BCC&I
AIDING BUSINESS
SINCE 1833

TURNING HALDIA INTO CHEMICAL HUB OF THE EAST & KOLKATA'S TWIN CITY

A Research-based Recommendation Paper By
BCC&I

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CONTENT

1. EXECUTIVE SUMMARY

Haldia Industrial Complex houses ~ 400 industrial units according to Haldia Development Authority. Large petrochemical industries, refineries, fertilizer manufacturing, logistics, port-led manufacturing, and downstream industries are the key players of the region. Haldia dock provides the edge to this industrial complex over the others. However, due to the absence of a robust industrial policy, the growth of the area has been halted for a long. The largest industry of the region, Haldia Petrochemicals Ltd. has a massive expansion plan and if executed would boost the industrial growth of the State drastically. Considering the prospect of the area, BCC&I has conducted a study and recommends the following:

MULTIMODAL CONNECTIVITY B/W HALDIA & KOLKATA: Several Catamaron Service b/w Haldia and Kolkata which would reduce Kolkata Haldia journey from 3 hrs to 1 hr. Bridge from Raichak to Kukrahati over the Haldi River . Widening and proper surfacing of Noorpur Road and Dalkhola-Bakhali road, connecting NH 12. Clearing Highway choke-points on Munbai Road at Uluberia, Panchla and Ankurhati. Enhanching railway service b/w Kolkata and Haldia. Currently, only 3 train services are available

Creating a model of Working in Haldia - Living in Kolkata

NOTIFY ENTIRE HALDIA AS AN INDUSTRIAL ZONE & A PETROCHEM HUB: This is needed to ensure faster environmental clearances for setiing up factories. Currently environmental clearance takes huge

IMPROVING PORT CONDITIONS & JETTY CAPACITY: At least 10-12m depth throughout the year is must. Very Large Crude Carriers (VLCC) are often stranded at the sand-head. Anchor ships are used for offloading which incurrs additional cost and makes the opertaion risky as they are mostly flamable items

DEVELOPING INFRASTRUCTURE FOR WATER INTAKE DIRECTLY FROM THE RIVER REDUCING PRESSURE ON HALDIA DEVELOPMENT AUTHORITY & MORE POWER TRANSMISSION SUBSTATIONS

DEVEDLOPING HALDIA AS A MODERN INDUSTRIAL CITY: Urgent need for state-of-the-art health facilities. Four-lane road infrastructure within the entire Haldia city A world-class skill centre, Labour Welfare Centre

DATA CENTRE IN NADIGRAM: Nandigram is unquily positioned to host hyperscalers by developing a data centre park. This would help in attracking FDI ranging from 5000 cr to 20,000 cr.

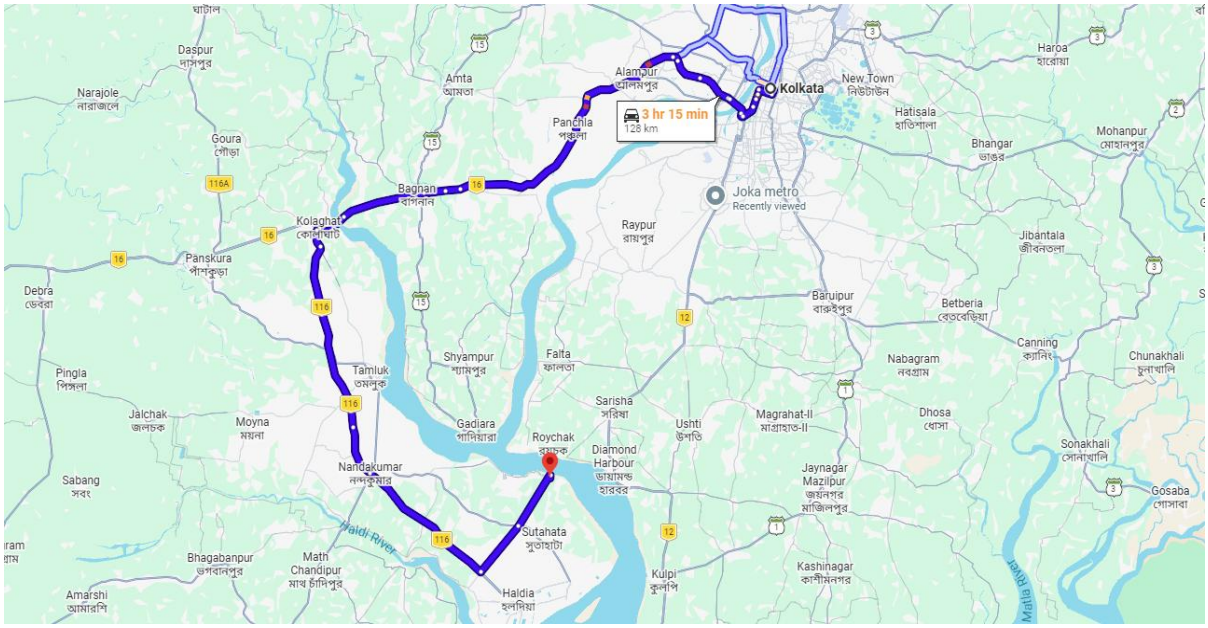
2. WORK IN HALDIA, LIVE IN KOLKATA MODEL

2.1 Raichak-Kukrahati Bridge & RoRo Services

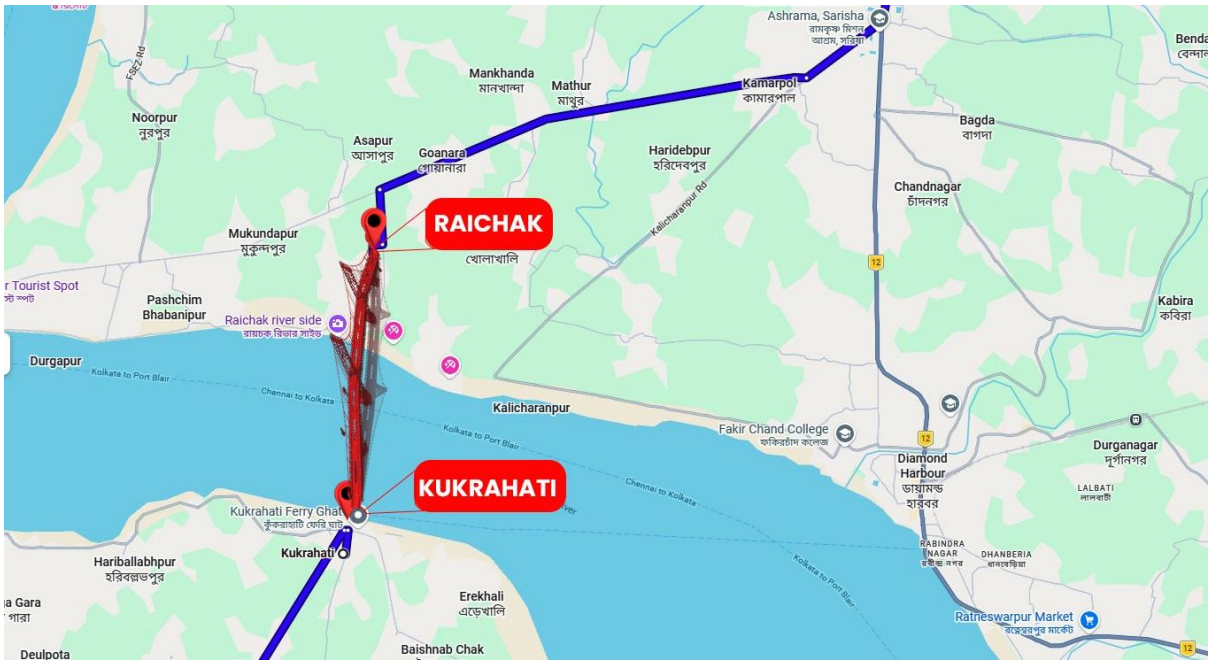
To significantly strengthen the connectivity between Kolkata and Haldia and support the vision of creating a “Work in Haldia – Live in Kolkata” corridor, it is suggested that a bridge to be constructed between **Raichak and Kukrahati across the Hooghly–Haldi river**. The bridge

would create a direct southern access corridor between Haldia and South Kolkata, substantially reducing travel distance and journey fatigue for professionals, industrial workers, and logistics operators. Given the growing industrial importance of Haldia, this connectivity enhancement would play a transformative role in improving mobility and integrating Haldia more closely with the Kolkata metropolitan economy.

Existing Scenario: The following Google map shows that currently it takes almost three and a half hours to reach Kukrahati in Haldia from Kolkata, availing the Kona Expressway (NH 41).



Proposed Scenario: If the bridge is constructed, then the journey time will be reduced to two and a half hours.



Alongside the proposed bridge, a regular Ro-Ro (Roll-on/Roll-off) ferry service may be introduced for freight movement. This would also reduce the logistics cost of businesses. High-speed boat services may be introduced between Kukrahati and Raichak to provide a cost-effective multimodal connectivity solution across the river corridor. To support the growth of passenger movement through this route, parking infrastructure and allied commuter facilities at Raichak should also be substantially upgraded. Enhanced parking capacity would enable commuters travelling by private vehicles to conveniently park their cars at Raichak and continue their onward journey through the proposed water transport network, thereby encouraging greater adoption of the service while reducing road congestion and travel time.

However, the bridge alone will not solve the congestion hurdle entirely. **Widening and proper surfacing of the Noorpur Road and Dalkhola–Bakhali Road** stretch, connecting the **Raichak–Joka corridor, is recommended**. At present, these roads are narrow and heavily congested due to encroachment, resulting in considerable delay despite the relatively short geographical distance. If upgraded systematically, the entire corridor can emerge as a high-speed southern entry route to Kolkata

2.2 Catamaran Service b/w Kolkata & Haldia

In parallel, dedicated high-speed catamaran services are recommended to be introduced directly between Haldia and Kolkata (Babughat / Millennium Park corridor). Under optimal operating conditions, these services have the potential to reduce the travel time between Kolkata and Haldia from nearly three hours to approximately one and a half hour.
(About 25 years back similar service was available between Kolkata and Haldia via Diamond Harbour.)

2.3 Addressing Bottleneck along Mumbai Road (NH 16)

For commuters and freight movement originating from Central and North Kolkata, it is essential to address the persistent highway bottlenecks along the Mumbai Road, particularly at Uluberia, Panchla, and Ankurhati. These stretches continue to experience severe congestion due to the mixing of long-distance freight traffic, local commercial movement, and passenger vehicles. It is therefore suggested that targeted infrastructure interventions — including grade separation, elevated flyovers and traffic stream segregation — be undertaken to improve corridor efficiency and reduce travel delays. Clearing these chokepoints would significantly the connectivity between Kolkata and Haldia while complementing the broader multimodal connectivity vision proposed for the region.

2.4 Enhancing Rail Connectivity b/w Kolkata and Haldia

Rail connectivity remains a key requirement for supporting Haldia's future industrial expansion and logistics efficiency. Currently, there are only **three rail connections** between Kolkata and Haldia. For strengthening multimodal connectivity, there is a strong need for more direct and faster intercity rail services between Kolkata and Haldia to support daily business travel and workforce mobility.

3. TURNING HALDIA INTO A CHEMICAL HUB

Haldia is one of the largest industrial belts in Bengal, and was part of the earlier envisaged WBPCPIR (West Bengal Petroleum, Chemicals and Petrochemicals Investment Region) to promote the growth of chemicals and petrochemicals in West Bengal.

Haldia, with existing port connectivity and industrial base for Oil Refining (eg. IOCL), Petrochemicals (eg. HPL), Fiber Intermediates (eg. MCPI), and PET- Polyethylene terephthalate (eg. Indorama), along with other chemical industries, is ideally suited for further growth, provided enabling infrastructure and fiscal incentives are provided to the industry.

A. Key Strengths of Haldia Industrial Area

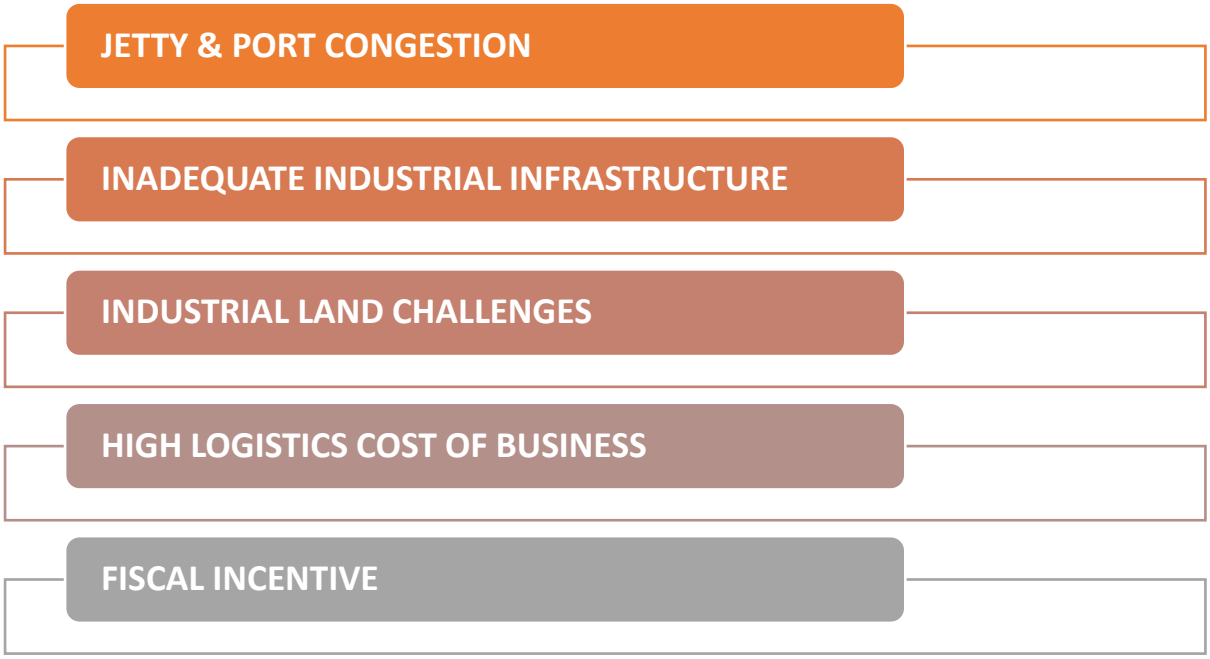
Due to the presence of refining, petrochemicals, and other chemical industries, Haldia has the presence of most of the chemical intermediates needed for the growth of Chemicals, Pharmaceuticals, Specialty Chemicals and Engineering Plastic industry. Key monomers/chemicals available at Haldia for future growth are the following.

KEY INPUTS	APPLICATIONS
Phenol	Phenolic Resins, Agrochemicals, Pharma Intermediates, Epoxy Resins, Polycarbonates
Acetone	IPA, Solvent, I & I Cleaners, Cosmetics etc.
Ethylene	Intermediates for Polymers and Chemicals
Propylene	Intermediates for Polymers and Chemicals
Isobutene/MTBE	MMA (Ingredient to Paint & Coatings, Adhesives), PMMA (Engineering Plastics)

KEY INPUTS	APPLICATIONS
Benzene	Phenolics, Styrene, Chemical Intermediates
Toluene	Agrochemicals, Pharma Intermediates, Textile Chemicals etc.
Xylene	Solvent, Agrochemicals, Insecticides etc.
PTA	Polyester Fibers, PET, PBT (Engineering Plastics)

HPL, Haldia Petrochemical Ltd., is currently implementing a project worth USD 700 million and has an investment plan of USD about 2.0 billion in Downstream Chemicals. However, these growth plans are taking time to realize in the absence of adequate infrastructure and incentive support.

B. Key Challenges of Haldia Industrial Area



i. **Jetty & Port Congestion:** Haldia is a riverine port with 8.0 -8.5 m draft and is highly congested. The existing capacity is inadequate to support further expansion of the industry. Further, logistics cost is significantly higher vis-à-vis Indian and global peers due to lower draft.

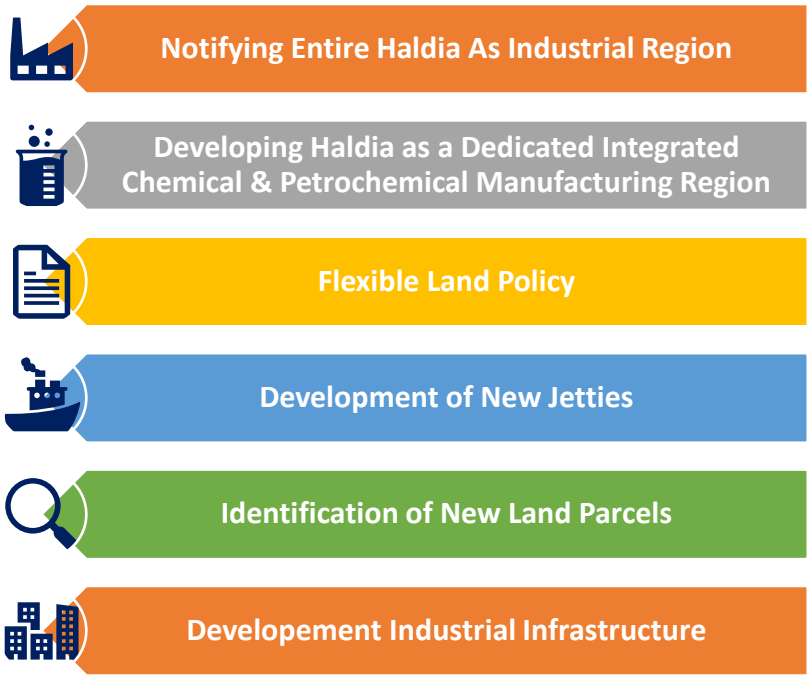
ii. **Inadequate Industrial Infrastructure:** Key enabling infrastructure at Haldia, such as Low Salinity Filtered Water, High Voltage Grid Connectivity, and CETPs, is not available, because of which, industries incur higher capex on providing alternate infrastructure.

iii. **Industrial Land:** Existing land has already been used, and new industrial land parcels are needed to promote further growth. Existing land policies are major impediments and need to be amended. (Reference page number for the incentive chapter will be added once the report is finalized.)

iv. **High Logistics Cost of Business:** Due to lower industrial growth in the entire eastern region, products made from Haldia need to be marketed in the Northern and Western Region, incurring higher logistics costs vis-à-vis peers.

v. **Fiscal Incentive:** Considering the high capital intensity of the chemical industry and additional cost being incurred due to infrastructure and market-related constraints, project economics suffer in the absence of any fiscal incentive from the state. Most of the developed states are offering fiscal incentives to promote industrial growth, and similar policy support is also crucial for the growth of industries in West Bengal.

C. Policy Support Needed for Growth of Haldia Region as the Chemical Hub of Bengal



i. **Notify the entire Haldia as an Industrial Region:** Considering the large-scale growth of the Chemical Industry in Haldia, the **entire area** can be notified as an Industrial Zone to ensure faster Environmental Clearance. Currently, the entire Haldia is not under the Industrial Region.

ii. **Develop Haldia as a Dedicated Integrated Chemical & Petrochemical Manufacturing Region:** Considering the scale of existing petrochemical investments in Haldia, a specialized facilitation framework with faster environmental clearances, common infrastructure, and downstream industry support may be considered to accelerate chemical-sector investments.

iii. **Flexible Land Policy** permitting mortgage and assignment, or to provide a definite timeline for obtaining permissions, to allow industries to raise funds or assign/sub-let land easily, to promote Ease of Doing Business.

iv. **Development of New Jetties/Ports:** To encourage further capacity growth, new jetties of a minimum 10-12 m draft and augmentation of port capacity are needed.

The draft also needs to be increased through dredging to ensure the arrival of larger parcels at Haldia.

v. **Identification of Land Parcels**

vi. **Development of Industrial Infrastructure**

a. Filtered Water Supply based on Desalination to ensure good quality water throughout the year
b. Common Utility Company to Supply Steam, Air, and Nitrogen to User Industries
c. Grid Connectivity to 200 KV/400 KV Headers to ensure reliable power to larger power-consuming industries
d. Common Effluent Treatment Plants (CETPS) to handle effluent from various industries and a single discharge system from the entire industrial region.

vii. **Augmenting Rail and Road Connectivity**: Apart from existing NH Connectivity, Haldia-Kolkata connectivity can also be built through Raichak to reduce travel time from the current 3 hours to about 1 hour and make it part of Greater Kolkata. It also promotes the growth of industries surrounding the Kukrahati-Raichak region.

viii. Incentive Support: To encourage growth of industries, the State Incentive Policy needs to be updated to support industrial growth. It may include –

a. Waiver of Stamp Duty/Land Conversion Charges
b. Waiver of Electricity Duty for 15 years
c. Waiver of Wheeling Charges on Import of Renewable Energy, as WB has limited potential, whereas national policy mandates growing use of renewable energy
d. Reimbursement of SGST incurred on Project Procurement
e. Fixed Capital Subsidy/SGST Reimbursement spread over 10-15 years of initial project execution

4. IMPROVING HALDIA DOCK CONDITIONS & JETTY CAPACITY

Haldia Port faces several critical infrastructural limitations that hinder its potential as a major industrial and commercial gateway. One of the primary constraints is the inadequate draft at the Sandheads, where Very Large Crude Carriers (VLCCs) and even moderate-sized vessels requiring over 9 meters of draft cannot enter the main dockyard. As a result, cargo is often transferred through lightering vessels and ship-to-ship operations, which not only adds significant extra costs but also introduces considerable safety risks during transfers. Furthermore, being a riverine dock, Haldia's operations remain heavily tide-dependent, which restricts vessel movement windows, limits overall operational efficiency, and reduces the port's ability to handle larger vessels consistently.

Another major challenge is the port's limited ship berthing capacity, which leads to congestion and extended waiting times for vessels. Priority berthing is frequently given to highly flammable and sensitive cargoes such as LPG, naphtha, propane, butane, and petrochemical feedstocks, causing substantial delays for other categories of cargo. These bottlenecks collectively increase logistics costs, reduce throughput, and deter potential investors looking for reliable and efficient port services.

To overcome these limitations, it is essential to establish and systematically maintain a navigation channel with a minimum constant draft of at least 10-12 meters, irrespective of tidal conditions. This can be achieved through a comprehensive long-term dredging strategy focused on regular maintenance, particularly to facilitate smoother movement of diverse cargo categories. Additionally, the development of new jetties and berthing facilities is urgently required to increase the number of simultaneous vessel handlings and significantly reduce port congestion.

5. ENHANCING WATER INTAKE SOURCE & POWER INFRASTRUCTURE FOR INDUSTRIAL GROWTH

5.1 Enhancing Water Intake Source

Haldia faces significant water infrastructure challenges that impede its projected industrial growth. Currently, only Haldia Energy Limited (HEL) has its own direct river water intake system, while all other industries are heavily dependent on the Haldia Development Authority (HDA) for pre-treated water supply. This centralized dependency, coupled with limited scalability of existing supply capacity and poor water quality from the Geonkhali Water Treatment Plant — characterized by high conductivity, high turbidity, and high Total Dissolved Solids (TDS) — makes the water unsuitable for critical industrial applications such as process use, heat exchange, and heat transfer systems.

To address these constraints, it is recommended that the **large industries should be encouraged to develop dedicated river water intake infrastructure**, thereby reducing pressure on the Haldia Development Authority. A long-term, robust **water augmentation plan must be implemented, including investment in advanced treatment systems such as Ultrafiltration (UF), Reverse Osmosis (RO), and Electrodeionization (EDI) at Geonkhali** to improve water quality. Drawing inspiration from Mundra Port's successful model of Seawater Reverse Osmosis desalination. Haldia may explore long-distance water transfer through a pipeline from **upstream Ganga, for example, from Farakka,** along with seawater desalination and widespread wastewater recycling through Common Effluent Treatment Plants (CETPs) with Zero Liquid Discharge (ZLD) systems.

HALDIA MAY ADOPT MUNDRA PORT WATER SUPPLY MODEL

In Gujarat, Mundra relies on a network that draws water from the Narmada River via the Sardar Sarovar canal system, pumping it across an alignment of 400 to 450 kilometres using large-diameter steel pipelines and automated booster stations. The proposed West Bengal model replicates this blueprint by tapping the main stem of the Ganga River at the Farakka Barrage in Murshidabad. This pipeline will span approximately 350 to 400 kilometres, utilizing existing transport or riverbank corridors to deliver raw, low-salinity freshwater directly to a centralized balancing reservoir and advanced water treatment facility at the Geonkhali hub for localized industrial distribution.

This pipeline infrastructure delivers a dual-benefit architecture that simultaneously stabilizes onshore manufacturing and offshore maritime operations. Onshore, heavy manufacturing units like oil refineries and petrochemical plants require continuous, low-TDS (Total Dissolved Solids) water for high-pressure boilers and cooling towers. Tapping the Farakka pipeline eliminates the equipment corrosion and scaling caused by salty local water, drastically lowering industrial pre-treatment costs and providing the supply security needed for capital expansion. Offshore, the project leverages natural hydrology to secure the port itself. While the pipeline feeds the factories, the parallel open river discharge from the Farakka Barrage maintains the downstream flushing velocity required to sweep heavy sediment out of the shipping lanes and into the Bay of Bengal, successfully maintaining the river draft required for deep-hulled cargo vessels.

Thus, if the Mundra Port model is adopted, it will allow Haldia to have reliable water intake facilities for the industries in Haldia. When integrated with localized wastewater recycling, Common Effluent Treatment Plants (CETPs), and backup desalination infrastructure, this long-distance pipeline will ensure total operational redundancy, establishing Haldia as a world-class industrial powerhouse.

The proposed Farakka to Haldia long-distance pipeline is proposed as a strategic infrastructure project modelled directly on the bulk water supply architecture of Mundra Port in Gujarat. Both coastal hubs share a critical operational challenge: they are surrounded by vast marine environments but lack the high-volume, low-salinity freshwater required to sustain heavy industry. While Mundra sits in the arid Kutch region with no local river systems, Haldia sits on a tidal estuary where seawater intrusion during dry months causes massive spikes in salinity, Total Dissolved Solids (TDS), and heavy siltation. To overcome these local constraints and unlock long-term economic growth, both models bypass vulnerable coastal waters entirely, looking hundreds of kilometres inland to secure a premium, perennial river source.

The structural design of this transmission network relies on a high-capacity bulk water grid that cuts across the state landscape.

5.2 Enhancing Power Quality in Haldia

Haldia does not face any power shortage. However, the main problem is in **power transmission and distribution**. The current network of substations and lines is not strong enough to handle the needs of large industries. This creates a major bottleneck for industrial growth.

To solve this issue, it is suggested that more power transmission substations need to be built, and the capacity of existing substations should be increased. Large industries should be directly connected to high-voltage lines of **220 kV to 400 kV**. This will ensure a reliable and uninterrupted power supply, allowing Haldia to support bigger industrial projects without electricity-related problems.

6. DEVELOPING HALDIA AS A MODERN INDUSTRIAL CITY

6.1 Development of ESI Hospital

Haldia suffers from severely inadequate ESI and public healthcare facilities. The existing ESI centre functions only as a dispensary and lacks hospital-level care. In case of serious illness or industrial accidents, workers are forced to travel long distances to the ESI Hospital in Uluberia, causing critical delays in treatment. A large section of people in Haldia contributes to the ESI scheme, but still, there is an absence of proper healthcare facilities, emergency/trauma care, and burn units. The sub-divisional hospital is also in poor condition, and the lack of quality private hospitals further worsens the situation, as evidenced by the tragic loss of lives during past industrial accidents.

To address these critical gaps, a full-fledged **ESI Hospital** is recommended to be established immediately in Haldia, equipped with an **Emergency & Trauma Care Unit and a dedicated Burn Unit**. Simultaneously, the existing public healthcare infrastructure must be upgraded, and efforts should be made to attract reputed private hospital chains by offering suitable land parcels. Developing a multispecialty hospital ecosystem will ensure timely and quality healthcare for the industrial workforce as well as the local population.

6.2 Four-Lane Road Infrastructure within Haldia City

At present, most roads within Haldia are narrow and congested, leading to traffic bottlenecks, delays in goods movement, and inconvenience to daily commuters. It is strongly recommended to develop a comprehensive four-lane road network across the entire Haldia city, including major arterial roads, industrial corridors, and connecting links to the port and key industrial zones. This upgraded road infrastructure will significantly improve traffic flow, enhance safety, support efficient logistics, and create a more organised urban landscape.

6.3 Skill Development Centre & Industrial Ecosystem

Haldia is facing a serious shortage of skilled industrial workers, particularly in trades like aluminium welding, pump operation, motor mechanics, and rewinding. This has led to high equipment downtime, as critical repairs often require sending machinery to distant cities like Nagpur or Kolkata. The supporting MSME ecosystem of fabricators and repair units has also weakened, and local youth are increasingly moving away from core industrial trades toward IT jobs.

Establishment of an **Industrial Skills & Safety Training Centre** in Haldia under a Public-Private Partnership (PPP) model is suggested. The centre should function as a **common facility** shared by all industries in the region, while simultaneously offering **tailor-made training modules** customised to the specific requirements of individual plants. For instance, the operational risks and technical needs at Haldia Petrochemicals Limited (HPL) are significantly different from those at power plants like Haldia Energy Limited.

The centre can also integrate **ITI-level training** with advanced, industry-specific programmes to bridge the current skill gap effectively. It should follow a **"Train-to-Deploy"** model, ensuring every trainee is pre-certified and fully job-ready through practical hands-on training, plant-specific safety drills, equipment handling simulations, and customised technical modules.

6.4 Development of Labour Welfare Centres

Haldia suffers from poor labour welfare infrastructure. Existing labour welfare centres are largely defunct, there is a lack of worker housing, community halls, and recreational facilities, and a large portion of the workforce consists of migrants living in inadequate conditions. This affects worker retention, productivity, and Haldia's ability to attract talent.

Development of modern **Labour Welfare Centres** and an integrated "**Haldia Industrial Welfare Hub**" that includes worker hostels, community spaces, recreational facilities, and basic amenities is recommended in the region.

7. DEVELOPMENT OF DATA CENTRES IN NANDIGRAM

Nandigram can be strategically developed as a future-ready **Data Centre and Digital Infrastructure Hub** for Eastern India. Its proximity to Haldia Port, access to industrial corridors, and the availability of large land parcels make it an ideal location for hyperscale data centres. By creating a dedicated Data Centre Park in Nandigram, the region can attract major global hyperscalers and cloud service providers looking to expand their footprint in India.

The Union Budget 2026 has provided a significant boost to the sector by announcing a **tax holiday until 2047** for foreign cloud providers using Indian data centre infrastructure to serve global clients. This incentive, combined with the massive surge in AI-driven workloads, positions Nandigram as a highly attractive destination. A well-planned Data Centre Park here can attract substantial **Foreign Direct Investment (FDI)**, with individual hyperscale projects often involving investments between ₹5,000 crore to ₹20,000 crore.

This development will not only complement Haldia's traditional industrial base but also create high-value jobs in engineering, cybersecurity, data management, and IT services, thereby transforming the region into a balanced hub of manufacturing and digital economy.

8. CONCLUSION

The BCC&I team has prepared this recommendation report in consultation with its industry stakeholders. The main objective is to present its understanding of the crucial requirements for the resurgence of industry in Bengal before the newly elected Government. The Chamber would be honoured to have the opportunity to work with the new Government towards its endeavour for a Rejuvenated Bengal.

ROYAL EXCHANGE