinforce this trajectory. Odisha's per capita income witnessed a CAGR of 5.45 percent during 2019–24, outpacing the national average (2.99 percent)¹⁴ and suggesting a growing consumer and industrial base. This upwards trend in income and urbanisation is expected to catalyse demand for white goods, capital equipment and logistics infrastructure, further embedding steel at the core of Odisha's development model.

¹ <https://www.pib.gov.in/PressNoteDetails.aspx?NotelD=155121&ModuleId=3>

² <https://steel.gov.in/national-steel-policy-nsp-2017>

³ JPC Monthly Report : Iron and Steel March 2025

⁴ JPC Monthly Report: Iron and Steel March 2025

⁵ JPC Annual Statistics 2023-24

⁶ <https://www.thehindu.com/business/odisha-targets-to-triple-steel-production-by-2030-says-cm-mohan-majhi/article69492106.ece>

⁷ [https://www.odishaminerals.gov.in/#:~:text=Besides%20iron%20ore%20\(32.9%20per,manganese%20\(67.6%20per%20cent\).](https://www.odishaminerals.gov.in/#:~:text=Besides%20iron%20ore%20(32.9%20per,manganese%20(67.6%20per%20cent).)

⁸ https://pc.odisha.gov.in/sites/default/files/2025-02/Economic%20Survey%202024-25%20-Full%20Document_0.pdf

⁹ JPC

¹⁰ <https://www.thehindu.com/business/odisha-targets-to-triple-steel-production-by-2030-says-cm-mohan-majhi/article69492106.ece>

¹¹ JPC

¹² Steel consumption figures are derived from JPC despatches data and should be interpreted as indicative estimates

¹³ Indian Steel Association

¹⁴ <https://iced.niti.gov.in/economy-and-demography/key-economic-indicators/socio-economic>



1.3 Future targets and production outlook

Despite being India's leading steel-producing state,¹⁵ Odisha has witnessed a slower-than-expected pace of capacity addition in recent years. Installed crude steel capacity grew marginally from 26.4 MT in FY19 to 29.1 MT in FY24, reflecting a CAGR of just 1.97 percent, significantly below the national average of 4.8 percent.¹⁶ The state has set an ambitious goal of achieving 130 MT of installed capacity and 100 MT of production by FY31.¹⁷ However, current industry assessments indicate that only 90.5 MT of capacity is likely to be realised, translating to an estimated crude steel output of 76.9 MT by FY31 (at 85 percent utilisation).¹⁸ This implies a projected shortfall of 39.5 MT in capacity and 23.1 MT in production against stated targets.¹⁹ While Odisha offers a favourable policy environment and mineral security, capacity expansion has been constrained by persistent issues related to raw material security, land acquisition, infrastructure readiness and regulatory clearances. This underscores the need for targeted interventions to accelerate project execution.

1.4 Key challenges

While Odisha has made significant strides in steel production, several critical challenges continue to hinder the state's ability to expand its capacity and fully use its potential in the steel sector.

A key issue remains land acquisition for steel projects, which is hindered by resistance from tribal communities in Fifth Schedule Areas. The Panchayats (Extension to Scheduled Areas) Act, 1996 (PESA) grants gram sabhas the authority

to approve or reject projects, creating significant delays. Moreover, critical railway infrastructure, such as the Dubri connectivity, faces land acquisition hurdles, negatively affecting project timelines and logistics linkages. Regulatory and environmental approvals present additional obstacles. The approval timelines for environmental and forest clearances are often unmet, affecting project execution. Compared with countries such as Brazil and Canada, where mining leases for greenfield projects are granted in under a year, it typically takes 4–5 years to secure such leases in India.²⁰ Overlapping requirements under EIA-2006, FRA-2006 and LARR-2013 further delay the process.

The state's logistics infrastructure faces persistent challenges. Insufficient rail rake allocations during peak seasons and the withdrawal of freight incentive schemes such as the Long Lead Rebate and Short Lead Discount have driven freight charges up by nearly 30 percent on critical iron ore routes.²¹ Inland rail freight costs from Odisha now exceed sea freight for imported steel, raising transportation costs. Additionally, the state's rail and road network lacks seamless connectivity between mining clusters, steel plants and key ports, and significant upgrades are required to enhance transportation efficiency. The port and power infrastructure also face bottlenecks, hindering smooth operations and escalating operational costs.

Raw material security is under threat due to the underutilisation and exit of mining operations. The surrender of the Jajang iron ore mine due to uneconomic operations highlights the risk to long-term iron ore supply in the state.

¹⁵ JPC Annual Statistics 2023-24

¹⁶ JPC Annual Statistics 2023-24

¹⁷ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1535224>

¹⁸ Deloitte Analysis

¹⁹ Deloitte Analysis

²⁰ Deloitte Analysis

²¹ Indian Steel Association

Increasing levies and steep auction premiums further compound this issue, creating a cost burden on mining operations. Additionally, the “royalty on royalty” issue continues to affect the competitiveness of raw material pricing. With all captive mining leases set to expire in 2030, concerns over the state’s iron ore supply security are growing. Furthermore, the pricing mechanism for Long Term Linkage (LTL) buyers based on the National E-Auction’s weighted average price, influenced by trader participation, makes raw material costs less competitive for steel producers.

The iron ore beneficiation sector faces operational challenges, particularly around tailings disposal and the lack of sustainable waste management solutions. The uniform 15 percent²² royalty on low-grade ore remains a significant cost burden, disincentivising value addition and making beneficiation operations less viable.

Finally, Odisha’s steel sector is under pressure to meet renewable energy and sustainability targets. The expiration of the Inter-State Transmission System (ISTS) charge waiver in 2025 will significantly increase electricity costs, adding further strain on energy-intensive steel production. The state’s underdeveloped scrap recycling sector and insufficient hydrogen infrastructure further hinder progress towards decarbonisation and green steel adoption.

1.5 Strategic recommendations

To bridge the projected shortfall in Odisha’s steel production and realise the 100 MT target by FY31, targeted interventions are needed across raw material security, logistics, land and clearances and green transition. On land acquisition and environmental clearances, timelines can be improved by earmarking part of the land bank scheme for steel projects and streamlining EC and FC processes through more precise documentation and convergence under EIA, FRA and LARR. Publishing land bank data for compensatory afforestation and permitting private access to revenue forest land will enhance execution readiness.

A dedicated Project Management Unit (PMU) should be established to oversee overall project execution in the state and fast-track clearances, approvals and escalations across sectors. Separately, a cross-functional review mechanism headed by the chief secretary, with participation from environment, forest, NHAI, railways, IDCO and OPTCL, should be instituted for the time-bound implementation of critical enablers such as power and logistics. Medium-term reforms, including FC exemption for prospecting and rehabilitation through direct benefit transfers, will further strengthen execution certainty.

Logistics competitiveness is a critical area requiring urgent attention. Priority must be given to completing key railway lines, such as the Talcher–Bimlagarh rail line, and expediting the Barbil–Nayagarh–Barsuan and Bhadrāsahi–Kiriburu routes. Resolving land acquisition delays, particularly for projects such as the Dubri connectivity, is vital to ensuring seamless transport connections. The state should prioritise road infrastructure upgrades, complete unfinished stretches to high-quality standards, develop logistics parks and introduce more Vande Bharat trains to connect urban and industrial areas. Additionally, strengthening port-handling facilities, building multi-modal corridors from mining regions to ports and utilising DMF funds for slurry pipelines, especially for smaller producers, will address transport inefficiencies. Expanding covered storage at ports, improving rake availability and digitising cargo coordination will enable seamless and cost-effective transportation of materials.

A dedicated iron ore policy for Odisha should be formulated, focusing on streamlining the auction process, optimising mine life, prioritising domestic value-added industries and promoting the utilisation of low-grade ore through beneficiation while enforcing sustainability benchmarks and ensuring time-bound clearances for project operationalisation. Securing raw materials requires faster mine auctions, especially for expired leases and pre-cleared blocks, and ensuring lessees produce up to full EC limits. Surplus output above MDPA thresholds could be channelled through state-facilitated e-auctions at regulated prices. Idle assets of OMDC and RINL should be recommissioned, auctioned mines should be operationalised without delay and the Balda block lease should be considered for transfer to OMC. Existing OMC mines should be scaled to sanctioned EC limits. To address the royalty over royalty issue, Odisha should recommend the adoption of ex-mine pricing in place of ASP-based pricing as the basis for royalty calculations, which will eliminate double taxation on embedded levies. Additionally, the government should recommend a royalty reduction for iron ore fed into dry and wet beneficiation, with wet beneficiation royalty reduced to 10 percent and dry beneficiation reduced to 5 percent. Relaxing EC norms for tailings disposal will also be essential, ensuring that tailings/slimes are excluded from EC tonnage limits when transported via conveyor or slurry pipelines.

In the medium term, Odisha should advocate for a phased downwards revision of royalty rates to align with global standards, aiming for 10 percent on iron ore for domestic consumption. Shifting the LTL buyer pricing model to a cost-plus or indexed pricing model and ensuring timely dispatches will improve industry access and competitiveness.

²² Indian Bureau of Mines



For the green transition, Odisha should rationalise RPO targets for captive power, scale hydrogen-based DRI and gas-based steelmaking pilots and develop scrap recycling clusters with policy support. Beneficiation of lower-grade ore should be incentivised through tax holidays and duty-free capital imports, alongside reforms in tailings handling and water access.

1.6 Socioeconomic impact

The expansion of Odisha's steel sector presents significant economic dividends for the state. Full utilisation of approved Environmental Clearance (EC) limits, beyond current Mine Development and Production Agreement (MDPA) thresholds, can generate an additional INR11,754 crore²³ in mineral revenue annually. This incremental income can substantially bolster Odisha's fiscal capacity, enabling increased investments in infrastructure, public services and welfare programmes. Employment generation remains a key multiplier of steel sector growth. From 48,232 direct jobs in FY23,²⁴ Odisha's steel industry is expected to add approximately 1,15,000 direct and 2,50,000 indirect jobs as capacity reaches 90.5 MT by FY31.²⁵ Achieving the aspirational 130 MT target could further create ~74,000 direct and ~1,60,000 indirect employment opportunities²⁶ across core and allied sectors, including mining, transport, fabrication

and equipment services. The rise in capacity is also catalysing the development of a robust industrial ecosystem. Odisha is witnessing rapid growth in refractory manufacturing, fabrication units and Original Equipment Manufacturers (OEMs). The ferroalloy industry and downstream engineering clusters are also expanding, underscoring the potential for broad-based economic transformation anchored in the steel value chain.

1.7 Conclusion

Odisha's resource base, industrial ecosystem and investor interest position it uniquely to lead India's steel transformation. However, realising the 130 MT vision will require a coordinated and time-bound strategy focused on de-bottlenecking land, minerals, logistics and clearances. The state's proactive policy framework must be matched with efficient execution, institutional reforms and industry collaborations. Odisha can emerge as a global benchmark in steel manufacturing by fostering a conducive business environment, incentivising value addition and embracing sustainability. The future of India's steel ambition lies in Odisha's ability to convert potential into performance — through policy clarity, infrastructure readiness and industrial resilience.

²³ Deloitte Analysis

²⁴ <https://steelmines.odisha.gov.in/node/119631>

²⁵ Deloitte Analysis, Stakeholder Discussion

²⁶ Deloitte Analysis

2. Strategic imperative: The role of steel in India's economic growth

Steel plays a critical role in India's economic and industrial growth, acting as a key enabler of national progress. India is the second-largest producer of crude steel globally, with a production of 151.9 MT in FY25.²⁷ The industry contributes nearly 2 percent²⁸ to the national GDP and employs over 2.6²⁹ million people directly and indirectly. It supports key sectors such as building and construction, infrastructure, automotive, engineering, packaging and defence. India is also the second-largest consumer of finished steel globally. During FY23–24, the elasticity of steel demand with urbanisation rate stood at 3.0,³⁰ indicating that rapid growth in urbanisation is expected to boost steel consumption further in the coming years.

The construction and infrastructure sectors collectively contribute to ~64 percent³¹ of India's steel demand, indicating the country's heavy reliance on steel for its growth and development. Large-scale investments under programmes, such as Bharatmala Pari yojana, for developing greenfield access-controlled corridors and expressways³² along with the housing projects under Pradhan Mantri Awas Yojana (PMAY), have driven steel consumption to approximately 152 MT in FY25,³³ marking over 11.5 percent YoY growth.³⁴ India's urban population is projected to reach 600 million by 2036,³⁵ driving a further acceleration in steel demand due to rapid urbanisation.

Despite these advancements, India's per capita steel consumption remains significantly below the global average of approximately 219 kg,³⁶ at 108 kg³⁷ in FY25. This underscores the immense potential for growth in domestic steel demand. To address this, the government has implemented ambitious policies under the National Steel Policy (NSP) 2017, with a vision to increase per capita steel consumption to 160 kg

and expand production capacity to 300 MT by 2030–31. The Ministry of Steel has taken proactive measures to strengthen the sector through the Domestically Manufactured Iron & Steel Products (DMISP) Policy, ensuring the use of domestic steel in government projects to promote self-reliance and the Production Linked Incentive (PLI) Scheme for specialty steel, driving high-value steel production, attracting investments and reducing import dependency. With finished steel exports reaching 4.8³⁸ MT in FY25 and efforts underway to scale production further, the industry is poised to significantly enhance its contribution to India's economic expansion.

2.1 Correlation between steel consumption and economic growth

The steel industry has long been a cornerstone of economic development worldwide, with a strong correlation between GDP growth and steel consumption in leading steel-consuming countries such as China, India, Japan, the US and Russia. Economic expansion in these countries is closely linked to higher steel demand, primarily driven by infrastructure, manufacturing and construction activities. Interestingly, the relationship between steel use intensity and economic development follows an inverted U-shape, indicating that steel consumption rises during the early stages of industrialisation but tapers off as economies mature and shift towards services-driven growth. The following table highlights the correlation between steel consumption and GDP (USD Constant Prices 2015) for major global economies from 2014 to 2023.³⁹

²⁷ JPC

²⁸ IBEF

²⁹ <https://www.investindia.gov.in/>

³⁰ JSW Steel Annual report 23-24

³¹ Indian Steel Association

³² <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2023/apr/doc2023428189201.pdf>

³³ <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2082773>

³⁴ <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/manufacturing/in-manufacturing-isa-steel-infrabuild-2024-noexp.pdf>

³⁵ <https://www.worldbank.org/en/news/press-release/2022/11/14/india-s-urban-infrastructure-needs-to-cross-840-billion-over-next-15-years-new-world-bank-report>

³⁶ <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2043644>

³⁷ <https://www.livemint.com/industry/manufacturing/india-plans-mandatory-green-steel-production-by-firms-and-procurement-by-government-11731833910777.html>

³⁸ JPC

³⁹ World Steel Association 2024, World Bank

Table 1: Correlation between GDP and steel consumption for major steel-consuming countries

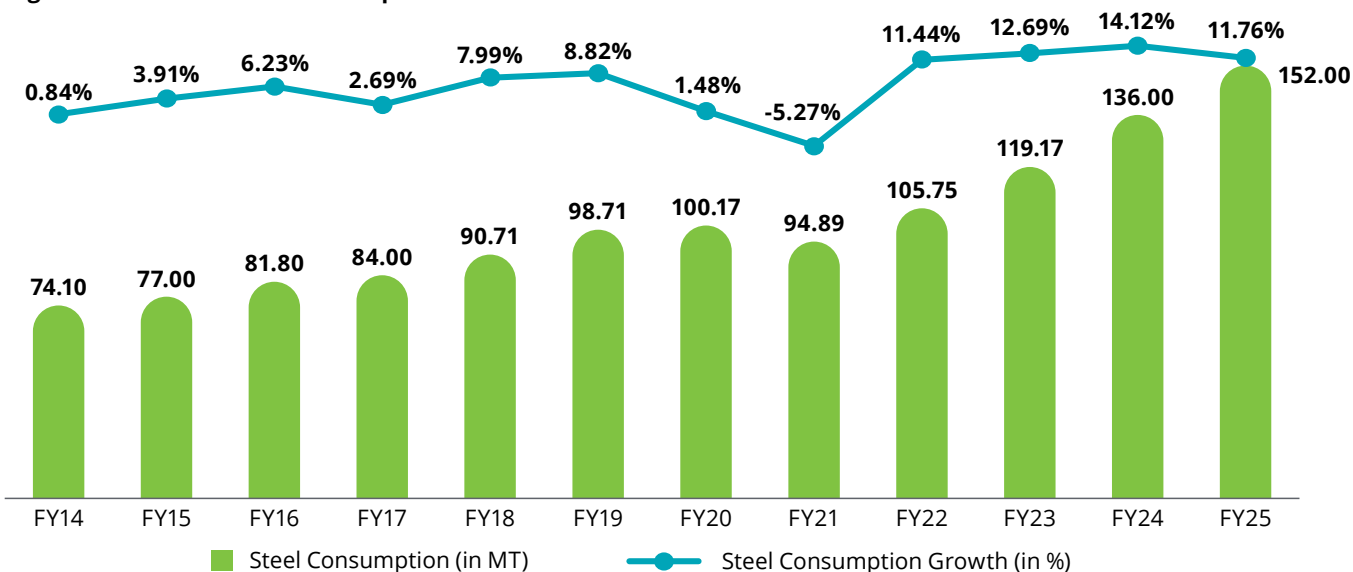
Country	GDP 2023 at constant prices 2015 (USD x 10 ⁹) ⁴⁰	Steel consumption 2023 (MT)	Correlation coefficient (2014-2023)
China	17,175	895.7	0.84
India	3,215	119.17	0.97
US	22,062	90.5	- 0.36
Japan	4,606	53.3	-0.06
Germany	3,692	28	-0.53

Source: Deloitte Analysis

Developed economies such as the US, Japan and Germany demonstrate a negative correlation between steel consumption and GDP, reflecting their position in the decline phase of the inverted U-curve as they transition to service-oriented economies. In contrast, China is gradually approaching the maturity phase, as indicated by a lower correlation of 0.84. India, however, stands out with the highest correlation of 0.97 among major economies, underscoring the significant influence of the steel sector on the country's economic growth. With a GDP per capita of US\$2,880⁴¹ in 2025, India's steel consumption is projected to peak at a GDP per capita of US\$28,000.⁴² This highlights the substantial growth potential for steel demand in the coming years, driven by rapid industrialisation, urbanisation and infrastructure development.

2.2 Current steel demand and historical growth

India's steel consumption has experienced significant growth over the past four years, increasing from 100.17 MT in FY21 to 152 MT in FY25, exhibiting a CAGR of 8.4 percent.⁴³ This surge has been primarily driven by strong demand from the infrastructure and automotive sectors, coupled with substantial government investments in developmental projects. The steady momentum in large-scale infrastructure and industrial expansion projects has contributed significantly to a rise in steel demand during this period, signalling sustained growth in the sector.

Figure 1: Historical steel consumption FY14–FY25

Source: Deloitte Analysis⁴⁴

⁴⁰ https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?most_recent_value_desc=true

⁴¹ IMF - <https://www.imf.org/external/datamapper/NGDPDPC@WEO/IND/BGD>

⁴² Trends and Developments in the Intensity of Steel Use: An Econometric Analysis

⁴³ JPC

⁴⁴ Steel consumption figures are derived from JPC despatches data and should be interpreted as indicative estimates

2.3 Key drivers for growth

India's steel sector is experiencing sustained growth, driven by rising infrastructure investments, urban expansion, increasing incomes and the push for green energy. As demand continues to grow across industries, government initiatives and policy support are further strengthening the sector, reinforcing its vital role in India's development. Key growth drivers include:

Government investment in the infrastructure and construction sector: Massive government investments in infrastructure have driven steel demand, with an annual commitment of INR22 lakh crore under the National Infrastructure Pipeline 2020.⁴⁵ The number of airports has doubled from ~74 in FY15 to over 159 in FY24, highlighting sustained growth. These initiatives reinforce the government's focus on infrastructure expansion.⁴⁶

Urbanisation and housing: Urbanisation in India has risen from 32.38 percent in 2014 to 37 percent in 2024, driving the need for transit-oriented development.⁴⁷ To support this growth in urban infrastructure, MoHUA has been allocated INR96,777 crore in the Union Budget 2025–26, an 18 percent increase from last year's INR82,576 crore.⁴⁸ Urbanisation initiatives, supported by the Pradhan Mantri Awas Yojana (PMAY) and the Smart Cities Mission, have contributed to a significant demand for steel in this sector.

Rise in total disposable income: Rising disposable income has increased growth across sectors. The automobile industry saw robust expansion, with 26 million vehicles in domestic sales in FY24, driven by rural sales growth in the two-wheeler and passenger vehicles segments.⁴⁹ This surge in automobile demand has significantly boosted the need for flat steel products, reinforcing the sector's growth.

Thrust towards green energy: Steel demand in the automobile sector has grown from 7.4 MT in FY14 to 16 MT in FY24 (CAGR 8 percent),⁵⁰ driven by the expanding EV industry and renewable energy projects. Government initiatives such as FAME-2 and the electric mobility scheme 2024 further support this growth.⁵¹

2.4 Role of stainless steel in India's growth story

Stainless steel is becoming a key driver in India's pursuit of modernisation, industrial growth and sustainable development. While it was primarily known for kitchenware and household use in the 1980s and 1990s, the past two decades have seen it evolve into a strategic material essential to the country's expanding infrastructure, manufacturing base and environmental goals.

As the world's second-largest consumer of stainless steel, India has witnessed a significant rise in per capita consumption, from **2.25 kg** in **FY19** to **3.1 kg** in **FY24**,⁵² according to the Indian Stainless Steel Development Association (ISSDA). Although this remains below the global average of **5.5–6.0 kg**, it indicates a substantial growth trajectory backed by the government's push for infrastructure, clean energy and green mobility.

India's stainless steel demand is set to rise from **4.46 MT** in **FY24** to **13 MT** by **FY40** and **21 MT** by **FY47**,⁵³ driven by its strength, corrosion resistance and recyclability. These properties support its growing use in EVs, fuel cells and emission systems, as well as in energy-efficient railway and metro infrastructure. In construction, stainless steel offers durability, aesthetics and sustainability. Its long lifecycle and hygiene benefits enhance urban infrastructure, while its antimicrobial properties serve healthcare needs. The defence, aerospace and green energy sectors also depend on its resilience and role in clean energy systems such as hydrogen storage and electrolyzers.

Stainless steel is a circular material, **100 percent recyclable** without degradation of quality, making it a key enabler in India's pursuit of a green economy and net-zero goals. Its use reduces material waste, enhances energy efficiency and contributes to the broader decarbonisation agenda.

As India aspires to become a **US\$5 trillion economy by 2027**⁵⁴ and a global manufacturing hub under initiatives such as Make in India and Atmanirbhar Bharat, **stainless steel is not just a material, but a multiplier**. Its expanding role across diverse and emerging sectors will drive domestic industrial growth and strengthen India's position as a global leader in sustainable, high-performance materials.

⁴⁵ <https://www.investindia.gov.in/blogs/indias-push-infrastructure-development#:~:text=India%20launched%20the%20National%20Infrastructure,almost%20INR%2022%20Lakh%20Cr.>

⁴⁶ <https://www.pib.gov.in/PressNoteDetails.aspx?ModuleId=3&NoteId=154323>

⁴⁷ <https://tradingeconomics.com/india/urban-population-percent-of-total-wb-data>

⁴⁸ <https://economictimes.indiatimes.com/news/economy/infrastructure/boost-in-urban-infrastructure-hua-ministry-allocated-rs-96777-cr-in-budget-2025-26/articleshow/117836914.cms>

⁴⁹ <https://www.acma.in/uploads/docmanager/SalesReportFY24.pdf>

⁵⁰ ISA Infrabuild Summit 2024

⁵¹ Indian Steel Association Infra Build Summit, July 2024

⁵² ISSDA

⁵³ Stakeholder Discussion

⁵⁴ <https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=155121&ModuleId=3>

2.5 Sector-wise steel consumption and future outlook

With its exceptional strength, ductility and durability, steel finds broad applications in construction, automotive, manufacturing and other essential industries. This section outlines the growth in steel consumption within these sectors, the policies that have driven this expansion and the outlook for steel demand:

Building, construction and infrastructure: Steel consumption in the construction sector has surged from 25.9 MT in FY14 to 49 MT in FY24,⁵⁵ reflecting a CAGR of 6.58 percent. Infrastructure-related steel demand has grown at an even faster rate, at a CAGR of 8.44 percent,⁵⁶ driven by large-scale investments and policy support. Government initiatives such as the National Infrastructure Pipeline (NIP), Smart Cities Mission, PM Gati Shakti, and Bharatmala and Sagarmala projects have significantly contributed to this expansion. The INR11.11 lakh crore capital outlay for FY25 further underscores the government's commitment to infrastructure development.⁵⁷ Consequently, construction and infrastructure accounted for 64 percent of total steel consumption in FY24,⁵⁸ a share projected to rise to 71 percent by FY31. Looking ahead, steel demand in these sectors is expected to grow from 94 MT in FY24 to 156 MT by FY31, highlighting the sustained momentum in urbanisation and infrastructure development.⁵⁹

Automobiles: The Indian automobile industry has long been a key indicator of the economy, contributing to macroeconomic growth and driving technological progress. From FY14 to FY24, steel consumption grew from 7.4 MT to 16 MT,⁶⁰ driven by increased automobile production and rising demand in domestic and international markets. This

growth has been supported by key policy initiatives such as FAME and 100 percent FDI in the sector.⁶¹ Steel demand in the automobile sector is projected to rise to 26 MT by FY31, with India becoming the key EV market by 2030. The PLI scheme, with an outlay US\$3.5 billion, will further boost domestic manufacturing of advanced automotive technologies.⁶²

Engineering and packaging: Steel demand in the engineering and packaging sector increased from 20.7 MT in FY14 to 26 MT in FY24, reflecting a CAGR of 2.3 percent.⁶³ This growth has been driven by key government initiatives such as the National Capital Goods Policy (2016) and the Scheme for Enhancement of Competitiveness in the Capital Goods Sector (2022), which have strengthened domestic manufacturing capabilities.⁶⁴ Looking ahead, demand is expected to rise from 26 MT in FY24 to 39.1 MT by FY31.⁶⁵ By FY31, the sector is projected to account for a significant portion of India's total finished steel consumption, highlighting its growing importance in the country's industrial ecosystem.

2.6 State-wise consumption trends and future outlook

India's steel consumption patterns vary across states. **While direct steel consumption data is not readily available, state-wise despatch figures published by JPC have been used in this report as a close proxy for steel consumption.** Maharashtra emerged as the largest steel-consuming state in FY24 (18.42 MT).⁶⁶ Steel demand is expected to follow a strong growth trajectory, primarily driven by sustained infrastructure development and industrial expansion. With a sustained momentum of investment across different sectors, overall steel demand is projected to post a **CAGR of 5–7.3 percent** over the next decade, leading to a steel demand of **202–237 MT** by FY31.⁶⁷

⁵⁵ Steel consumption figures are derived from JPC despatches data and should be interpreted as indicative estimates

⁵⁶ ISA Infrabuild Summit 2024

⁵⁷ <https://www.reuters.com/world/india/india-budget-india-keeps-infrastructure-spend-target-unchanged-record-1111-trln-2024-07-23>

⁵⁸ Indian Steel Association

⁵⁹ Deloitte Analysis

⁶⁰ Indian Steel Association Infra Build Summit, July 2024

⁶¹ <https://www.investindia.gov.in/sector/automobile>

⁶² <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2107825#:~:text=With%20an%20outlay%20of%20US,investments%2C%20far%20exceeding%20the%20target.>

⁶³ Indian Steel Association Infra Build Summit, July 2024

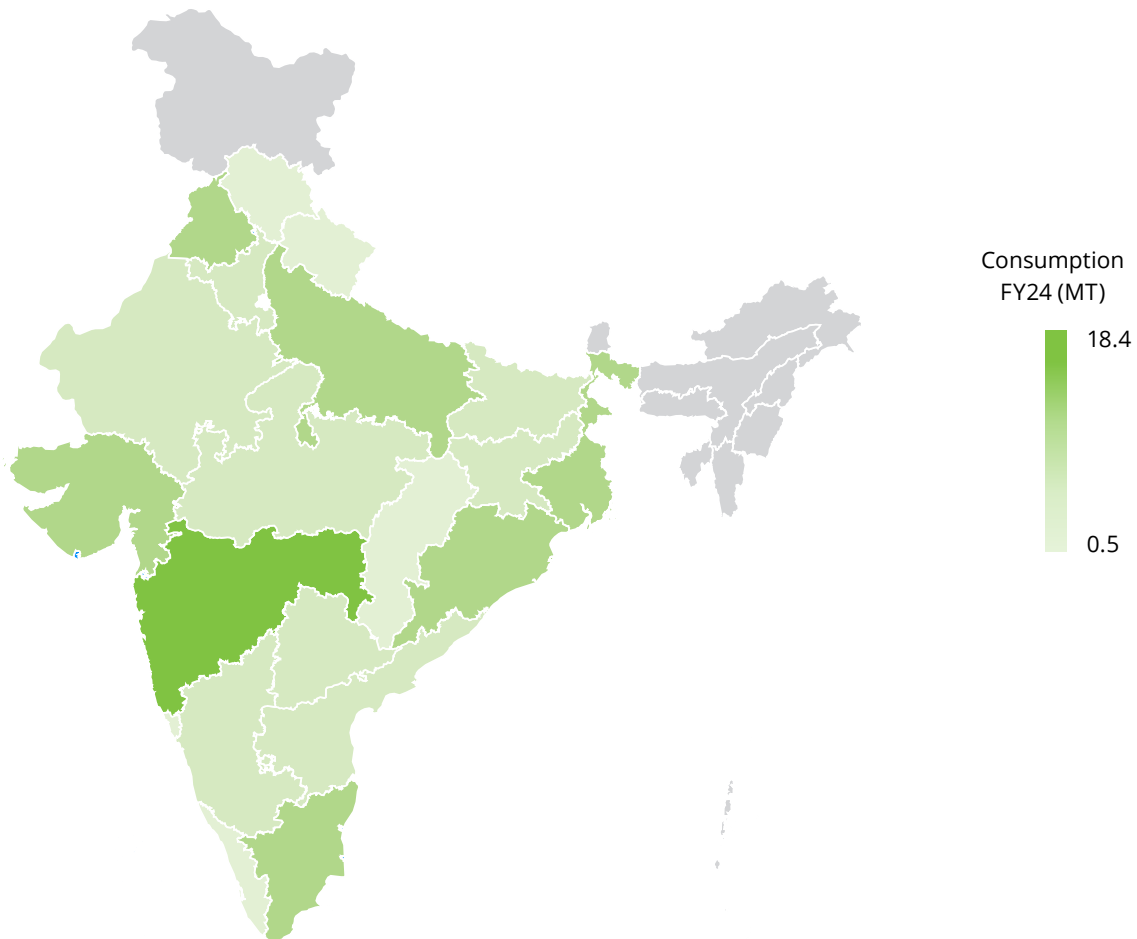
⁶⁴ <https://www.investindia.gov.in/team-india-blogs/indian-packaging-sector-outlook-industry>

⁶⁵ Indian Steel Association Infra Build Summit, July 2024

⁶⁶ JPC

⁶⁷ Deloitte Analysis

Figure 2: State-wise finished steel consumption in FY24



Source: JPC⁶⁸



⁶⁸ Steel consumption figures are derived from JPC despatches data and should be interpreted as indicative estimates

Below are the highlights for some of the high steel-consuming states and their future outlook.

- **Maharashtra**, India's largest steel-consuming state, recorded a demand of 18.42 MT in FY24, posting a CAGR of 7.8 percent from 9.32 MT in FY15. The demand is projected to reach 26 MT by FY31, driven by industrial growth and infrastructure projects such as the Mumbai Trans Harbor Link and metro expansions. The state's cluster development programme, which offers financial support of up to 90 percent for approved projects, has seen strong progress, with 78 projects approved and 41 operational. These initiatives will maintain Maharashtra's leadership in steel demand.^{69,70,71}
- **Gujarat's** steel consumption reached 10.02 MT in FY24, registering at a CAGR of 14 percent from 3.1 MT in FY15 and is projected to rise to 21.4 MT by FY31. This growth is driven by strong industrial sectors, particularly petrochemicals and pharmaceuticals, along with significant infrastructure projects. The state contributes 9 percent of India's transport equipment manufacturing and has established auto clusters across several regions. Gujarat's industrial growth is supported by government initiatives, with the SME sector playing a key role in its manufacturing expansion.^{72,73,74}
- **Odisha's** steel consumption witnessed a CAGR of 14 percent, from 2.5 MT in FY15 to 8.04 MT in FY24. It is projected to reach 17.3 MT by FY31 at a CAGR of 11.5 percent. This growth is fuelled by the state's abundant mineral resources, industrial expansion and key investments in hubs such as Kalinganagar and Angul. Odisha's focus on infrastructure improvements, including new ports and transportation networks, strengthens its position in India's steel sector. Strategic projects such as industrial estates and MSME parks are expected to boost Odisha to the fourth-highest steel-consuming state by FY31.^{75,76,77}
- **Tamil Nadu's** steel consumption grew from 6.31 MT in FY17 to 9.99 MT in FY24, with a CAGR of 6.8 percent, and is expected to reach 12.5 MT by FY31. The state's growth is driven by its automotive and electronics sectors, along with infrastructure developments that continue to drive steel demand. Tamil Nadu is uniquely positioned with all districts involved in key industrial corridor projects, such as the Tamil Nadu Defence Industrial Corridor and Chennai-Bengaluru Industrial Corridor. The state also has the highest concentration of SEZs in India and hosts the first PM-MITRA park, with an investment of INR1,683 crore.^{78,79,80}
- **Uttar Pradesh's** steel consumption grew from 5.85 MT in FY17 to 11.5 MT in FY24 at a CAGR of 10.1 percent and is projected to reach 17.7 MT by FY31. This growth is driven by rapid urbanisation, industrial expansion and significant infrastructure projects such as the Delhi-Mumbai Industrial Corridor. The state's strategic industrial and investment regions provide easy access to markets, reliable utilities and efficient waste management, making it attractive for investors. Three Integrated Manufacturing Clusters (IMC) along the Eastern Dedicated Freight Corridor will further boost manufacturing in the state.^{81,82,83,84}

Odisha's growth in steel demand is expected to outpace that of other states by 2030, making it a **central player** in India's economic development and the steel sector's expansion.

Table 2: Ranking of states based on steel consumption

States	FY 24 Rank	FY 31 Rank
Maharashtra	1	1
Odisha	7	4 
Uttar Pradesh	2	3 
Tamil Nadu	4	5 
Gujarat	3	2 

⁶⁹ JPC Annual Reports

⁷⁰ ISA Steel infra build report 2024

⁷¹ <https://maitri2.mahaonline.gov.in/cluster-development-program/>

⁷² JPC Annual Reports

⁷³ Deloitte Analysis

⁷⁴ <https://gujaratindia.gov.in/business/indus-parks.htm>

⁷⁵ JPC Annual Reports

⁷⁶ Deloitte Analysis

⁷⁷ [https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/about-IDCO#:~:text=IDCO%20has%20taken%20up%20establishment,Basantpur%20in%20Sambalpur%20district%20\(Ac.](https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/about-IDCO#:~:text=IDCO%20has%20taken%20up%20establishment,Basantpur%20in%20Sambalpur%20district%20(Ac.)

⁷⁸ Optimistic Value

⁷⁹ Deloitte Analysis

⁸⁰ https://investingintamilnadu.com/DIGIGOV/TN-pages/individual-sector.jsp?pagedisp=static§or=focus_industrial_parks

⁸¹ JPC Annual Reports

⁸² Optimistic Value

⁸³ Indian Steel Association Infra Build Summit, July 2024

⁸⁴ <https://niveshmitra.up.nic.in/InvAssis.aspx?ID=imcs>

3. Growth story of Odisha's steel sector until now

Odisha has emerged as a vital contributor to India's economic growth, accounting for 3 percent of the country's GDP.⁸⁵ The state's rich mineral reserves have played a pivotal role in this growth, with Odisha's share in the total value of mineral production in India rising significantly from 32.8 percent in 2017–18 to an impressive 45 percent in 2023–24.⁸⁶ Using this resource advantage, Odisha has established itself as a central manufacturing hub, with the manufacturing sector contributing 52.6 percent to the state's Gross State Value Added (GSVA).⁸⁷ The industrial GSVA witnessed a robust 8.3 percent growth between 2017–18 and 2023–24, reflecting the state's dynamic industrial progress across various sectors.⁸⁸

Odisha is the largest steel-producing state in India, accounting for ~18 percent⁸⁹ of the country's total steel production in 2024.⁹⁰ It is home to some of the largest steel producers, including Tata Steel, JSPL, JSW and SAIL, which have established significant operations in the state. Major ports such as Dhamra and Paradip provide a strategic advantage, facilitating the seamless movement of raw materials and finished steel products to domestic and international markets. As global demand for steel rises, Odisha's strategic focus on technological advancement, sustainable practices and capacity expansion ensures its pivotal role in shaping the future of steel production. The state's steel industry enhances its economic prospects and significantly influences India's broader industrial landscape, reinforcing its position as a cornerstone of national industrial development.

3.1 Historical demand and production

With significant government spending on infrastructure, steel demand in Odisha has grown steadily from 5.47 MT⁹¹ in FY18 to 8.04 MT⁹² in FY24, at a CAGR of 6.6 percent. The share of long products in consumption has grown from ~44 percent in FY18 to ~73 percent in FY24,⁹³ driven by high infrastructure developments. Odisha has emerged as a growing hub for various industries, with large-scale infrastructure initiatives and IT SEZs under development. Large-scale projects such as Infocity IT SEZ Bhubaneswar, Infosys SEZ and ITES/BPO in Mancheswar Industrial Estate have been major contributors to growth in steel consumption. Additionally, industrial estates for ancillary and downstream industries are driving further demand. The state's focus on strengthening logistics infrastructure through extensive road and railway development has further boosted steel consumption.

Future projects such as the Petrochemical and Chemical Investment Region (PCPIR) at Paradip, the International Convention Centre in Bhubaneswar and the Industrial Estate for Auto Components at Cuttack are expected to significantly increase steel demand.

⁸⁵ <https://iced.niti.gov.in/economy-and-demography/key-economic-indicators/gdp>

⁸⁶ https://pc.odisha.gov.in/sites/default/files/2025-02/Economic%20Survey%202024-25%20-Full%20Document_0.pdf

⁸⁷ https://pc.odisha.gov.in/sites/default/files/2025-02/Economic%20Survey%202024-25%20-Full%20Document_0.pdf

⁸⁸ Odisha Economic Survey 24-25

⁸⁹ JPC

⁹⁰ JPC

⁹¹ JPC

⁹² JPC

⁹³ ISA Infrabuild Summit 2024

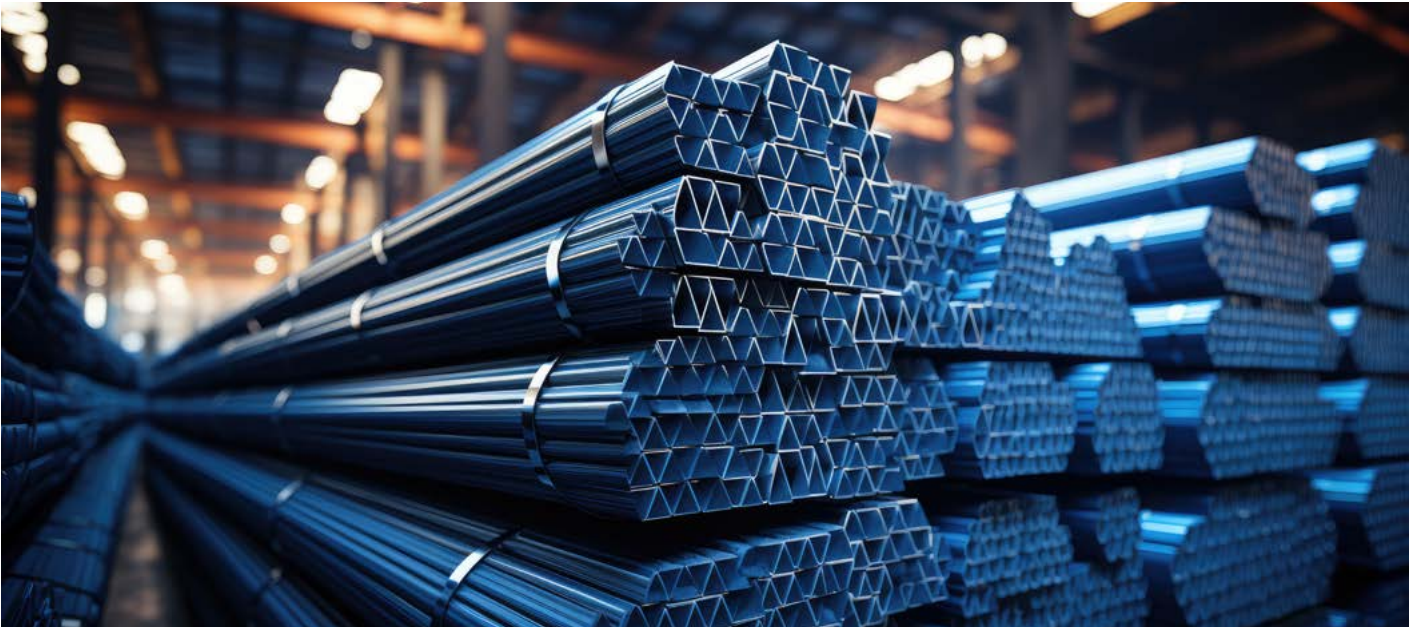
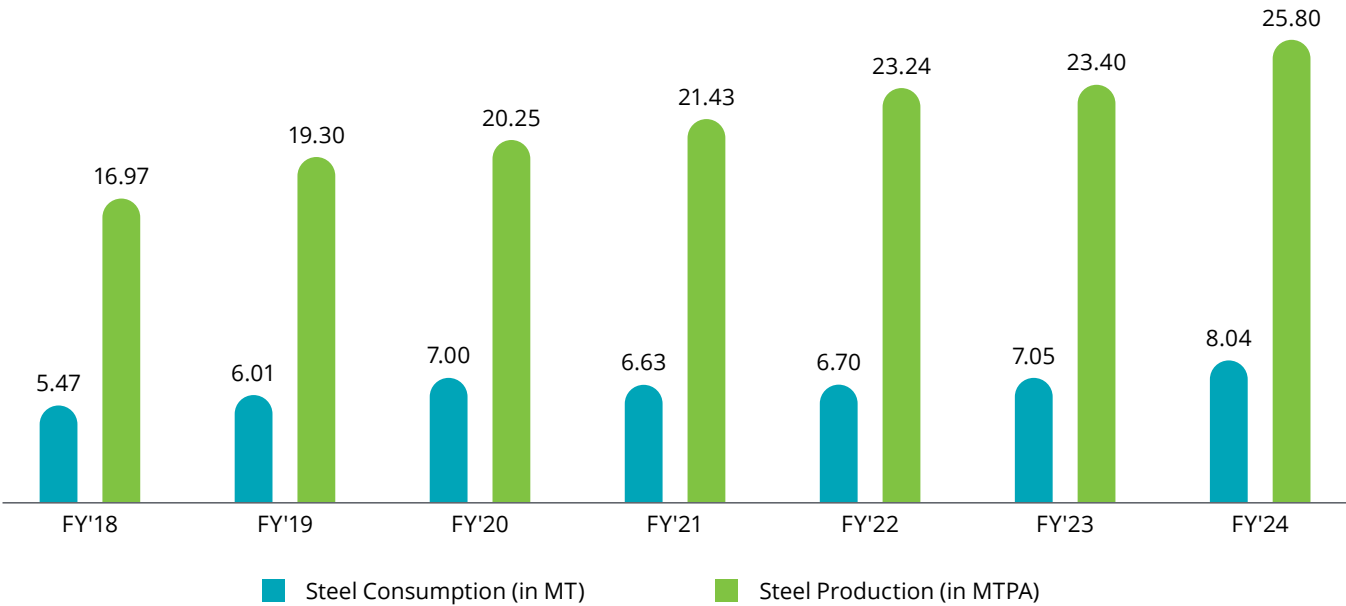


Figure 3: Historical steel consumption and steel production for Odisha



Source: Deloitte Analysis⁹⁴

Steel production in Odisha has posted a CAGR of 7.2 percent over the past six years, increasing from 16.97 MT in FY18 to 25.80 MT⁹⁵ in FY24. The state has become a significant contributor to India’s steel industry, driven by its robust infrastructure and industrial base.

The production processes in Odisha are dominated by the Basic Oxygen Furnace (BOF) route, which accounts for 49.1

percent⁹⁶ of the total steelmaking capacity. The Electric Arc Furnace (EAF) and Induction Furnace (IF) routes contribute 33.3 percent⁹⁷ and 17.6 percent,⁹⁸ respectively. Odisha hosts 5⁹⁹ BOF units, 6 EAF units and 59 IF units reflect the state’s diverse production capabilities. Major Integrated Steel Producers (ISPs), including JSW, Tata Steel, JSPL, JSL and SAIL, account for ~88 percent¹⁰⁰ of the state’s total steelmaking capacity.

⁹⁴ Steel consumption figures are derived from JPC despatches data and should be interpreted as indicative estimates

⁹⁵ JPC

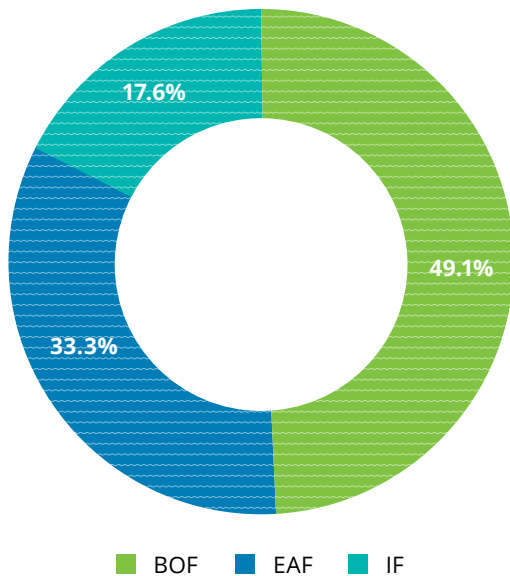
⁹⁶ JPC

⁹⁷ JPC

⁹⁸ JPC

⁹⁹ JPC

¹⁰⁰ Deloitte Analysis

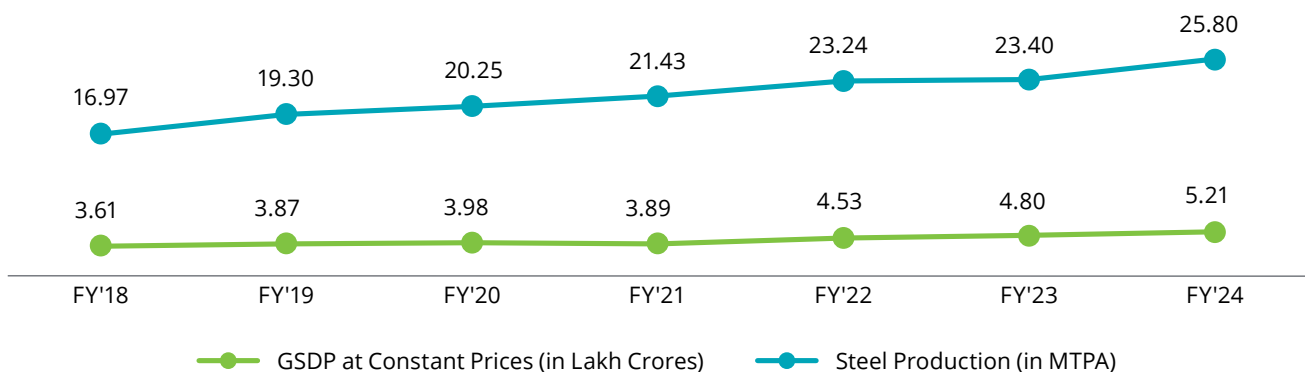
Figure 4: Steel-making capacity by production route

Source: JPC 2024

Odisha accounts for up to 38.6 percent¹⁰¹ of India's pellet production capacity and 25.3 percent¹⁰² of the country's DRI capacity, underscoring its critical role in upstream steel production.

3.2 GSDP and production growth correlation in Odisha

The steel sector has been a key driver of Odisha's economic growth, with a strong correlation of 0.95¹⁰³ between the state's GSDP and steel production, underscoring its profound economic influence. As of FY23, the sector has created significant employment opportunities, with 164,723¹⁰⁴ people engaged in iron ore-based industries—152,766 in steel, 7,313 in sponge iron and 4,644 in pellet plants—highlighting the sector's role in job creation. In FY24, the iron and steel sector alone contributed approximately 8 percent to Odisha's GSDP, which stood at INR8.62 lakh crore at current prices, amounting to an estimated INR65,000–70,000 crore in direct revenue contribution from the sector.¹⁰⁵ This robust fiscal contribution reinforces the strategic importance of the steel industry in the state's economic framework. Furthermore, the sector's expansion has significantly shaped Odisha's investment landscape, with the industrial sector recording an impressive 24 percent CAGR in Gross Fixed Capital Formation (GFCF) between 2011–12 and 2019–20,¹⁰⁶ signalling sustained investor confidence and a strong capital investment momentum, with the steel sector serving as a central catalyst. As Odisha continues to cement its position as a leading steel hub, the sector remains instrumental in driving long-term economic and industrial progress.

Figure 5: GSDP and steel production for Odisha

Source: Deloitte Analysis

¹⁰¹ JPC¹⁰² JPC¹⁰³ Deloitte Analysis¹⁰⁴ Department of Steel & Mines, Odisha¹⁰⁵ Deloitte Analysis¹⁰⁶ Odisha Economic Survey 2023-24

3.3 Strategic strongholds: Key industrial clusters and consumption hubs

Odisha has emerged as a key industrial hub in India, driven by its rich mineral resources, strategic location and robust infrastructure development. The state hosts multiple industrial clusters that cater to various sectors, including steel, aluminium, mining, engineering and port-based industries.

These clusters contribute to the state's economic growth and serve as major consumption centres for steel, driven by large-scale industrial operations, infrastructure projects and urban development. The following table provides an overview of the key industrial clusters in Odisha and their estimated steel consumption.

Table 3: Industry clusters and demand centres in Odisha

Industry cluster	Description	Estimated steel consumption (MTPA) ¹⁰⁷
Bhubaneswar–Cuttack	A major hub for urban and commercial real estate, bridge development and railway projects. Numerous dealerships and component manufacturers	~0.75–0.80
Angul–Talcher	High steel consumption due to the presence of multiple large and mega industrial units	~1.00–1.2
Jharsuguda–Sambalpur	Capacity expansion by the aluminium, steel and mining industries and railway development projects creates high demand for steel in this cluster	~0.9–1.05
Rourkela Engineering Cluster	Multiple machining units producing various engineering products; significant demand for steel in manufacturing. Focus on machinery and tools; supports local engineering applications	~1.2
Kalinganagar	Largest industrial cluster for upstream and downstream metal industries and heavy engineering goods	~1.4
Paradeep	Significant steel consumption due to the presence of shipbuilding and other port-based industries	~0.6
Southern Odisha	Steel demand from construction, railway projects and small-scale industries	~0.4
Others	Steel demand from roads, infrastructure, construction and railway projects	~1.35–1.75

Source: Deloitte Analysis



¹⁰⁷ Deloitte Analysis

3.4 Players, capacities and production

Odisha is a key player in India's steel industry and attracts significant investments from leading steel manufacturers. The state's rich mineral resources, coupled with a strategic focus on industrial development, have facilitated the growth of several major steel producers. Among the steel players, Tata Steel Dhenkanal Plant produced the highest quantity of crude steel at 5.16 MT as of FY24.¹⁰⁸ The central belt of Odisha accounts for the most significant part of the state's steel production due to its excellent logistics support and mineral-rich resources. The major players in Odisha's steel industry are mentioned below.

Figure 6: Steel industry landscape in Odisha

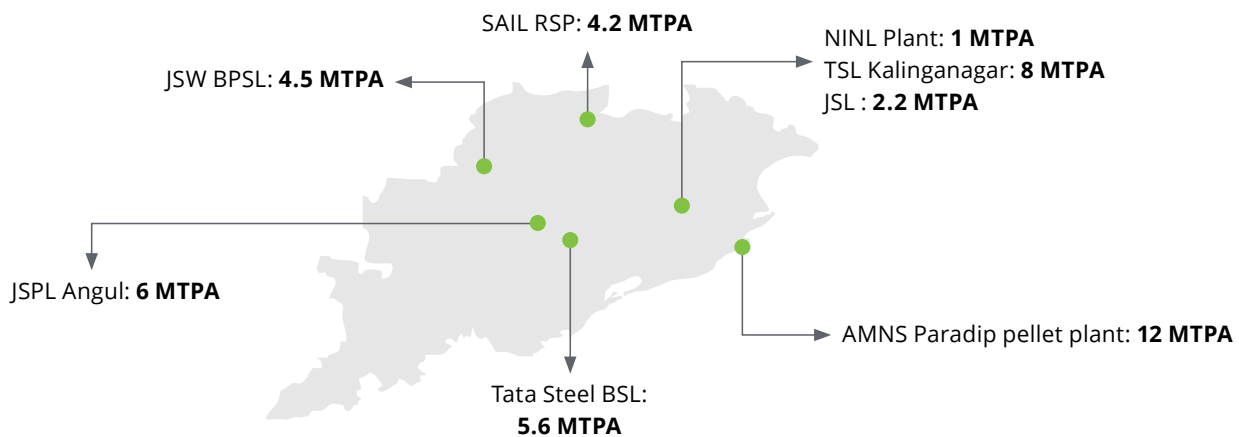


Table 4: Major players with existing capacity and production

Company	Location	Production route	Capacity FY24 (MT)	Production FY24 (MT)
Jindal Steel & Power Ltd.	Angul	BF, BOF, DRI, EAF	6.00 ¹⁰⁹	4.50 ¹¹⁰
Tata Steel	Dhenkanal	BF, BOF, DRI, EAF	5.60 ¹¹¹	5.16 ¹¹²
Rourkela Steel Plant	Sundargarh	BF, BOF	4.20 ¹¹³	4.16 ¹¹⁴
JSW- Bhushan Steel Ltd.	Sambalpur	BF, BOF, DRI, EAF	3.50 ^{115,116}	3.18 ¹¹⁷
Tata Steel	Kalinganagar	BF, BOF	3.00 ¹¹⁸	3.00 ¹¹⁹
Jindal Stainless Limited	Jajpur	EAF	2.20 ¹²⁰	1.50 ¹²¹
Neelachal Ispat Nigam Ltd (NINL)	Jajpur	BF, BOF	1.00 ¹²²	0.66 ¹²³
Others	-	-	3.6	3.6
Total			29.1¹²⁴	25.82

Source: Deloitte Analysis

¹⁰⁸ Tata Steel Annual Report 2023-24

¹⁰⁹ JSPL Annual Report 2023-24

¹¹⁰ JSPL Annual Report 2023-24

¹¹¹ TATA Steel Annual Reports 2023-24

¹¹² TATA Steel Annual Reports 2023-24

¹¹³ <https://www.sail.co.in/en/plants/about-rourkela-steel-plant#:~:text=After%20implementing%20a%20massive%20modernisation,Million%20Tonnes%20of%20Crude%20Steel.>

¹¹⁴ https://www.sail.co.in/sites/default/files/upload/2023-11/1_RSP-2019-Caster-4-EC-Implementation-report-October-March-2024.pdf

¹¹⁵ JSW Annual Report 2023-24

¹¹⁶ Expansion to 4.5 MTPA is complete as per Annual report FY25

¹¹⁷ JSW Annual Report 2023-24

¹¹⁸ Current Capacity expanded to 8 MTPA as per Annual Report FY25

¹¹⁹ TATA Steel Annual Reports 2023-24

¹²⁰ JSL Annual Report 2023-24

¹²¹ JSL Annual Report 2023-24

¹²² TATA Steel Annual Reports 2023-24

¹²³ TATA Steel Annual Reports 2023-24

¹²⁴ JPC

3.5 Key enablers for growth

Resource abundance

Odisha is endowed with abundant essential resources supporting its thriving iron and steel industry. Odisha has ample iron ore (32.9 percent of the country's reserves), bauxite (59.95 percent), chromite (98.4 percent), coal (24.8 percent) and manganese (67.6 percent).¹²⁵ The state accounts for over 57 percent of India's total iron ore production, making it the largest producer in the country.¹²⁶ In FY23–24, Odisha produced approximately **169.03**¹²⁷ MT of iron ore, significantly contributing to domestic supply and exports. There are 16 auctioned iron ore mines operational in the state – 8 captive and 8 merchant – with a combined MDPA of 50.65 MTPA. In FY24, these mines produced 45.01 MT of iron ore, of which ~46 percent came from captive mines.¹²⁸

Table 5: List of iron ore mines in Odisha

Mine	Company	MDPA (MTPA)	Production (MT) FY24	Mine category
Kasia	JSPL	3.84	4.70	Merchant
Nuagaon	JSW Steel	4.49	4.50	Merchant
Narayanposhi, Koira	JSW Steel	3.23	5.70	Captive
Jajang	JSW Steel	9.24	6.30	Captive
Gonua	JSW Steel	0.50	0.50	Captive
Ghoraburhani Sagasahi	AMNS	5.76	6.50	Captive
Thakurani	AMNS	4.40	4.60	Captive
Nadidihi	ESL (Vedanta)	2.78	2.50	Merchant
Rengalibeda, Nadikasira	ESL (Vedanta)	2.68	2.30	Merchant
Gorumahisani	G M & Sons	0.58	0.50	Merchant
Badampahar	G M Iron & Steel	0.91	1.0	Merchant
Jururi	Jagat Janani	0.65	0.20	Merchant
Jaribahal	Kashvi International	0.79	1.0	Captive
Roida II	Narbhareem	2.28	2.30	Captive
Balda Block	Seerajudin	8.51	2.40	Merchant
Kolmong	YSPL	0.01	0.02	Captive
Total		50.65	45.02	

In addition to iron ore, Odisha has substantial coal reserves. In FY24, it was India's third-largest coal producer with a 24 percent share in the total national coal production.¹²⁹ The state's coal resources are estimated at around **94.5 billion tonnes**,¹³⁰ with significant deposits concentrated in the Talcher and Ib Valley coalfields. Furthermore, Odisha is rich in manganese and chromite, which are critical for ferroalloy production. It tops with 34 percent of India's manganese ore reserves, with Keonjhar serving as a key production hub. The state also holds over 96 percent of India's chromite reserves, concentrated in regions such as Jajpur, Kendujhar and Dhenkanal. These reserves significantly contribute to ferroalloy production, an essential input for the steel industry.

¹²⁵ [https://www.odishaminerals.gov.in/#:-:text=Besides%20iron%20ore%20\(32.9%20per,manganese%20\(67.6%20per%20cent\).](https://www.odishaminerals.gov.in/#:-:text=Besides%20iron%20ore%20(32.9%20per,manganese%20(67.6%20per%20cent).)

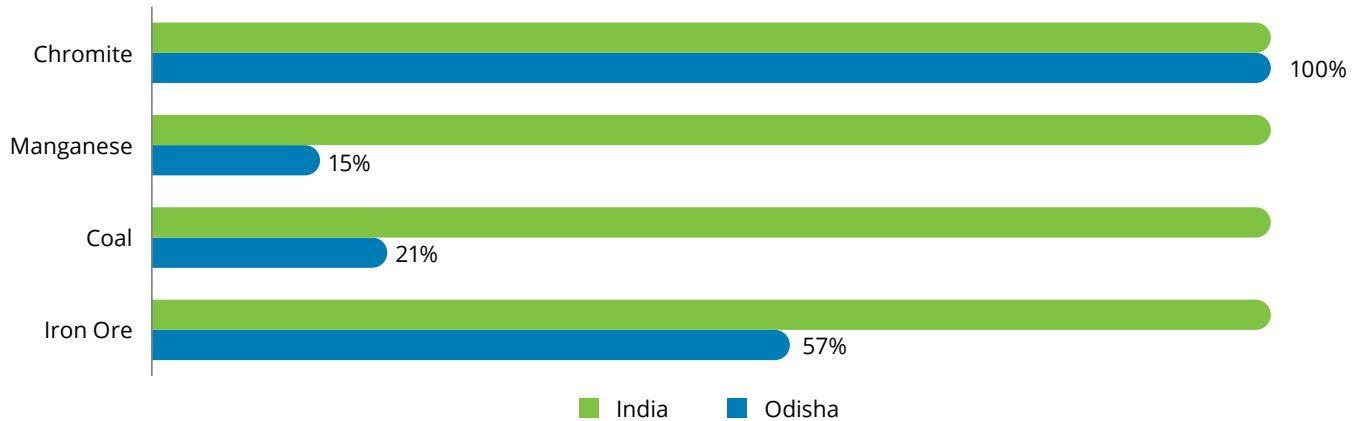
¹²⁶ https://pc.odisha.gov.in/sites/default/files/2025-02/Economic%20Survey%202024-25%20-Full%20Document_0.pdf

¹²⁷ <https://www.odishaminerals.gov.in/ResourceStatistics/MineralProduction>

¹²⁸ Indian Steel Association, Deloitte Analysis

¹²⁹ https://sansad.in/getFile/annex/267/AU36_Z44lqh.pdf?source=pqars

¹³⁰ <https://coal.gov.in/en/major-statistics/coal-reserves>

Figure 7: Contribution of Odisha to India's mineral production

Source: Odisha Economic Survey 2023–24

Supporting the industrial ecosystem in Odisha

Odisha's SEZ ecosystem is a critical enabler for the steel sector, providing an integrated industrial environment with robust infrastructure, policy support and cost-effective operations. The state hosts five major SEZs,¹³¹ each is designed to facilitate sector-specific growth. The **Tata Steel Special Economic Zone Limited in Kalinganagar** is a major hub for steel and allied downstream industries, engineering products, chemicals and aerial target products for defence.

Odisha offers an array of fiscal incentives to enhance the competitiveness of industries operating within these SEZs. Units benefit from **100 percent¹³² exemption on stamp duty and registration fees for land transfer**, alongside waivers on **VAT, entry tax, electricity duty and other transaction-based cess**. The SEZ framework also ensures **zero input cost** through the GST exemption on SEZ supplies under the **IGST Act, 2017**, extending similar benefits to contractors and subcontractors engaged with SEZ entities. **The Special Economic Zones Act, 2005**, also provides **customs duty exemptions** for imports and exports, allowing duty-free procurement of raw materials, whether imported or sourced domestically.

Beyond the existing SEZs, Odisha is actively expanding its industrial landscape to attract mineral-based industries, including steel downstream players. The upcoming **Special Investment Region (SIR) at Dhamra**, spanning 10,000

acres, is being developed as a multi-sector industrial hub with designated industrial, social, logistics and residential infrastructure zones. Envisioned as a hub for the aluminium and steel downstream industries, fertilisers, gas-based industries and wood processing, this region is expected to play a strategic role in Odisha's industrial expansion.

Similarly, **Kalinganagar has been approved as a National Investment and Manufacturing Zone (NIMZ)¹³³** under the National Manufacturing Policy. The region currently is a major steel production hub with **nine major steel players contributing 3.5 MT¹³⁴ of steel production annually**. IDCO is leading the development of this region, which will further strengthen Odisha's position as a manufacturing hub. The overall SEZ and investment region ecosystem, including integrated parks for aluminium and steel downstream industries, offers world-class infrastructure, connectivity and policy-driven advantages, making Odisha an attractive destination for steel players to establish and scale operations in a globally competitive environment.

The Odisha government is actively strengthening the steel industry's ecosystem by facilitating the establishment of refractory units and promoting OEM facilities. A reputed German OEM, has set up a major manufacturing and service workshop in Khurda, which includes mould repair shops, a cast house and steel manufacturing equipment. A renowned Italian OEM, also has a presence in the state. To meet the growing demand of the steel sector, a refractory producer is setting up a new refractory unit to produce acidic and basic

¹³¹ <https://www.commerce.gov.in/wp-content/uploads/2024/12/LS-SQ-No.-305-dt-17.12.2024.pdf>

¹³² Policy for SEZs, 2015 Odisha

¹³³ <https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/infrastructure-projects-under-implementation>

¹³⁴ <https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/infrastructure-projects-under-implementation>

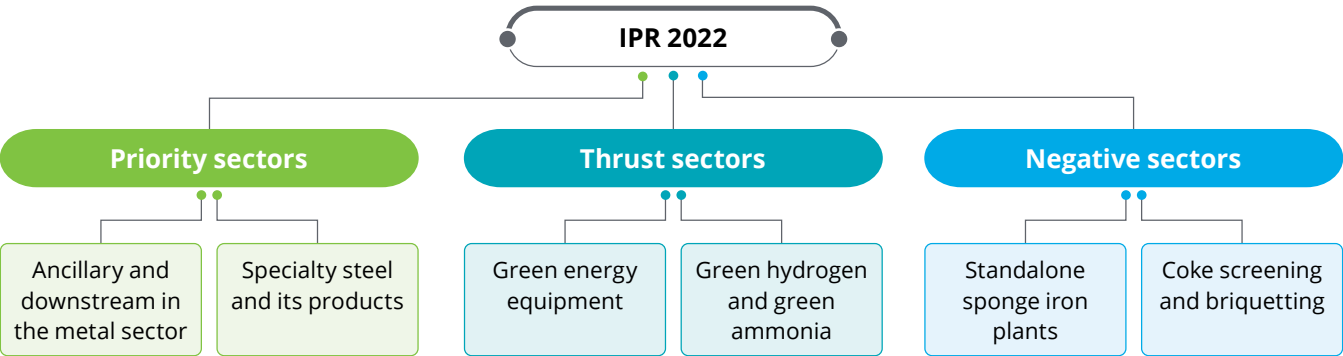
bricks, monolithics and steel casting fluxes, while another company, which already operates in Odisha, is adding a second facility with an annual capacity of 240,000 continuous casting refractories.¹³⁵

The Odisha government has taken proactive steps to support the growing industrial workforce. INR100 crore has been allocated under the SIDBI Cluster Development Fund, and INR20 crore for the Din Dayal Karmachari Niwas to develop worker hostels in key industrial areas. Additionally, five MSME workers' hostels are planned over the next four years to accommodate 15,000–20,000 workers.¹³⁶ These initiatives reinforce Odisha's commitment to becoming a key enabler of the steel manufacturing ecosystem.

Policy incentives and exemptions available

The Odisha government is promoting investments for value-added steel production within the state through policy incentives under the Industrial Policy Resolution 2022. The policy aims to create a business-friendly environment by simplifying approvals, providing financial assistance for industrial infrastructure and ensuring sustainable environmental practices. With a focus on high-quality infrastructure and a large land bank, Odisha seeks to position itself as a preferred destination for industrial enterprises. Following is a representation of the sectoral classification of industries under IPR 2022 relevant to the steel sector in Odisha:

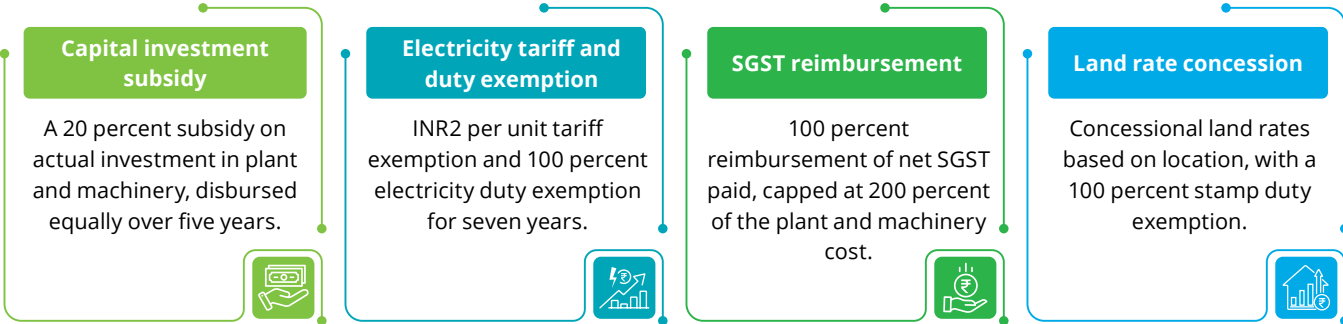
Figure 8: Sector classification for policies and incentives in Odisha



Source: Industrial Policy Resolution 2022, Odisha

Incentives for priority sectors¹³⁷

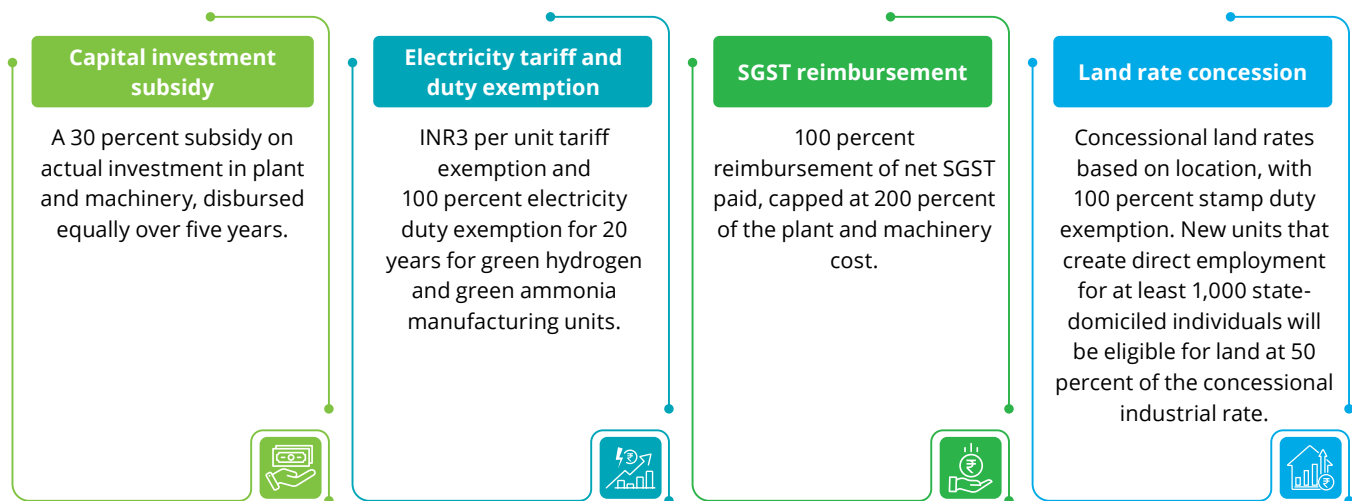
The Odisha government has classified **ancillary and downstream industries in the metal sector and Specialty steel and its products as priority sectors** to encourage value addition within the state. While Odisha has a strong presence in primary steel production, much of the value addition, such as specialty steel manufacturing for automobiles, shipbuilding and defence, has traditionally occurred in states such as Karnataka and Maharashtra. Odisha offers targeted incentives to steel-making units to enhance local processing and ensure that the growing demand for high-value steel is met within the state. Key incentives include:



¹³⁵ Stakeholder Discussions
¹³⁶ General Budget 2025-26
¹³⁷ Industrial Policy Resolution 2022, Odisha

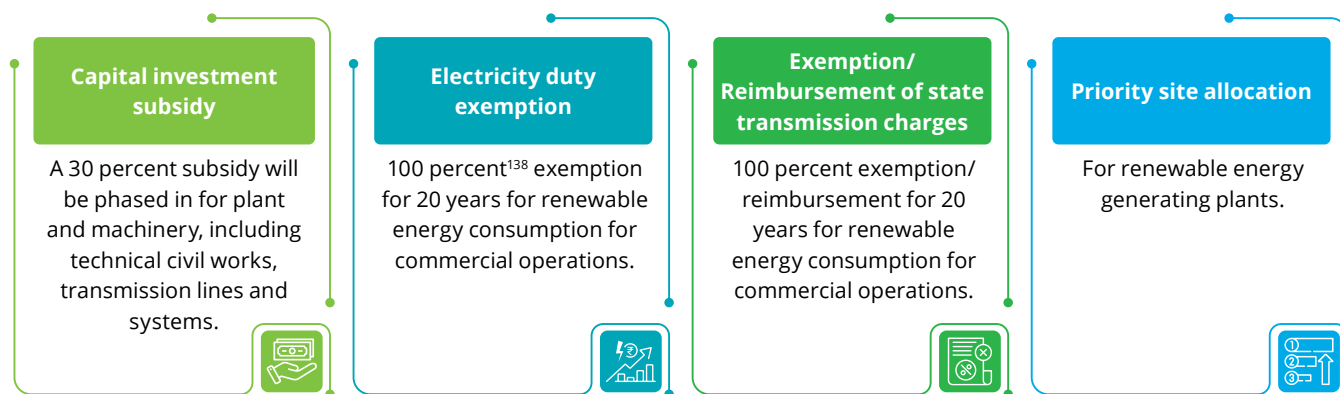
Incentives for thrust sectors

The Odisha government has classified **green energy equipment manufacturing and green hydrogen and green ammonia industries as thrust sectors** to accelerate the transition towards low-carbon steel production. Given the high carbon footprint of conventional steelmaking, which relies on imported coke, Odisha aims to promote the production and adoption of hydrogen and ammonia as alternative reductants. By supporting investments in renewable energy, green hydrogen and ammonia production, the state seeks to reduce dependence on carbon-intensive processes and position itself as a hub for sustainable steel manufacturing. Key incentives available are:



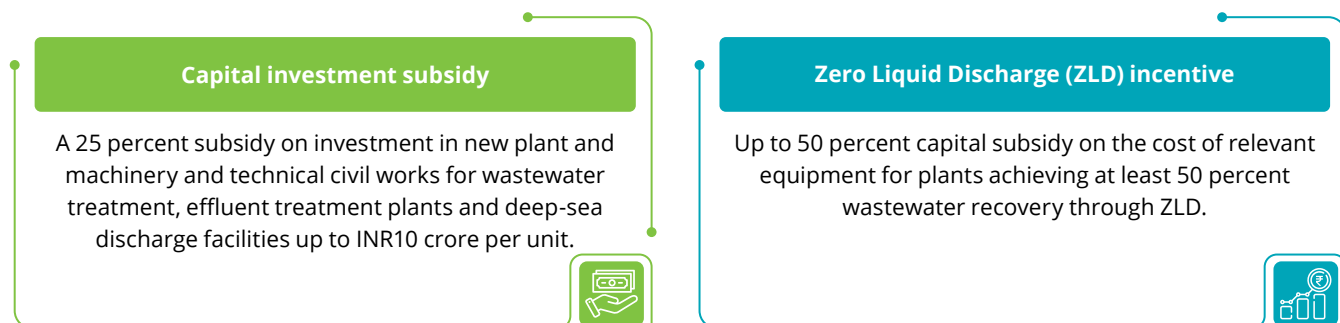
Incentives for setting up captive renewable energy plants

IPR 2022 provides targeted incentives to steel producers to support their decarbonisation efforts and promote the integration of renewable energy through assistance in setting up captive renewable energy power plants. These incentives include:



Incentives for wastewater management facilities

Waste water treatment and effluent treatment plants entail significant capital investment by steel plants for wastewater management and environmental compliance. To support these essential infrastructure needs, the following incentives are provided under IPR 2022:



While Odisha has favourable policies for setting up plants, **the classification of coal washing, coke screening, and coal and coke briquetting as negative sectors in the IPR 2022 poses challenges.** Industries in the negative sector do not receive special incentives or access to land at concessional rates, which could impact investment in these essential technologies. **Coking coal is a critical input for steelmaking**, with ~0.5–0.75 tonnes¹³⁹ required per tonne of steel produced. Due to the high ash content

in domestic coal, India is reliant on imports. To reduce this dependence, **Indian steel producers require support for coal beneficiation** through the establishment of washeries and investment in briquetting facilities, especially as the **transition** to alternative reductants like **hydrogen** is still in its **early stages**. With Odisha planning a 130 MT capacity expansion, the demand for coking coal will be significant, making this classification a limiting factor for the industry's growth.

¹³⁸ IPR 2022

¹³⁹ Stakeholder Discussions

4. Roadmap to become the steel hub of India by 2030

India's goal of achieving 300 MT of steel capacity by 2030–31 is a cornerstone of the country's industrial growth strategy. With its abundant natural resources, strategic location and industrial capabilities, Odisha is poised to significantly contribute, targeting a crude steel capacity of 130 MT. This aligns closely with the national vision, emphasizing Odisha's key role in driving India's steel sector. The Odisha government has implemented targeted policies and initiatives to foster this growth. The High-Level Clearance Authority (HLCA) has approved nine major projects in the steel sector, with a total investment exceeding INR4,00,000 crore,¹⁴⁰ which are expected to create 92,425 jobs in the state. The state is actively engaged in the PM Gati Shakti National Master Plan, which aims to enhance national infrastructure, thereby stimulating steel demand and creating a favourable environment for the state's steel industry.

Through these comprehensive efforts, Odisha contributes to India's steel production target and positions itself as a leader in sustainable industrial practices and economic development. The state's proactive policies and strategic initiatives ensure its continued leadership in India's steel industry, fostering growth and prosperity for the region and the country.

4.1 Odisha's contribution to future national demand fulfilment

Odisha has been a cornerstone of India's steel production, with its output surpassing local consumption. In contrast to its high steel production capacity, Odisha's domestic steel consumption remains relatively low at around 8.04¹⁴¹ MT, which means that a significant portion of its steel is exported. This positions Odisha as a net steel exporter, contributing to fulfilling national demand and enhancing the global supply chain.

This dynamic is set to shift as Odisha strengthens its industrial base. With an increase in production capacity, there is a corresponding expectation for a significant rise in

the state's internal steel demand. The government has plans to attract domestic investment of INR2.5 trillion and FDI of over US\$2 billion¹⁴² in the next 4–5 years. Odisha is making significant strides by investing heavily in mega infrastructure projects strategically designed to drive the demand for steel.

Expanding industrial hubs such as food processing, chemical and petrochemical industries, IT sectors and logistics improvements such as highways and seaports will transform the state's infrastructure and significantly increase steel consumption across sectors. As Odisha focuses on fortifying its industrial base, these investments are positioned to play a critical role in establishing the state as a key catalyst in meeting India's growing steel demand in the years ahead.

4.2 Emerging end-use industries that are poised to drive steel demand in Odisha

Stainless steel park: Catalysing downstream stainless steel demand in Odisha

The upcoming Jindal Stainless Industrial Park spanning 271 acres in Kalinganagar, launched during the Make in Odisha Conclave 2022, is set to be India's first dedicated stainless steel industrial park. Designed to strengthen upstream and downstream linkages, the park will drive demand for stainless steel in Odisha and across Eastern India by enabling the growth of value-added segments such as auto components, fabrications, pipes and tubes. Spread across a strategically located site with modern logistics, green utilities and a skilled workforce, the park is expected to attract substantial investments from MSMEs and help create nearly 20,000 jobs. Its just-in-time supply chain model will help reduce cost and time for secondary and tertiary stainless steel-based industries.

Chemical and petrochemical

The development of the Petroleum, Chemical and Petrochemical Investment Region (PCPIR) hub at Paradip is

¹⁴⁰ <https://www.odishaminerals.gov.in/IndustryWindow/NewInitiatives>

¹⁴¹ JPC

¹⁴² https://www.business-standard.com/india-news/odisha-to-hold-investors-meet-in-january-eyes-rs-2-5-trn-by-2029-124092800279_1.html

expected to attract investments worth INR2.74 lakh crore.¹⁴³ As part of this initiative, IOCL plans to invest INR33,150 crore to establish a 15 MTPA oil refinery and a polypropylene unit. Additionally, IOCL has signed an MoU with Dhamra Port Company Ltd (DPCL) to set up a 5 MTPA LNG terminal at an investment of INR5,000 crore.¹⁴⁴

Furthermore, the establishment of multiple coal gasification-based chemical units is poised to significantly boost steel demand in Odisha. These projects, including urea, ethanol and chemical production facilities, will require substantial steel for infrastructure such as processing plants, storage units and pipelines. Industries supporting these projects, such as logistics and power generation, will further drive steel consumption.

Pharmaceuticals and biotechnology

The upcoming pharmaceutical SEZ in the Khurda-Balasore corridor is expected to increase the demand for stainless steel in Odisha. The government has set up the Odisha Pharmaceutical Development Cell (OPDC) to strengthen the pharmaceutical sector and attract global investments. The Biotechnology Policy 2024 has been introduced to promote the biotech industry. A state-of-the-art Biotech Park¹⁴⁵ in Bhubaneswar, featuring advanced testing centres and R&D labs, will contribute to stainless steel consumption in the state.

E-mobility

JSW Group has signed an INR40,000 crore MoU with the Odisha government to establish an integrated electric vehicle manufacturing facility and EV battery making plant, aiming to manufacture 1 lakh electric commercial vehicles and 3 lakh¹⁴⁶ electric passenger vehicle annually. The project will consist of a 50 GWH EV battery plant, a commercial and passenger electric cars manufacturing unit, a lithium refinery, a copper smelter and electric powertrains¹⁴⁷ for EVs and related component manufacturing units. The entire value chain is expected to boost the demand for electrical steel, HSLA and stainless steel, among other materials.

Renewable energy

The Odisha government has sanctioned seven renewable energy projects worth INR1,386 crore to enhance the state's green energy capacity. These initiatives, centred around solar, wind and hybrid power generation, are set to drive sustainable development and strengthen energy security. The approved projects include a 99 MW wind power project, five ground-based solar projects of 91.77 MW and one rooftop solar project of 1.64 MW.¹⁴⁸ Odisha aims to achieve 7.5 GW of solar capacity by 2030 as part of its larger vision to achieve 10 GW¹⁴⁹ of total renewable energy capacity by 2030. NTPC has signed an MoU with Grid Corporation of Odisha (GRIDCO) and Capital Region Urban Transport (CRUT) to promote green hydrogen mobility¹⁵⁰ in the state. These initiatives are expected to boost the demand for HSLA, stainless steel, galvanised steel and electrical steel.

IT and SEZs

Odisha Industrial Infrastructure Development Corporation (IDCO) is developing a sector-specific IT/ITES SEZ Info Valley near Bhubaneswar. IT firms have already set up units in existing SEZs, and more companies are expected to establish operations once Info Valley is completed.

In addition, IDCO is developing an electronic hardware manufacturing cluster under the Electronics Manufacturing Cluster (EMC)¹⁵¹ Scheme. To further boost the Electronics Systems Design & Manufacturing (ESDM)¹⁵² sector, the government has introduced a special incentive package, offering a range of benefits such as subsidies on fixed capital investment for plant and machinery, exemption from entry tax on equipment acquisition, training subsidies and a 100 percent VAT reimbursement for five years. The package also includes exemptions from electricity duty, inspection fees, water duty and interest subsidies. These measures are expected to attract significant investments in ESDM, driving demand for electrical and galvanised steel.

¹⁴³ <https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/infrastructure-projects-under-implementation>

¹⁴⁴ <https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/infrastructure-projects-under-implementation>

¹⁴⁵ <https://investodisha.gov.in/industry-infrastructure/sector-specific-clusters/>

¹⁴⁶ <https://www.newindianexpress.com/business/2024/Feb/13/jsw-to-roll-out-3l-e-cars-1l-e-cvs-from-odisha-plant>

¹⁴⁷ <https://auto.hindustantimes.com/auto/electric-vehicles/jsw-group-to-set-up-ev-manufacturing-plant-in-odisha-signs-deal-with-govt-41707712628273.html>

¹⁴⁸ <https://www.eqmagpro.com/odisha-govt-approves-7-renewable-energy-projects-worth-rs-1386-cr-eq/>

¹⁴⁹ <https://www.eqmagpro.com/odisha-govt-approves-7-renewable-energy-projects-worth-rs-1386-cr-eq/>

¹⁵⁰ <https://energy.economictimes.indiatimes.com/news/renewable/ntpc-signs-mou-for-green-hydrogen-mobility-in-odisha/116614424>

¹⁵¹ <https://industries.odisha.gov.in/about-us/associate-bodies/IDCO/infrastructure-projects-under-implementation>

¹⁵² <https://investodisha.gov.in/industry-infrastructure/sector-specific-clusters/>

Transport and logistics

The Odisha government has allocated a substantial capital outlay of INR58,195 crore in 2024–25, representing 6.1 percent of the state's GSDP and marking a 26 percent¹⁵³ increase from the previous year. Much of this investment has been directed towards strengthening logistics infrastructure, reinforcing the state's commitment to enhancing connectivity and industrial growth. Eight locations have been planned to develop the multimodal logistics park under the Connect Odisha Initiative from FY25–26.¹⁵⁴

Road development has been a key focus area, with annual expenditure rising from INR2,927 crore in 2012–13 to INR19,456 crore in 2024–25,¹⁵⁵ positioning Odisha among the top states in road infrastructure investment. Several major highway projects have been approved, including the Sambalpur Ring Road and the Cuttack-Paradip corridor under the PM Gati Shakti initiative, along with four additional national highway expansions worth INR15,000 crore.¹⁵⁶

Rail connectivity is also being enhanced through multiple projects with a record allocation of INR10,586 crore in 2024–25,¹⁵⁷ including the redevelopment of Bhubaneswar and Puri railway stations. The Bhubaneswar Metro Rail Project, with an estimated cost of INR6,256 crore, is expected to complete its first phase by December 2027. The government has proposed five greenfield airports at Rayagada, Paradip, Dhamara, Angul and Kalinganagar to strengthen air and port connectivity. Additionally, the expansion of Paradip Port is being complemented by plans for an INR4,000 crore ship recycling hub¹⁵⁸ and the development of two new ports at Ichuri in North Odisha and Bahuda in South Odisha. The state's high investment in logistics infrastructure is expected to drive substantial demand for structural steel and railway materials, further supporting Odisha's industrial expansion.

4.3 Steel demand forecast for Odisha until FY31

Odisha is one of the most mineral-rich states in India. Iron ore, coal, manganese and chromite are among the key minerals in the state. The state leads the iron ore production in India

with over 50 percent share. In FY24, iron ore production in Odisha stood at ~169.03 MT.¹⁵⁹ This makes Odisha a key state for mineral and metal-based industries. It is also one of the top steel-consuming states in the country. In FY24, it consumed 8.04 MT¹⁶⁰ of finished steel, with a CAGR of ~14 percent in the past eight years. Based on the historical data analysis, steel has a correlation of 0.95 with GSDP and 0.85 with investment. Some of the key growth initiatives by the Odisha government are as follows:



The Make in Odisha Conclave received 593 proposals with an investment intent of INR16.73 lakh crore, generating 12.88 lakh jobs across 20 sectors.¹⁶¹



Industrial corridors connecting Paradip, Choudwar, Dhenkanal, Angul, Sambalpur, Jharsuguda, Sundergarh and Rourkela will be developed to boost the state's industrial infrastructure.



INR60 crore has been allocated under the Industrial Infrastructure Development Fund (IIDF) to bridge infrastructure gaps in industrial parks.¹⁶²

With these investments and policy measures, the state's GDP is expected to post a CAGR of 6–8 percent over the next decade. Based on the regression analysis and the macroeconomic outlook, the steel demand in Odisha is projected to post a CAGR of 11–13 percent to reach 17.3–18.6 MT by FY31.¹⁶³

¹⁵³ Odisha Economic Survey

¹⁵⁴ General Budget 2025-26

¹⁵⁵ Odisha Economic Survey 2024-25

¹⁵⁶ <https://www.newindianexpress.com/states/odisha/2024/Sep/07/npg-approved-two-more-highway-projects-in-odisha>

¹⁵⁷ Odisha Economic Survey 2024-25

¹⁵⁸ <https://economictimes.indiatimes.com/industry/transportation/shipping-/transport/odisha-planning-4000-crore-ship-recycling-hub-near-paradip-port-says-top-official/articleshow/117094227.cms?from=mdr>

¹⁵⁹ BigMint

¹⁶⁰ JPC

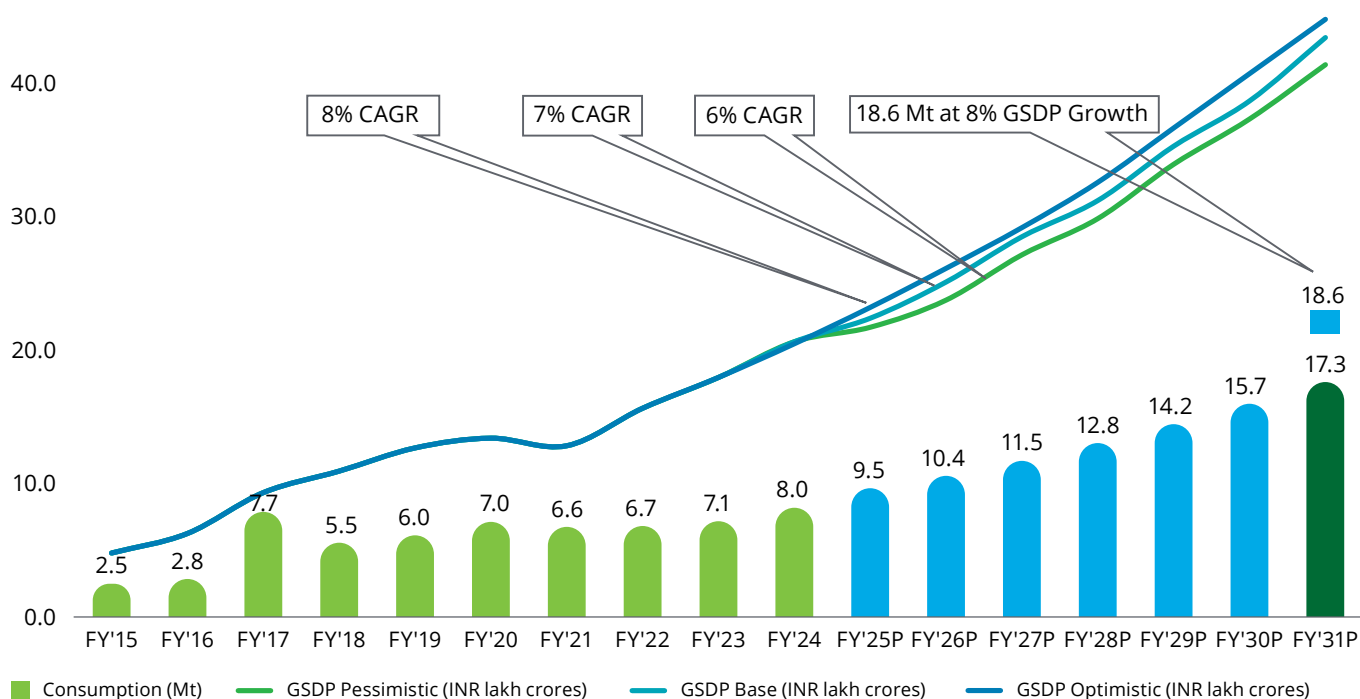
¹⁶¹ General Budget 2025-26

¹⁶² General Budget 2025-26

¹⁶³ Deloitte Analysis



Figure 9: Steel consumption and GSDP growth outlook



Source: JPC, MoSPI, Deloitte analysis

Note: The dispatch data of JPC for Odisha is considered as consumption for the regression model

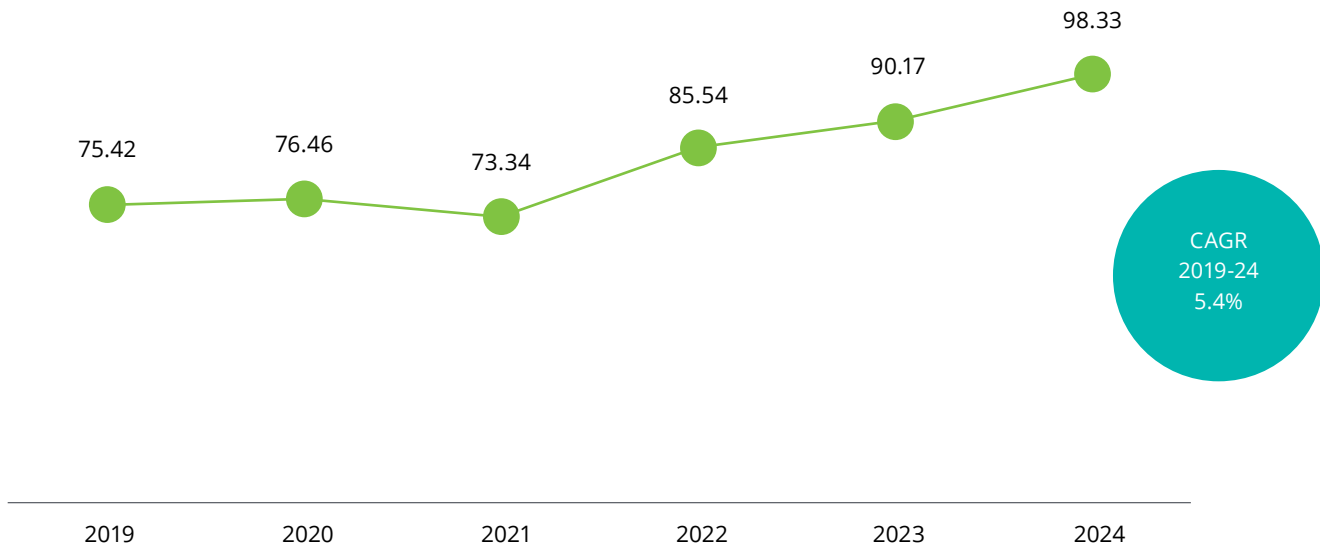
Odisha's steel demand is poised for significant growth, primarily driven by infrastructure and industrial development. Currently, infrastructure and construction account for ~70–75 percent¹⁶⁴ of steel consumption in the state, surpassing the national average due to the absence of a strong automobile manufacturing base. Factory construction alone generates ~3–4 MT of demand,¹⁶⁵ particularly for higher steel grades, and sectors such as hospitals, hotels, educational institutions, capital goods and automotive are expected to contribute further.

Odisha has emerged as one of the fastest-growing states in per capita income, significantly outpacing national growth and surpassing several developed states. The state's CAGR of 5.45 percent from 2019 to 2024 far exceeds the national average of 2.99 percent, as well as the growth rates of developed states such as Tamil Nadu (5.0 percent) and Karnataka (4.54 percent).¹⁶⁶

¹⁶⁴ Stakeholder discussion

¹⁶⁵ Stakeholder discussion

¹⁶⁶ <https://iced.niti.gov.in/economy-and-demography/key-economic-indicators/socio-economic>

Figure 10: State per capita income ('000 at constant prices)Source: ICED¹⁶⁷

This rise in income levels is expected to boost demand for advanced consumer products such as double-door refrigerators and other white goods, driving higher steel consumption. However, for Odisha to translate this economic momentum into sustained industrial growth, strategic policy interventions by the state government will be crucial. Developing industrial clusters in regions such as Angul and Jajpur, modelled after successful warehousing-led hubs such as Manesar, can provide a strong foundation for manufacturing and logistics expansion.

Odisha has the potential to become a major steel consumption hub, but this will depend on how effectively the state government fosters an enabling ecosystem for automotive, consumer durables, MSMEs and ancillary industries. Establishing an automotive and ancillary ecosystem, similar to those in Western India, could significantly increase steel demand in automotive and structural applications. Additionally, Odisha's coastal advantage presents opportunities in the maritime and shipbuilding industries, further driving industrial steel usage.

While the rise of EVs may introduce shifts towards materials such as aluminium and carbon fibre, steel will remain essential in structural applications.¹⁶⁸ Government policies, infrastructure development and industry-friendly incentives will be key to unlocking Odisha's full industrial potential.

4.4 Capacity projections until FY31

Odisha, India's largest iron ore producer, is also a frontrunner in the country's steel production sector. It is the largest steel-producing state in the country, with ~26 MT crude steel output in FY24.¹⁶⁹ The state has embraced a strategic "More from Ore" approach, identifying and implementing stable reforms that have significantly accelerated its steel production. Odisha boasts an installed capacity of ~29.1 MT¹⁷⁰ and has set an ambitious target to reach 130 MT by FY31. This growth trajectory includes ~62 MT of greenfield expansions and ~37 MT of brownfield expansions,¹⁷¹ with prominent companies such as JSW, TATA Steel and JSPL making substantial progress towards this goal.

¹⁶⁷ <https://iced.niti.gov.in/economy-and-demography/key-economic-indicators/socio-economic>

¹⁶⁸ Stakeholder Discussions

¹⁶⁹ JPC

¹⁷⁰ JPC

¹⁷¹ <https://steelmines.odisha.gov.in/node/119458#:~:text=Currently%20Odisha%20has%20an%20installed,annual%20steel%20production%20by%202030.>

The current capacities and planned expansion of some major steel players are mentioned below.

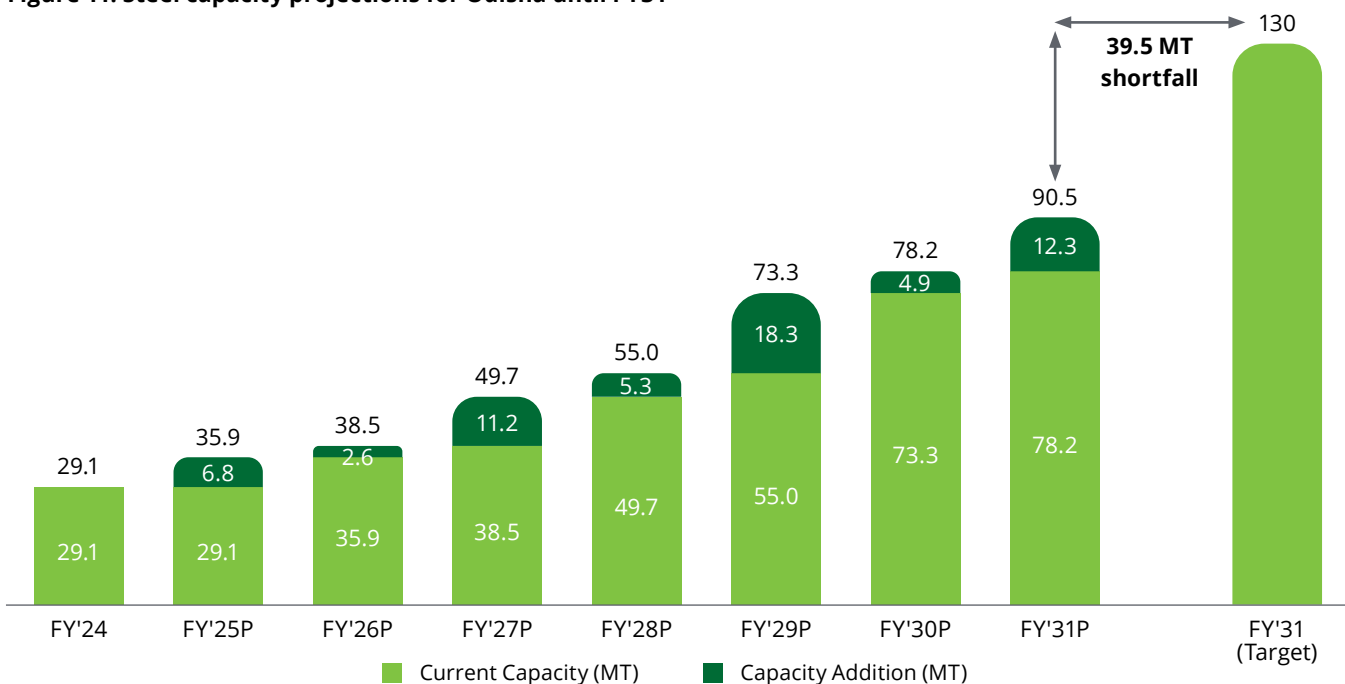
Table 6: Expansion plans of major ISPs

Company	Capacity FY'24 (MT)	Announced capacity addition (MT)	Announced total capacity by FY31 (MT)
JSPL	6		6
Jindal Steel Odisha Ltd.	-	19.2	19.2
JSW-BPSL	3.5 ¹⁷²	6.5	10
JSW Utkal Steel Ltd	-	13.5	13.5
JSL	2.2	2.3	4.5
TATA Steel, Kalinganagar	3 ¹⁷³	5	8
TATA Steel, Dhenkanal	5.6	-	5.6
Neelanchal Ispat Nigam Ltd	1	4.5	5.5
AMNS, Paradip	-	7	7
AMNS, Kendrapara		24.2	24.2
SAIL	4.2	5.5	9.7
Others	3.6	13.2	10.8
Total	29.1	100.9	130

Source: Deloitte Analysis, Annual Reports, Stakeholder Discussions

Odisha's steel production capacity is expected to increase from 29.1 MT to 90.5 MT by FY31, driven by expansions in the blast furnace route. Major steel producers are set to contribute 59 MT to the total capacity growth of 61.4 MT,¹⁷⁴ while smaller producers are expected to expand their capacity from 3.6 MT to 6.0 MT, growing at 7.6 percent annually.¹⁷⁵

Figure 11: Steel capacity projections for Odisha until FY31



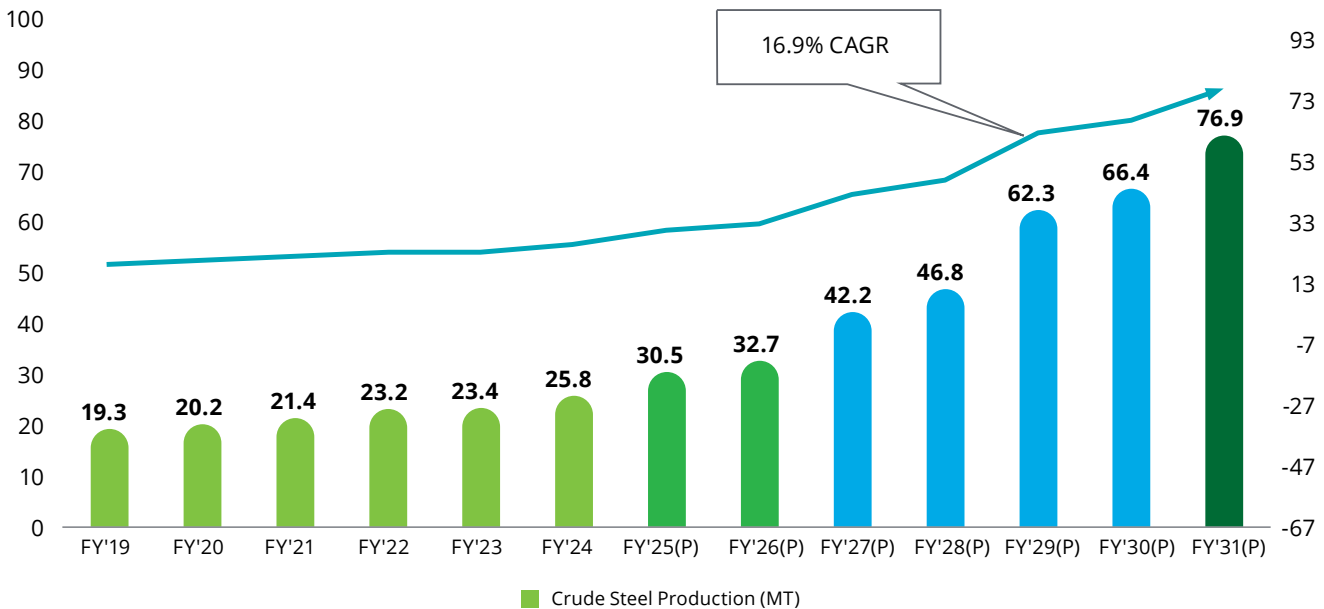
Source: Deloitte Analysis, Stakeholder Discussions

¹⁷² Current Capacity has been expanded to 4.5 MTPA as per Annual Reports FY25

¹⁷³ Expansion to 8 MTPA is complete as per Annual Reports FY25

¹⁷⁴ Deloitte Analysis

¹⁷⁵ Deloitte Analysis

Figure 12: Steel production projections for Odisha until FY31

Source: Deloitte Analysis

However, this projected capacity remains 39.5 MT¹⁷⁶ below the state's target of 130 MT, with several challenges slowing the pace of expansion. Uncertainty in raw material availability, caused by a slow auction process, affects raw material security. Land allocation challenges, arising from community disturbances, environmental regulations and the lack of land for compensatory afforestation, delay project execution. Infrastructure constraints, including an over-reliance on road transport due to limited railway connectivity and slow expansion of the slurry pipeline network, add to logistical inefficiencies. The slow pace of power infrastructure development is also creating further hurdles for new steel plants. If these issues persist, Odisha's ability to meet its long-term steel sector ambitions will remain uncertain, potentially limiting its industrial growth and competitiveness.

4.5 Steel production forecast FY25 to FY31

Odisha has set a target of achieving 100 MT of crude steel production by 2030, aiming to contribute 39 percent of India's national crude steel production target of 255 MT. This reinforces its role as the nerve centre of Mission Purvodaya in Eastern India, positioning the state as a key driver of India's steel sector. However, based on current estimates, production is projected to reach only 76.9 MT by FY31, assuming a

capacity utilisation of 85 percent per NSP 2017 guidelines. While this marks a sharp increase from 25.8 MT in FY24, reflecting a CAGR of 16.9 percent, the projected shortfall of 23.1 MT raises concerns for Odisha and India's steel supply chain.¹⁷⁷

For Odisha, lower-than-expected production could limit employment opportunities, slow industrial job creation and affect livelihoods dependent on the steel sector. The growth of downstream industries, such as fabrication, machinery and auto component manufacturing, which rely on local steel availability, may also be constrained, affecting the state's broader industrialisation efforts.

At the national level, given that Odisha is a net steel exporter, this shortfall could affect India's ability to meet its growing domestic demand, increasing reliance on imports. With steel being a core input for sectors such as construction, infrastructure and capital goods manufacturing, any disruption in supply could have wider economic implications. Additionally, challenges in raw material security, land availability, power infrastructure and logistics constraints are concerns for future capacity expansion and pose risks to seamless production, cost efficiency and overall competitiveness in the global market.

¹⁷⁶ Deloitte Analysis

¹⁷⁷ Deloitte Analysis

5. Current challenges for steel capacity expansion in Odisha

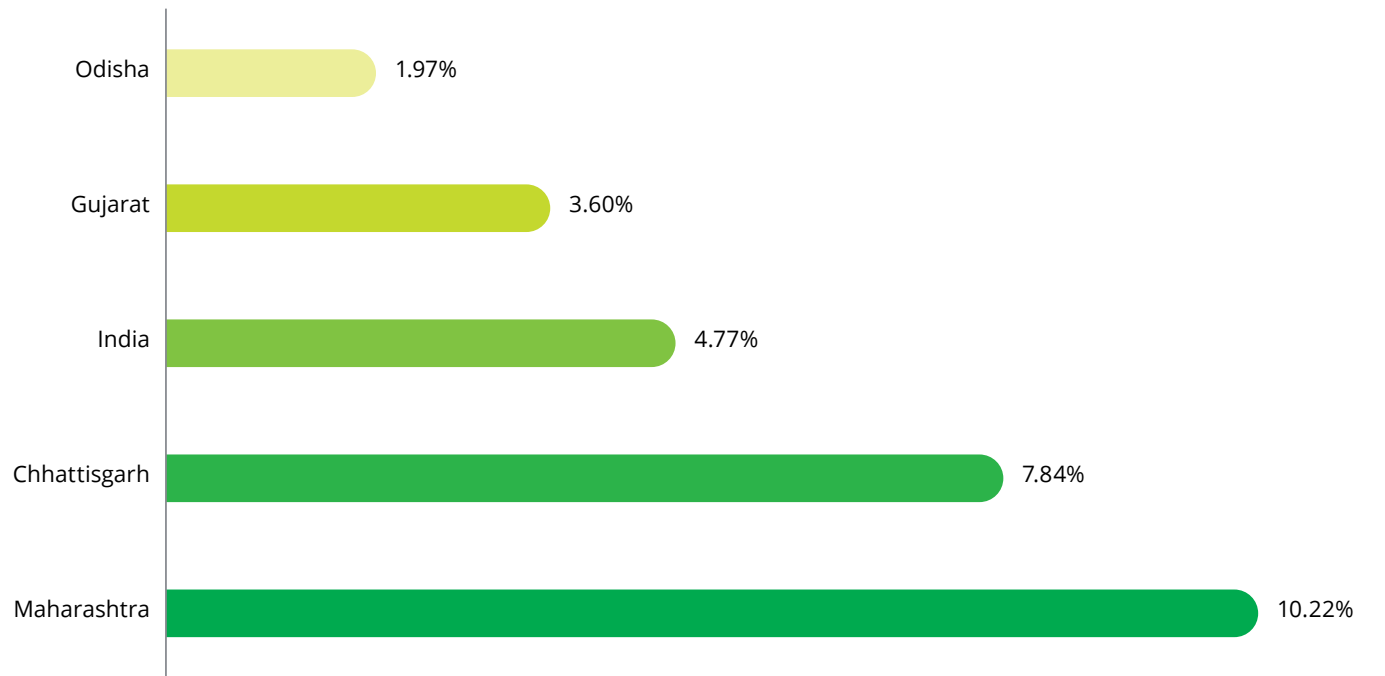
Over the years, Odisha has introduced several progressive policy measures to attract industrial investment and facilitate capacity expansion. With initiatives such as single-window clearance, concessional land allotment and fiscal incentives under the amended Industrial Policy Resolution (IPR), the state aims to position itself as a preferred investment destination. These efforts reflect a proactive approach to industrial growth, ensuring ease of doing business and fostering a conducive environment for large-scale investments.

However, the actual pace of capacity expansion has not fully kept up with expectations. While steel capacity addition in India has grown yearly at 4.8 percent¹⁷⁸ since 2019, Odisha's

steel capacity has grown at a modest rate of 1.97 percent,¹⁷⁹ from 26.4 MT¹⁸⁰ in FY19 to 29.1 MT in FY24.

In stark contrast, Chhattisgarh, the second-largest steel producer in India, has added steel capacity at a rate of 7.9 percent¹⁸¹ since FY19. Despite a well-structured policy framework, challenges in raw material availability, slow growth in logistics and power infrastructure, difficulties in land acquisition due to regulatory and environmental bottlenecks and the lack of renewable energy infrastructure have collectively slowed the pace of capacity expansion in the state. These challenges are further detailed in the following sections.

Figure 13: Annual growth in steel production capacity since FY19



Source: JPC

¹⁷⁸ Deloitte Analysis
¹⁷⁹ Deloitte Analysis
¹⁸⁰ JPC Annual Report 2023-24
¹⁸¹ Deloitte Analysis

5.1 Land acquisition challenges and environmental clearances

As a mineral-rich state, Odisha has witnessed several challenges in land acquisition and environmental clearances for steel projects. Resistance from tribal communities, legal and regulatory hurdles and environmental concerns have significantly delayed or stalled major projects.

Land acquisition and community challenges

Land acquisition for steel projects in Odisha faces significant delays due to resistance from tribal communities in Fifth Schedule Areas, where the Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996 (PESA) empowers gram sabhas to approve or reject project proposals. This has led to major disruptions in expansion projects in the past. Rehabilitation and resettlement challenges, plagued by weak policy implementation, further hinder execution. Compliance with the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR) remains slow, resulting in prolonged negotiations, higher costs and increased uncertainty for investors. Delays in acquiring land for critical railway infrastructure, such as the Dubri connectivity, are impeding timely execution and affecting industrial and logistics linkages.

Regulatory and environmental clearance bottlenecks

Approval timelines for environmental clearance and forest clearance under MoEF&CC are not met and obtaining a mining lease in India typically takes 4–5 years compared with less than a year in countries such as Brazil and Canada.¹⁸² For blocks auctioned since 2016, the national average time to operationalisation of greenfield mines after auction has been about 49 months. In Odisha, this stretches to 57 months, compared with Gujarat's just 23 months and states such as Madhya Pradesh and Andhra Pradesh's 44 months. Such prolonged timelines, often driven by indecisiveness and procedural delays, underscore a weakening ease of doing business in the state.¹⁸³ Overlapping requirements under EIA-2006, FRA-2006 and LARR-2013 lead to procedural delays. The amended Van Sanrakshan Evam Samvardhan Adhiniyam, 2023, has introduced stricter deforestation and biodiversity safeguards along with reinforced tribal consultation provisions.

Forest clearance is required at the prospecting and mining lease stages, while difficulty in securing land for compensatory afforestation further raises costs and prolongs project execution.

5.2 Transportation and logistical bottlenecks

Odisha faces significant transportation and logistical challenges that affect supply chain efficiency. Efficient transport of raw materials (iron ore, coal, limestone) and finished steel is critical, yet bottlenecks in rail, road and port infrastructure increase costs and lead times.

Railways-related challenges

- **Insufficient rake availability:** Despite Odisha's significant steel output, the allocation of railway rakes remains inadequate, especially during peak seasons. This shortage disrupts raw material supply chains and compels manufacturers to use road transport for long distances, raising overall costs.
- **Escalating rail transportation logistics costs:** The cost of rail transportation has been steadily increasing due to the withdrawal of freight incentive schemes such as Long Lead Rebate, Short Lead Discount and Round-Trip Benefits in FY23. Additionally, the Busy Season Surcharge (BSS) on base freight, previously exempt from July to September until FY23, was imposed for 10 months in FY24 and is now set to be levied year-round in FY25. Furthermore, freight charges on critical iron ore routes, such as the Banspani-Tomka BG section, have increased by ~30 percent, further adding to cost pressures on the industry.¹⁸⁴
- **Higher inland freight costs:** The cost differential between FOB China and CFR West Coast India prices for steel imports typically remains within US\$30/t,¹⁸⁵ while for South Korea, it is around US\$35/t. In contrast, inland rail freight from eastern to western and southern India is higher (US\$37/t and above), exceeding sea freight costs for imported steel.¹⁸⁶
- **Gaps in rail connectivity:** Odisha's rail network lacks seamless connectivity between mining clusters, steel plants and key ports such as Paradip, leading to inefficiencies in material transportation. The absence of dedicated freight corridors increases logistics costs and delays, impacting the steel industry's competitiveness.

¹⁸² Deloitte Analysis of Ministry of Mines data on list of 66 operational blocks since 2016

¹⁸³ Deloitte Analysis of Ministry of Mines data on list of 66 operational blocks since 2016

¹⁸⁴ Stakeholder Discussion

¹⁸⁵ Stakeholder Discussion

¹⁸⁶ Stakeholder Discussion

- **Dependence on rail for bulk transport:** Odisha transports ~140 MT of raw material annually, with 100 MT through rail and 40 MT by road.¹⁸⁷ If the state's iron ore production is to double, railway infrastructure must expand significantly to accommodate increased freight demand.
- **Lack of railway sidings:** Many steel stockyards and mines lack direct railway sidings, increasing mid-mile transportation costs and reducing efficiency. The absence of seamless rail connectivity forces the industry to rely on costly short-haul truck movements.

Road-related challenges

- **Overburdened road network:** Roads are inadequate for transporting iron ore, especially lumps, which account for 30 percent of Odisha's 169 MT¹⁸⁸ of annual production. With an expected future increase in production to 240–245 MT, including ~72 MT of lumps,¹⁸⁹ road infrastructure will require significant upgrades to accommodate the growing demand and ensure efficient transportation.
- **Poor connectivity to mines:** Many mines in Odisha, especially in Keonjhar and Sundargarh, lack direct access to national highways, leading to high first-mile transportation costs. Poor road conditions further exacerbate inefficiencies, adding **INR6–8 per tonne/km** in transportation costs.¹⁹⁰
- **High first- and last-mile costs:** Handling and last-mile logistics contribute to **~25 percent**¹⁹¹ of total transportation expenses. The lack of dedicated railway sidings at steel stockyards forces manufacturers to rely on road transport for intermediate movements, increasing logistics costs.
- **Underdeveloped road infrastructure to ports:** The lack of road infrastructure in key port areas increases first-mile costs and lead times. The Bhubaneswar-Paradip corridor is currently a single-lane transit road, which hinders the seamless movement of heavy commercial vehicles. With ~16 MT¹⁹² of the steel capacity expansion planned in Paradip by 2030, the underdeveloped infrastructure poses serious challenges.

Port and waterway-related challenges

- **Difficulty in right-of-way permission for slurry pipeline:** Slurry pipelines are the most cost-effective and sustainable solution for transporting raw materials, significantly reducing logistics costs and environmental impact. However, despite the presence of a single-window clearance system, steel players face persistent delays in acquiring Right of Way (RoW) permissions for intermediate regions, delaying the laying of the entire pipeline.
- **Limited coastal shipment infrastructure:** Odisha's east coast ports face constraints in storage capacity and cargo handling, leading to delays and inefficiencies. The mismatch between port handling capacity and inland transportation infrastructure further extends lead times.
- **Underdeveloped national waterways:** The slow development of inland waterways forces the steel players to depend on costlier road and rail transport. The NW-5 (Brahmani River and Mahanadi Delta) in the state, which has significant potential for industrial freight movement, remains underdeveloped, limiting inland water transport options and increasing reliance on costlier road and rail networks.
- **Congestion at port entry points:** Inadequate road and rail links to ports create congestion, increasing first-mile transportation costs by **~INR200 per tonne**.¹⁹³ Most ports on the East Coast have limited railway connectivity, causing high congestion on entry roads. This impacts the timely movement of raw materials and finished steel products.

5.3 Challenges to raw material security

The steel industry in Odisha is encountering significant challenges in ensuring a stable supply of raw materials, driven by regulatory, supply chain and resource-related constraints.

Regulatory and taxation challenges

- **Royalty inconsistencies:** India's high royalty regime on iron ore, particularly for low-grade material, places a disproportionate burden on producers compared with

¹⁸⁷ <https://odishabytes.com/logistics-issues-affect-domestic-steel-production-as-raw-material-transport-from-odisha-languishes/#:~:text=Production%20of%20steel%20has%20been%20hit%20due,and%20close%20to%2040%20MT%20through%20roads.>

¹⁸⁸ <https://www.odishaminerals.gov.in/StatisticsReport/DespatchProductionReport>

¹⁸⁹ <https://steelmines.odisha.gov.in/sites/default/files/2023-10/Growth%20Potential%20and%20New%20Initiatives.pdf>

¹⁹⁰ <https://steel.gov.in/sites/default/files/DRAFT%20%20Sectoral%20Plan%20For%20Efficient%20Logistics%20%20for%20Iron%20and%20steel%20sector.pdf>

¹⁹¹ <https://steel.gov.in/sites/default/files/DRAFT%20%20Sectoral%20Plan%20For%20Efficient%20Logistics%20%20for%20Iron%20and%20steel%20sector.pdf>

¹⁹² Stakeholder Discussion ,Deloitte Analysis

¹⁹³ <https://steel.gov.in/sites/default/files/DRAFT%20%20Sectoral%20Plan%20For%20Efficient%20Logistics%20%20for%20Iron%20and%20steel%20sector.pdf>

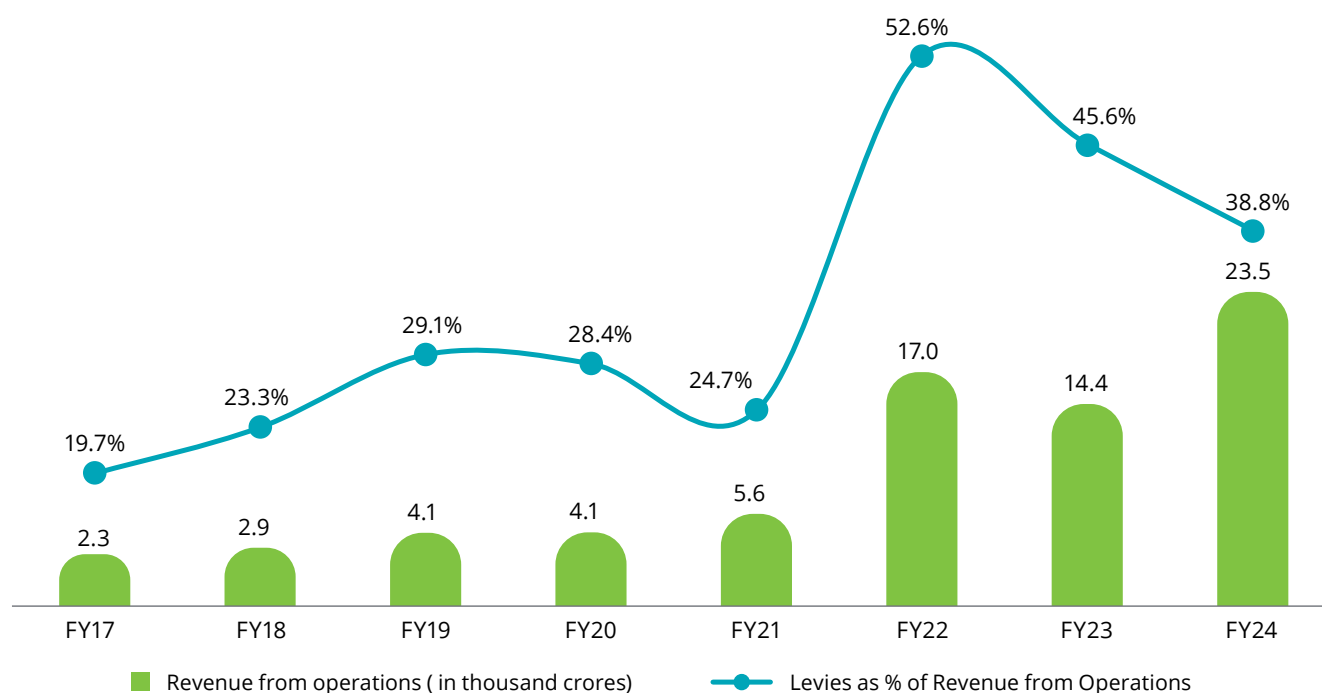
global standards. While major iron ore producing regions such as Western Australia, the world's largest exporter, levy a royalty of 5 percent on beneficiated ore, India imposes a 15 percent ad valorem royalty on the IBM-declared Average Sale Price (ASP), regardless of ore grade. This is further compounded by additional levies such as the District Mineral Foundation (DMF) (10–30 percent of royalty), the National Mineral Exploration Trust (NMET) (2 percent of royalty) and other statutory charges.

Table 7: Global comparison for royalty rates on iron ore

Parameter	Western Australia ¹⁹⁴	Brazil ¹⁹⁵	China ¹⁹⁶	India
Royalty rate	5 percent (beneficiated), 7.5 percent (raw ore)	3.5 percent (CFEM)	1–9 percent (iron ore concentrate)	15 percent
Royalty base	Sales revenue	Sales revenue	Sales revenue	Average sale price
Royalty system	Ad valorem	Ad valorem	Ad valorem	Ad valorem
Auction premiums	No	No	Yes	Yes

Such a uniform and layered taxation structure severely affects the viability of low-grade ore production in India. Although the market value of such ore is significantly lower, it attracts the same absolute royalty burden as high-grade material, resulting in distorted economics and financial strain on producers.

Figure 14: OMC's contribution to the exchequer as % of revenue from operations



Source: Deloitte Analysis, OMC Annual Reports

¹⁹⁴ <https://www.wa.gov.au/organisation/departments/mines-petroleum-and-exploration/mineral-royalties>

¹⁹⁵ <https://www.reuters.com/article/brazil-mining-regulation/update-3-brazilcongress-approves-higher-mining-royalties>

¹⁹⁶ [https://iclg.com/practice-areas/mining-laws-and-regulations/china#:~:text=Republic%20of%20Peru.,14.,ore\):%201%E2%80%9312%25](https://iclg.com/practice-areas/mining-laws-and-regulations/china#:~:text=Republic%20of%20Peru.,14.,ore):%201%E2%80%9312%25)

There has been a stark increase in statutory levies on miners in Odisha in recent years, driven by rising levies and steep auction premiums. This trend is evident in the case of OMC, the largest mining company in the state, whose total contribution to the exchequer, comprising royalty, additional charges on royalty, DMF and NMET, rose from 20–30 percent of its operational revenue during FY17–21 to over 50 percent in FY22,¹⁹⁷ before moderating to around 39 percent in FY24. The burden is compounded by the issue of “royalty on royalty,” wherein the IBM-declared Average Sale Price (ASP), used as the basis for royalty calculation, already includes the royalty component, resulting in double taxation.

- **Cumulative mineral taxation:** Following the Supreme Court’s August 2024 ruling, states can now retrospectively collect taxes on minerals from 1 April 2005. This decision is expected to further strain the sector’s financial viability.
- **Expiry of captive leases by 2030:** Per the MMDR Act, all captive mining leases, including those for iron ore, are set to expire in 2030, posing a significant risk to the established supply chain and ecosystem built over decades. With major investments underway for capacity expansion, amounting to ~INR10,000 crore annually,¹⁹⁸ the lack of raw material security could render these investments financially unviable, threatening the industry’s long-term sustainability.
- **Delay in iron ore analysis and sampling:** In 2023, the Ministry of Mines issued guidelines to implement the latest technology for real-time grade determination of iron ore. However, the current mandate requires stacking the ore for sampling to determine its grade, leading to significant operational challenges. This process not only occupies valuable space within the lease area but also causes delays of up to seven days before the ore can be dispatched.¹⁹⁹
- **Limitations of Long-Term Linkage (LTL) policy:** The Odisha government has implemented the LTL policy to ensure a steady supply of iron ore to industries, but certain challenges reduce its effectiveness. The pricing mechanism, based on the weighted average price in the National E-Auction, is often skewed upward due to trader participation, making raw material costs less competitive for LTL buyers. Additionally, delays in dispatch permissions and truck allotments disrupt supply to Integrated Steel Plants (ISPs), as non-LTL buyers are prioritised due to stricter dispatch timelines.

- **Sale restrictions:** A significant portion of iron ore fines remains unsold due to regulatory transaction restrictions, limiting revenue generation for mining companies. The inability to monetise these fines effectively impacts overall profitability and resource utilisation.

Supply chain and resource limitations

- **Slow auction process:** The pace of mineral block auctions across India remains sluggish, with a limited number of blocks coming up for bidding. In most cases, bid premiums exceed 100 percent, making acquisitions financially burdensome. Notably, Odisha has not conducted any mineral block auctions in FY24 and FY25.²⁰⁰ Several leases that expired in 2020 remain unauctioned, further restricting resource availability.
- **Challenges in iron ore sufficiency:** Odisha currently produces around 169.03²⁰¹ MT of iron ore, but ~10–17 percent²⁰² of it is low-grade iron ore, which is unsuitable for steelmaking due to its iron content being below 58 percent. Odisha Mining Corporation’s current capacity is 45 MT, with production levels between 33 MT and 38 MT.²⁰³

While the state can meet the current iron ore requirements, future growth projections are more challenging. By 2030, Odisha envisions 100 MT of crude steel production, translating to a demand for ~160–170 MT²⁰⁴ of iron ore for steel making alone. Iron ore deposits in Odisha and Jharkhand are characterised by high alumina (5–7 percent) and low silica (5–7 percent), primarily due to the presence of Kaolinite and shale. The lower Fe content necessitates additional beneficiation, significantly increasing production costs and energy consumption. In many cases, the cost of beneficiated ore exceeds the market price, making operations economically unviable.

In FY24, the **Balda Block iron ore mine**, operated by Serajuddin & Co., produced 2.4 MT against its MDPA of 8.51 MTPA, a 29 percent utilisation rate. Additionally, the Jajang iron ore mine was **surrendered due to uneconomic operation**. Such underutilisation and exits from mining operations **threaten the long-term sufficiency of iron ore supply** in the state, especially in view of rising demand projections.²⁰⁵

¹⁹⁷ OMC Annual Reports

¹⁹⁸ Stakeholder Discussions

¹⁹⁹ Stakeholder Discussions

²⁰⁰ Indian Bureau of Mines

²⁰¹ <https://odishaminerals.gov.in/ResourceStatistics/MineralProduction>

²⁰² Stakeholder Discussion

²⁰³ <https://omcltd.in/en/our-business/products>

²⁰⁴ 1 tonne of steel production requires ~1.7 tonnes of iron ore.

²⁰⁵ Indian Steel Association

- **Challenges in low-grade ore beneficiation:** The regulatory framework governing EC and royalty structure for iron ore beneficiation presents operational and compliance challenges for miners and plant operators. Under current norms, waste material (below threshold value) extracted from mines and sent for beneficiation is counted towards EC tonnage limits, even when it is not marketable ore, leading to inflated environmental burdens. Another major challenge for beneficiation plant operations is disposing of tailings generated during processing. The lack of sustainable disposal solutions poses a long-term risk to the feasibility of iron ore processing. On the fiscal side, the same 15 percent royalty is applied on low-grade ore used for beneficiation, which imposes a significant cost burden and acts as a disincentive for value addition.
- **Dependence on Imports for critical raw materials:** The steel industry relies heavily on imported coking coal, exposing it to price volatility and geopolitical risks. Additionally, the shortage of high-grade limestone and dolomite within the state increases procurement costs from distant sources.

5.4 Issues in renewable energy and green steel adoption

The steel industry in Odisha encounters substantial challenges in adopting renewable energy and green steel technologies. Limited renewable infrastructure, high transition costs and difficulties in accessing key resources such as natural gas and hydrogen pose significant barriers. Additionally, the absence of a robust scrap recycling sector complicates efforts to shift towards more sustainable production methods.

Stringent Renewable Purchase Obligations (RPOs)

Odisha aims to achieve 10 gigawatts (GW) of renewable energy capacity by 2030. This is a significant increase from its 2024 target of 24 percent renewable energy purchase.²⁰⁶ While this initiative aligns with decarbonisation goals, industries face considerable difficulties in meeting these obligations due to the following factors:

- **Insufficient renewable energy infrastructure:** The state lacks a reliable and extensive renewable energy network,

preventing industries from achieving the mandated RPO targets.

- **High costs in renewable energy transition:** The financial burden of transitioning to renewable sources, particularly solar and wind energy, remains a major constraint, making large-scale adoption economically challenging for steel plants.
- **Land acquisition hurdles:** Developing renewable energy projects faces significant resistance due to challenges in securing land, which slows down infrastructure expansion efforts.

Challenges in green steel adoption

The shift towards green steel production is hindered by multiple structural and resource-related challenges:

- **Limited access to affordable natural gas:** Natural gas is a crucial feedstock for low-carbon steelmaking, but its availability in Odisha remains restricted, making the transition to cleaner production methods difficult.
- **Expiry of ISTS charge waiver:** The scheduled expiration of the Inter-State Transmission System (ISTS) charge waiver in 2025 will drive up electricity costs, further complicating efforts to switch to renewable energy sources.
- **Underdeveloped scrap recycling sector:** The lack of a formalised scrap collection and processing infrastructure hampers the adoption of Electric Arc Furnaces (EAFs), a key technology in green steel production.
- **Inadequate hydrogen infrastructure:** Hydrogen is emerging as a pivotal solution for decarbonising steel production. However, Odisha's steel industry lacks the necessary hydrogen supply chain and infrastructure, slowing down innovation and large-scale adoption of hydrogen-based steelmaking processes.

Addressing these challenges will require targeted policy interventions, infrastructure development and strategic investments to enable Odisha's steel industry to transition toward a more sustainable and decarbonised future.

²⁰⁶ <https://www.angelone.in/news/ireda-boosts-odishas-renewable-energy-goal-with-3000-crore-investment>

6. Future strategy for the steel industry in Odisha

Odisha plays a critical role in India's steel ecosystem and contributes significantly to national production and exports. To sustain its growth trajectory and achieve the 130 MT target by 2030–31, proactive policy interventions are crucial. Ensuring raw material security through faster mine auctions, beneficiation incentives and optimised mineral block allocation, along with streamlining land acquisition and environmental clearances through a dedicated industrial expansion facilitation cell, will help accelerate project execution. Strengthening logistics infrastructure by expanding railway freight corridors, developing slurry pipelines and modernising ports will enhance cost efficiency and ensure seamless transportation of raw materials and finished steel.

Beyond capacity expansion, stimulating domestic demand and strengthening industrial linkages will be key. Establishing steel-based SEZs beyond Kalinganagar in hubs such as Angul can attract investments in fabrication, machinery and value-added steel products, while adopting an industrial township model similar to NCR and Andhra Pradesh's State Capital Region (SCR) can drive infrastructure-led steel consumption. MSME integration through steel parks, preferential procurement policies and access to affordable raw materials will further boost downstream growth. Additionally, expanding skill development initiatives, including dedicated training institutes for welders, fabricators and metallurgical technicians, will ensure a steady supply of skilled labour for the evolving steel sector.

The following sections outline key policy recommendations to address these areas and position Odisha as a globally competitive steel manufacturing hub.

6.1 Land acquisition and environmental clearances

With ongoing improvements in land acquisition and regulatory frameworks, Odisha's steel sector is better positioned to attract and retain major investors, reversing past challenges that impacted projects previously. With

the state targeting 130 MT capacity, securing land for steel plants, mines and infrastructure remains critical. However, delays due to regulatory bottlenecks, community resistance and compensatory afforestation requirements continue to slow project execution. Prolonged environmental and forest clearance processes add further uncertainty, impacting investor confidence. A streamlined approval mechanism and a transparent regulatory framework will be essential to sustaining Odisha's industrial growth. Following sections highlight on some policy recommendations to address these challenges.

Short term (0–2 years)

- **Allocation of land for steel projects:** Earmark land allocation from 1000 acres of land to be acquired yearly under the land bank scheme for steel expansion projects.²⁰⁷
- **Establish a dedicated Project Management Unit (PMU):** Establish a state-level PMU at the Department of Steel and Mines to fast-track project execution by coordinating inter-departmental clearances, monitoring approval timelines, resolving bottlenecks and providing an escalation mechanism for high-priority mining and steel sector projects.
- **Fast-track the integrated single-window clearance process:** Streamline the EC and FC approval mechanism to ensure clearances are granted within 3–4 months from the date of application submission.
- **Auction mineral blocks with pre-embedded EC and FC:** Align with the National Mineral Policy 2019 by exploring the feasibility of auctioning pre-approved mineral blocks, significantly reducing the time required to commence mining operations.
- **Explore the option of single public consultation** to cover requirements under EIA 2006, FRA-2006, LARR 2013.
- **Expedited consultations with tribal communities:** Establish fast-track consultation mechanisms with gram sabhas to ensure transparent dialogue and reduce delays.

²⁰⁷ General Budget Speech 2025-26

- **Improve project documentation:** Enforce stringent Environmental Impact Assessment (EIA) norms to minimise clearance-related delays.
- **Public availability of land banks for CA:** The state should maintain and publish land bank data for Compensatory Afforestation (CA) in the public domain, enabling better planning and faster project execution.

Medium term (2–5 years)

- **Exempt prospecting operations from FC:** To enable faster execution of Composite Licence (CL) deeds, prospecting activities, being temporary and non-intrusive, should be exempted from the FC requirement. FC should be mandated only at the time of granting the Mining Lease (ML), reducing delays in the early stages of mineral exploration and facilitating smoother project execution.
- **Allow private entities to use revenue forest lands for CA:** Extend the provision currently available to government PSUs to private entities, allowing them to utilise revenue forest lands for CA, ensuring smoother compliance with afforestation requirements.
- **Comprehensive Rehabilitation & Resettlement (R&R) reforms:** Introduce Direct Benefit Transfer (DBT) schemes for displaced communities, ensuring timely and adequate compensation.
- **Strengthen environmental compliance:** Establish dedicated courts in Odisha to expedite cases related to NGT and MoEF & CC disputes.

Long term (5+ years)

- **Community development initiatives:** Implement long-term socioeconomic programmes for affected communities, such as employment generation, skill development and sustainable resettlement.

6.2 Transportation and logistical improvements

A well-integrated multimodal logistics network is essential for Odisha to sustain its steel sector growth and cost competitiveness. Currently, road infrastructure is inadequate for iron ore transportation, particularly for lumps, which account for about 30 percent²⁰⁸ (51 MT) of Odisha's 169 MT²⁰⁹ annual iron ore production.

While fines can be transported through slurry pipelines, lumps must rely on roads, making road maintenance and expansion critical. As Odisha's iron ore production is expected to rise to 240–245 MT,²¹⁰ the volume of lumps requiring road transport will increase to 72 MT,²¹¹ further straining the existing infrastructure.

The consistent rise in freight costs on critical rail routes has escalated production costs for steel manufacturers, impacting competitiveness and potentially leading to higher steel prices. Additionally, high inland railway freight rates for transporting finished steel to developed southern and western states exceed the cost of sea freight for imported steel reaching ports in these regions. This pricing disparity reduces Odisha's competitive edge, making imported steel a more attractive option despite its abundant production. Without urgent investments in rail connectivity, slurry pipelines and port modernisation, Odisha's steel industry will face rising transportation costs, logistical bottlenecks and reduced competitiveness in domestic and export markets. The following sections outline key policy recommendations to address these challenges.

Short term (0–2 years)

- **Establish a cross-functional review mechanism:** Establish a high-level review body chaired by the chief secretary and comprising representatives from the MoEFCC, NHAI, railways, IDCO and OPTCL to monitor and drive time-bound delivery of critical logistics and power infrastructure for mining and steel projects.
- **Expand Vande Bharat network in Odisha:** Build on the existing six Vande Bharat Express services by adding new routes connecting key urban centres with major industrial hubs, enabling safer, faster and more efficient workforce commuting.
- **Expedite slurry pipeline projects:** The state government should expedite the completion of ongoing slurry pipeline projects by facilitating Right of Way (ROW) permission through single-window clearance.
- **Develop an integrated digital portal for cargo and vessel coordination:** Establish a digital portal integrating vessel schedules with cargo bookings from different shippers. This will enable better planning, reduce delays and improve overall supply chain efficiency.
- **Enhance storage infrastructure for optimised logistics:** The state government should facilitate the development

²⁰⁸ Stakeholder Discussions

²⁰⁹ Department of Steel and Mines, Odisha

²¹⁰ <https://steelmines.odisha.gov.in/sites/default/files/2023-10/Growth%20Potential%20and%20New%20Initiatives.pdf>

²¹¹ Stakeholder Discussion

of adequate storage capacities (covered and open) at discounted rates to ensure optimum parcel sizes can be maintained, reducing handling inefficiencies.

- **The Talchar-Bimlagarh new rail line (150 km, approved in 2004)** should be fast-tracked. It will reduce the rail distance by 200 km from the current 366 km (Barsuan to Angul), offering significant logistical benefits.²¹²
- **Increase railway rake allocation:** Engage with Indian Railways to prioritise rake availability for key industrial corridors.
- **Strengthen road maintenance and connectivity:** Repair and expand existing road networks to improve first- and last-mile connectivity to mines and steel plants.

Medium term (2–5 years)

- **Develop railway network and inland waterways:** Invest in dedicated interconnected railway network between mine clusters, steel plants and ports through as system of Merry-Go-Rounds and connecting lines. Accelerate the development of National Waterway-5 (NW-5) for bulk cargo transport.
- **Prioritise slurry pipeline construction for other steel producers:** DMF fund can be used to construct slurry pipelines network to facilitate raw material movement for other steel producers on tariff-based transportation model.
- **Upgrade port handling infrastructure:** Ensure the availability of adequate cranes and handling equipment at ports to efficiently handle steel products, including TMT bars, CR sheets, HR and CR coils, as well as steel by-products such as blast furnace slag.
- **Enhance coastal shipping infrastructure:** Develop dedicated coastal shipping corridors to facilitate bulk material movement through east coast ports.
- **Strengthen mineral corridors:** Enhance iron ore logistics between Odisha and other states by investing in a Multi-Modal Logistics Ecosystem with road, rail and slurry pipeline infrastructure. Laying of Barbil-Nayagarh-Barsuan and Bhadrasahi-Kiriburu rail lines, along with the doubling of the Barbil-Nayagarh line section (198 km), should be fast-tracked to improve rail connectivity, reduce congestion and ensure the efficient transport of ore from the Koira region to the steel plant hub in Kalinganagar.²¹³

Long term (5+ years)

- **Expand railway infrastructure:** Construct new freight corridors and double-track railway lines to support increased steel output.
- **Strengthen last-mile connectivity from ports:** The government should prioritise the development of last-mile connectivity from ports to customer premises through road infrastructure projects, ensuring seamless transportation and reducing logistical bottlenecks.
- **Upgrade port capacity:** Develop deep-draft ports to handle larger cargo volumes and facilitate seamless exports.

6.3 Raw material security

Ensuring a steady supply of raw materials is crucial for Odisha to achieve its 100 MT crude steel production target by 2030. The industry depends on iron ore, coal, limestone and dolomite, which must be available at competitive prices to sustain production growth. For iron ore for steel making alone, Odisha will require 170 MT annually, with 51 MT as lumps and 119 MT as fines.²¹⁴ Supply constraints could increase reliance on imports, raising costs and reducing competitiveness.

However, limited OMC production capacity, coupled with elevated procurement prices for LTL buyers due to trader participation in national e-auctions, has further increased input costs for steelmakers. Additionally, delays in mine auctions and slow mineral block allocation continue to restrict resource availability. Addressing these challenges will ensure a cost-effective and sustainable raw material supply for Odisha's steel industry. The following sections outline key policy recommendations to address these challenges.

Short term (0–2 years)

- **Formulate a dedicated iron ore policy for Odisha:** Given that 57 percent of India's current iron ore production comes from the state,²¹⁵ the policy will focus on streamlining auction process, setting reserve management norms to optimise mine life and regulating exports to prioritise domestic value-adding industries. It will also mandate technology-driven grade assessment, promote utilisation of low-grade ore and waste through beneficiation, stipulate time-bound clearances for operationalisation and enforce sustainability benchmarks in mining operations.

²¹² Stakeholder Discussion

²¹³ Stakeholder Discussion

²¹⁴ Stakeholder Discussion

²¹⁵ <https://www.hindustantimes.com/india-news/no-need-to-cap-iron-ore-mining-in-odisha-centre-tells-top-court-101705432942607.html>

- **Rationalise royalty calculation method for iron ore:** Advocate for adoption of the ex-mine price as the basis for calculating royalty and other statutory levies, in line with the pit-head pricing mechanism used in the coal sector. Since the ex-mine price is exclusive of royalty, DMF, NMET and other statutory charges, this shift would effectively eliminate the issue of “royalty over royalty” and prevent double taxation on embedded levies.
- **Fastrack mine auctions:** Expedite the auction of new blocks and expired leases to boost raw material security and promote investor confidence.
- **Ensure full production up to EC limit and operationalise surplus beyond MDPA through state auctions:** Insist that auctioned mine leaseholders produce up to their EC limits. Any production above the Mine Development and Production Agreement (MDPA) quantity that the lessee cannot utilise should be handed over to the state at a regulated mining cost (e.g., INR300/MT) for onward sale through state-facilitated e-auctions to enable broader industry access.
- **Enhance output from state and central mining assets:** Reopen and operationalise legacy mines such as OMDC/ RINL (with a capacity of ~15 MTPA). If feasible, consider transferring operational responsibilities, for example, Serajuddin (15 MTPA EC), to state PSUs such as OMC. Additionally, expedite capacity ramp-up in existing OMC mines (e.g., Guali from 9 to 30 MTPA and Kurmitar from 6 to 9 MTPA) to align with their sanctioned EC limits.²¹⁶
- **Introduce alternative pricing mechanisms for LTL buyers:** Replace the existing pricing mechanism for mineral allotment to LTL buyers through OMC, based on weighted average National e-auction prices, with a cost-plus model or benchmarking-based pricing mechanisms.
- **Initiate pilot projects for real-time grade determination:** Implement the technology outlined in the Ministry of Mines, 2023 guidelines²¹⁷ on a pilot basis to enable real-time grade determination, reducing cycle time from mines to plants and ensuring faster dispatch of iron ore.
- **Fastrack dispatch permission and truck allotments to LTL buyers:** Prioritise dispatch permission and truck allotments to LTL buyers to limit supply chain disruptions due to non-availability of raw materials.
- **One-time sale of legacy stocks:** Advocate for one-time permission for captive miners to sell legacy ore stocks, generating royalty revenue through beneficiation transactions.
- **Strengthen beneficiation and pelletisation:** Support the beneficiation of low-grade iron ore by incentivising beneficiation through policy reforms, such as recommending royalty concessions for dry and wet processing, with wet processing royalty reduced to 10 percent and dry processing reduced to 5 percent. Additionally, ensure that waste (below threshold value) extracted for beneficiation is excluded from EC tonnage calculations, particularly when transported through conveyor or slurry pipelines, regardless of whether the plant is located inside or outside the lease area.
- **State support for water supply:** The state government should provide the water required for beneficiation at subsidised rates, enabling more efficient processing of low-grade ore and fostering investment in advanced beneficiation technologies.
- **GST revenue-sharing reforms:** Advocate for revenue-sharing mechanisms to compensate steel-producing states for their role in national industrial growth. Allocate a portion of GST collected on steel consumption to producing states. Implement a special compensatory mechanism similar to GST compensation for states post-GST rollout.

Medium term (2-5 years)

- **OMC capacity expansion:** Expedite expansion plans for OMC to increase iron ore production capacity from 45 MT to 60 MT over the next 2-3 years.²¹⁸
- **Incentivise beneficiation plant development:** Provide comprehensive incentives for establishing beneficiation plants, including 100 percent duty-free imports of equipment, low-interest bank loans for advanced technology and machinery, and 5-year tax holidays, to encourage investment and development in beneficiation capabilities.
- **Support for tailings management:** Facilitate effective tailings management by allotting land at subsidised rates near beneficiation plants for tailings disposal, allowing state governments to repurpose expired mining leases for backfilling with tailings or slimes and exempting tailings/ slimes from statutory dues when removed from leasehold or plant areas and allowing the sale of tailings as minor minerals. Necessary amendments to the MMDR Act and rules should be introduced to streamline these processes.

²¹⁶ Indian Steel Association

²¹⁷ <https://mines.gov.in/admin/download/651d23b590e161696408501.pdf>

²¹⁸ Stakeholder Discussion

- **Phase-wise reduction of royalty and levies on minerals:** A phased approach allows for gradually adjusting government revenues while ensuring continued support for local development programmes. Advocate for reducing royalty on iron ore from 15 percent to 10 percent for domestic consumption. This reduction should be accompanied by a further 7.5 percent reduction while ensuring the revenue loss is compensated for by introducing a higher corporate tax on exported steel. This adjustment would align royalty rates with global standards, such as the 7.5 percent royalty on iron ore exports in countries such as Western Australia,²¹⁹ fostering competitiveness in the domestic steel sector while maintaining fiscal sustainability.
- **Increase limestone and dolomite mining:** Identify new mining leases to expand the supply of key flux materials required for steelmaking.

Long term (5+ years)

- **Develop a circular economy for raw materials:** Encourage large-scale recycling of steel scrap to minimise dependency on iron ore. Establish government-supported infrastructure, such as dedicated recycling plants, to facilitate steel scrap collection and processing.

6.4 Renewable energy and green steel adoption

As the global steel industry moves towards decarbonisation, Odisha must proactively invest in renewable energy and green steel technologies to remain competitive. The adoption of hydrogen-based steelmaking and the increased use of renewable power and carbon capture solutions will be essential for achieving sustainability goals. The following sections outline key policy recommendations to support this adoption.

Short term (0–2 years)

- **Rationalise Renewable Purchase Obligations (RPO) for the steel sector:** Reconsider the RPO trajectory and reduce the minimum share of renewable energy

consumption to align with industry feasibility. Reinstate the 2019 circular that capped RPO requirements for Captive Power Plants (CPP) to prevent excessive compliance burdens. Introduce a separate mandate for integrated steel plants that reuse generated heat and gases, recognising their inherent energy efficiency and sustainability contributions.

- **Incentivise renewable energy adoption:** Provide subsidies or tax incentives for steel plants to integrate solar and wind power into operations.
- **Expand access to carbon credits:** Establish a state-level carbon trading market to offset emissions from steel production.
- **Develop green hydrogen pilot projects:** Initiate pilot projects for **hydrogen-based DRI (Direct Reduced Iron)** production in collaboration with key industry players.

Medium term (2–5 years)

- **Invest in green steel R&D:** Develop research clusters for green steel technologies, including hydrogen-based steelmaking and carbon capture.
- **Expand gas-based steelmaking:** Promote the use of natural gas and **Midrex** technology to replace coal-based processes.
- **Develop scrap recycling infrastructure:** Establish dedicated steel scrap processing zones and incentivise EAF technology adoption.

Long term (5+ years)

- **Achieve large-scale hydrogen integration:** Develop hydrogen production and storage infrastructure to support the transition to hydrogen-based steelmaking.
- **Establish Odisha as a green steel hub:** Position Odisha as a leader in green steel production through policy-driven investments in renewable energy, circular economy practices and global collaborations.
- **Align with the global carbon neutrality targets:** Implement long-term decarbonisation roadmaps to align with **India's Net Zero 2070** goals.

²¹⁹ <https://www.assochem.org/uploads/files/Odisha%20Mining%20Report%202022.pdf>

7. Potential socioeconomic impact

The growth of the steel sector in Odisha is set to have far-reaching socioeconomic implications, extending beyond core steel production. As the industry expands, it will drive the development of ancillary industries, generate large-scale employment and spur investments in infrastructure and logistics. This industrial growth will create new business opportunities, enhance skill development and contribute to overall economic progress in the state. The following sections explore the impact of a proactive policy framework on economic development and the state's overall growth.

7.1 Economic impact of mineral revenue from auctioned mines

Auctioned iron ore mines in Odisha are critical in augmenting the state's mineral revenue. In 2024, these mines had a cumulative EC limit of 74.7 MTPA, with actual production aligned to Mine Development and Production Agreement (MDPA) quantities recorded at 40.8 MTPA.²²⁰ Based on the weighted average IBM sale price for CY 2024, this level of production yielded ~INR17,778 crore in mineral revenue,²²¹ comprising premium, royalty at 15 percent, DMF contribution at 10 percent of royalty and NMET contribution at 2 percent of royalty.

Utilising the full EC capacity would result in an additional 33.9 MTPA production. After accounting for reimbursement of mining costs to lessees (estimated at INR300 per tonne), this incremental production is estimated to generate an additional INR11,754 crore in mineral revenue for the state.²²²

Maximising production up to EC limits from auctioned mines would significantly enhance the state's mineral earnings, ensure more efficient utilisation of allocated resources and improve raw material availability for Odisha's expanding steel industry.

7.2 Positive impact on ancillary industries

The expansion of Odisha's steel sector is set to drive significant growth in ancillary industries, creating a ripple effect across multiple sectors. As steel production increases from 25 MTPA to 100 MTPA, the demand for raw materials will surge, generating an additional requirement of ~128 MTPA²²³ of iron ore. This will stimulate mining operations, boosting investment and employment in the sector. Similarly, the rise in steel output will push ferro-manganese demand, encouraging new ferroalloy plants to be set up in Odisha, thereby strengthening the state's industrial base.

Steel expansion plans can have a multiplier effect on the growth of ancillary and downstream industries. This was evident in the case of a major player's planned 12 MTPA steel plant near Paradip, where 36 ancillary industries, including refractory materials, lancing pipes, welding electrodes, conveyor belt and cotton waste, and 19 downstream units were expected to come up alongside the project.²²⁴ Such large-scale investments create an industrial ecosystem that fosters local manufacturing and supply chain development. In Chhattisgarh, extensive hand-holding support from Bhilai Steel Ltd has led to the widespread growth of large and MSME industries.²²⁵ The strong participation in the Make in Odisha Conclave reflects the growing interest of MSMEs in setting up operations in the state, particularly in shipbuilding, renewable energy, petrochemicals and semiconductors.²²⁶

Fast-tracking the development of the FDI park in the state capital region, focused on automobiles, EVs, semiconductors and IT/ITES, can significantly boost the steel and allied industries by attracting downstream manufacturers. Currently, value-added products are primarily imported from developed Western states, putting downstream industries in Odisha at a cost disadvantage. The government can create a more

²²⁰ Jajang Iron Ore mines not considered in calculations

²²¹ Indian Steel Association

²²² Stakeholder Discussion

²²³ Stakeholder Discussion

²²⁴ <https://economictimes.indiatimes.com/industry/indl-goods/svs/steel/36-ancillary-industries-to-come-up-with-posco-plant/articleshow/12073910.cms?from=mdr>

²²⁵ <https://www.newindianexpress.com/states/odisha/2022/Sep/12/rourkela-ancillary-industries-of-odisha-stunted-without-rsp-support-2497727.html>

²²⁶ General Budget Speech 2025-26

competitive industrial ecosystem by facilitating steel capacity expansion and promoting value addition within the state.

Furthermore, increased steel production will directly impact the logistics, transportation and power sectors. The large-scale movement of raw materials and finished steel products will drive demand for commercial vehicles, rail freight and warehousing facilities. This will enhance Odisha's transport infrastructure, create employment opportunities and spur growth in vehicle manufacturing and logistics services. Therefore, the steel sector's expansion establishes a self-reinforcing industrial development cycle, positioning Odisha as a key player in India's manufacturing growth story.

7.3 Rise in employment opportunities

The growth of the iron and steel industry, along with its ancillary and downstream industries in Odisha, can significantly boost employment opportunities, creating jobs directly within the steel sector and indirectly through supporting industries and services. In FY22–23, Odisha's steel sector, with an installed capacity of 24.68 MT, directly employed 48,232²²⁷ individuals. As leading steel companies expand their operations to help Odisha achieve its target of 130 MT production capacity by 2030–31, substantial employment opportunities will arise in the steel industry and allied sectors. The table below presents the projected employment generation from some of the announced greenfield and brownfield expansion projects:

Table 8: Steel capacity additions and employment generation for Odisha until FY31

Company	Capacity addition by FY31 (MT)	Expected employment generation
Jindal Steel & Power Ltd.	19.2	24,350
JSW Utkal Steel Ltd.	13.2	30,000
Tata Steel Kalinganagar	5	4,625
Total	37.4	58,975

Source: Department of Steel & Mines, Government of Odisha

Based on the above table and the existing employment status in the sector, it is expected that Odisha's steel industry has the potential to generate **~1,200–2,000 direct employment per MT of steel capacity**.²²⁸ The expansion of Odisha's steel sector is set to generate substantial employment, directly within the industry and indirectly across allied and downstream sectors. With the projected crude steel capacity to rise from 29.1 MT in FY24 to 90.5 MT in FY31, the steel industry in Odisha is expected to additionally create **~1,15,000 direct jobs**.²²⁹ Given the existing employment status in the Odisha steel industry, where **one direct job supports ~2.17²³⁰ indirect jobs**, this would translate to **~2,50,000 indirect jobs**,²³¹ significantly boosting Odisha's industrial ecosystem.

A concerted effort by the government to address key challenges and support the steel industry's growth will be crucial in achieving Odisha's vision of **130 MT crude steel capacity** by 2030–31. Meeting this target would generate an additional **~74,000 direct jobs**,²³² leading to **~1,60,000²³³ more indirect employment opportunities**. This expansion will further strengthen Odisha's position as a key employment hub in the steel sector, fostering job creation across manufacturing, logistics, mining and other supporting industries.

²²⁷ <https://steelmines.odisha.gov.in/node/119631>

²²⁸ Stakeholder Discussion

²²⁹ Deloitte Analysis

²³⁰ <https://steelmines.odisha.gov.in/node/119631>

²³¹ Deloitte Analysis

²³² Deloitte Analysis

²³³ Deloitte Analysis

8. Conclusion

Odisha has firmly positioned itself as a key player in India's steel sector, using its abundant mineral resources and strategic investments from leading steel producers. The state's commitment to industrial growth, reflected in the numerous MoUs signed with key stakeholders, underscores its ambition to emerge as a global steel manufacturing hub. However, achieving the ambitious 130 MT target by 2030–31 will require accelerating the pace of capacity expansion through a robust execution framework that ensures planned investments translate into on-ground development at the necessary speed and scale.

Odisha has introduced concessional land allotments, subsidised power tariffs and fiscal incentives under the IPR to attract investments and strengthen industrial growth. The state has also promoted beneficiation projects and infrastructure collaborations, fostering an investor-friendly ecosystem. However, the effectiveness of these measures will depend on timely execution, consistency and adaptability to evolving market conditions. A streamlined, transparent policy framework will maintain investor confidence and ensure steady progress.

While Odisha continues to lead in steel production, unlocking its full industrial potential will require overcoming key challenges related to land acquisition, raw material security,

infrastructure and logistics. With iron ore demand projected to increase significantly, ensuring efficient mineral block allocation, beneficiation and multimodal transportation will be crucial. Enhancing railway linkages, expanding port capacity and developing slurry pipeline networks will support cost-effective and sustainable growth. A comprehensive and forward-looking strategy is needed to position Odisha as a global steel manufacturing powerhouse. Strengthening single-window clearance mechanisms, rationalising mining policies and improving multimodal logistics will help drive efficiency and competitiveness. Meanwhile, fostering sustainability-driven initiatives, such as green steel production and carbon capture technologies, will align Odisha's growth with global environmental standards.

With the right policy interventions, industry collaboration and infrastructure development, Odisha can scale up capacity, expand downstream industries and create large-scale employment opportunities. By capitalising on its resource advantages and reinforcing its industrial ecosystem, the state can emerge as a benchmark for steel manufacturing excellence, contributing meaningfully to India's economic growth and global competitiveness.



9. Glossary

AMNS	ArcelorMittal Nippon Steel	FRA	Forest Rights Act
ASP	Average Sale Price	FY	Financial Year
BF	Blast Furnace	GDP	Gross Domestic Product
BG	Broad Gauge	GFCF	Gross Fixed Capital Formation
BOF	Basic Oxygen Furnace	GRIDCO	Grid Corporation of Odisha
BPSL	Bhushan Power & Steel Limited	GSDP	Gross State Domestic Product
BSL	Bhushan Steel Limited	GSPA	Gross State Value Added
BSS	Busy Season Surcharge	GST	Goods and Services Tax
CA	Compensatory Afforestation	GW	Gigawatt
CAGR	Compound Annual Growth Rate	GWh	Gigawatt-hour
CAPEX	Capital Expenditure	HLCA	High-Level Clearance Authority
CFEM	Financial Compensation for the Exploitation of Mineral Resources (Brazil)	HR	Hot Rolled
CFR	Cost and Freight	HSLA	High-Strength Low-Alloy
CL	Composite License	IBM	Indian Bureau of Mines
CPP	Captive Power Plant	IDCO	Industrial Infrastructure Development Corporation
CR	Cold Rolled	IGST	Integrated Goods and Services Tax
CRUT	Capital Region Urban Transport	IF	Induction Furnace
Cr	Crore	IIDF	Industrial Infrastructure Development Fund
DBT	Direct Benefit Transfer	IOCL	Indian Oil Corporation Limited
DMF	District Mineral Foundation	IPR	Industrial Policy Resolution
DMISP	Domestically Manufactured Iron & Steel Products	ISP	Integrated Steel Producer
DPCL	Dhamra Port Company Limited	ISTS	Inter-State Transmission System
DRI	Direct Reduced Iron	IT/ITeS	Information Technology / Information Technology enabled Services
EAF	Electric Arc Furnace	ITeS	Information Technology enabled Services
EC	Environmental Clearance	ISSDA	Indian Stainless Steel Development Association
EIA	Environmental Impact Assessment	JOSL	Jindal Orissa Steel Limited
EMC	Electronics Manufacturing Cluster	JPC	Joint Plant Committee
ESDM	Electronics Systems Design & Manufacturing	JSL	Jindal Stainless Limited
ESL	Electrosteel Steels Limited	JSPL	Jindal Steel & Power Limited
ETP	Effluent Treatment Plant	JSW	JSW Steel Limited
EV	Electric Vehicle	LARR	Land Acquisition, Rehabilitation and Resettlement

FAME	Faster Adoption and Manufacturing of Hybrid and Electric Vehicles
FC	Forest Clearance
FDI	Foreign Direct Investment
FOB	Free on Board
ML	Mining Lease
MMDR	Mines and Minerals Development and Regulation
MoEF&CC	Ministry of Environment, Forest and Climate Change
MoHUA	Ministry of Housing and Urban Affairs
MoSPI	Ministry of Statistics and Programme Implementation
MoU	Memorandum of Understanding
MT	Million Tonnes
MTPA	Million Tonnes Per Annum
MW	Megawatt
NCR	National Capital Region
NHAI	National Highways Authority of India
NGT	National Green Tribunal
NIMZ	National Investment and Manufacturing Zone
NINL	Neelachal Ispat Nigam Limited
NIP	National Infrastructure Pipeline
NTPC	National Thermal Power Corporation
NW-1	National Waterway-1
NW-3	National Waterway-3
NW-5	National Waterway-5
OEM	Original Equipment Manufacturer
OMC	Odisha Mining Corporation
OMDC	Odisha Mineral Development Company
OPDC	Odisha Pharmaceutical Development Cell

LNG	Liquefied Natural Gas
LTL	Long Term Linkage
MDPA	Mine Development and Production Agreement
OPTCL	Odisha Power Transmission Corporation Limited
PCPIR	Petroleum, Chemicals and Petrochemicals Investment Region
PLI	Production Linked Incentive
PM Gati Shakti	Pradhan Mantri Gati Shakti
PM-MITRA	Prime Minister Mega Integrated Textile Region and Apparel
PMAY	Pradhan Mantri Awas Yojana
PMU	Project Management Unit
PSU	Public Sector Undertaking
R&R	Rehabilitation and Resettlement
RE	Renewable Energy
RINL	Rashtriya Ispat Nigam Limited
RoW	Right of Way
RPO	Renewable Purchase Obligation
SAIL	Steel Authority of India Limited
SCR	State Capital Region
SEZ	Special Economic Zone
SGST	State Goods and Services Tax
SIDBI	Small Industries Development Bank of India
SIR	Special Investment Region
TMT	Thermo-Mechanically Treated
USD	United States Dollar
VAT	Value Added Tax
YSPL	Yazdani Steel and Power Limited
ZLD	Zero Liquid Discharge

10. Connect with us

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11. About ISA



The Indian Steel Association (ISA) is the apex body and common voice of India's steel industry, representing both public and private producers at national and international forums. As a not-for-profit society, ISA works closely with the government, regulators, and global stakeholders to advance policies that promote growth, sustainability, and competitiveness. ISA's mission is to stay at the forefront of deliberations on public policy, raw materials, trade, logistics, environment, technology, and health and safety, while fostering innovation and international collaboration. It strives to create the best possible environment for Indian steel production, strengthen domestic demand, and champion the industry's commitment to quality, productivity, competitiveness, and sustainability.

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Notes

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