

LOGISTICS CHALLENGES IN SETTING UP OF THERMAL POWER PROJECTS

**By
Pankaj Gadhia
Chief Executive Officer**

Logistics - Thermal Power Sector

- Capital goods transportation, at the time of setting up of the plant
- Transportation and storage of coal, flyash & other consumables

Different stages in procurement of capital goods

- Identifying suitable vendors for supply of Capital goods
- Short listing & selection of vendors
- Signing of contract
- Movement of capital goods from origin to destination port
- Customs clearance & transportation from destination port to site
- Handling & storage at site
- Movement to erection point and offloading

Some of the Critical Factors in Logistics for setting up Thermal Power Projects

- Access for cargo movement to the proposed site
- Selection of a gateway port and alternate ports
- Guidelines while WIP
- Scheduling
- Shipping
- Packing & marking
- INCO terms

Some of the Critical Factors in Logistics for setting up Thermal Power Projects

- Understanding roles & responsibilities of different agencies
- Handling, storage, preservation, transportation & customs clearance
- Loss prevention and insurance
- Documentation and permissions.
- Inventory management at site
- Safety
- Selection of Logistics Service Provider

Access for cargo movement to the proposed site

- Acquiring land for such large project is generally an issue. However, at the time of selection of site, if there is a choice available the ease or difficulty of movement into and ex site needs to be considered
- Infrastructural constraints and local situations
- Conduct road surveys for ascertaining feasibility of transporting heavy equipments.
- Conditions of road, rail, port facilities, site all impact significantly on efficiency of project supply chain.

Factors for selection of a gateway port

- Road / rail / waterways access to site from port
- Minimum hindrance for transportation from port
- Working environment/congestion/draft at port
- Space & handling equipments availability
- Port charges
- Overall logistics cost
- Identifying alternate ports

Guidelines while WIP

- While fabricating / manufacturing of equipment, making provision for lifting hooks / saddles / lashing hooks etc is very critical for smooth handling of heavy packages.
- Technical inputs on dimensional / weight restrictions could help the manufacturer to plan, as per the dimensions of containers / trucks and other constraints which are faced while transporting the equipment.

Scheduling

- Sequencing of production and shipping by supplier, as per project construction requirements so as to reduce handling & storage needs and inventory costs at site.
- Stowage plan, loading plan at origin
- With advance planning undue storage at port/site to be avoided
- Flow of shipments to be at regular intervals so as to avoid bunching of vessels and to facilitate unloading at site
- Carrier planning & scheduling: match readiness of cargo, monsoon
- e.g. At some ports like Kolkata/Haldia, if the vessel needing higher draught, arrives during a low tide period, the vessel will have to wait at the sand heads for a long time, thus resulting in the importer not getting the cargo on time and where the erection team awaits the cargo

Shipping

- For international transportation, the modes are :
 - Ocean transport: containers, break bulk
 - Air freight : line flights, charter flights
- For domestic transportation, the modes are :
 - road, rail, air, water ways
- Pre-alerts, availability of original documents and scrutiny of transport documents

Packing & Marking

- Type of packing is based on the cargo to be packed. Small & loose items like bolts etc shall be kept in a metal boxes instead of wooden boxes to avoid loosing them in transit storage.
- Points to be considered includes usage of treated wood conforming to plant quarantine norms, usage of right dunnage, lashing material, choking blocks
- Marking centre of gravity, protection requirements, proper provisions for lifting, hooking and stooling along with mandatory marks and numbers

Understanding INCO terms

- INCO terms are standard trade definitions from the International Chamber of Commerce
- INCO terms are a sort of contractual shorthand which allows the parties to easily specify their understanding as to:
 - the transport costs which the seller will cover, the point at which risk of loss will be transferred from the seller to the buyer
 - who must handle customs formalities and pay duties.

Roles & responsibilities of different agencies

- Different agencies involved: Freight Forwarder, Shipping line, Customs, Port, Surveyors, CHAs, Transporters etc. to work with seamless integration for achieving optimum efficiency in logistics operations.
- Their roles in providing various services and coordination among them is of vital importance.

Handling, storage, customs clearance & transportation

- Handling methodology – Standard Operating Procedures
- Storage at port / site
- Customs clearance activity – process and documentation
- Modes of transport, their suitability & limitations at destination port/site

Loss prevention and insurance

- Insurance – coverage & exceptions
- Steps involved in loss minimization
- Insurance claim process

Documentation

- Accurate and complete documents at origin and at destination for smooth shipment handling
- Timely availability of original documents
- Project registration & reconciliation process

Inventory management at site

- Methodology to be followed, software & hardware support, handling equipments
- Warehouse Management System – structured receiving, put away & retrieval processes to enable smooth flow of goods
- Inventory Management System – stock management in an error-free and efficient manner
- Use of appropriate material handling equipment for ease & speed of operations

Safety

- Safety comes first & foremost – for both men & materials
- Safety measures to be followed while handling, storage & transportation of cargo
- Good maintenance of tools & tackles will ensure safety while handling
- Training of all personnel involved is very important

Capability required for integrated logistics services provider

- At origin, ex-works logistics services like pickup and forwarding
- International transportation by all modes including charters
- Port handling on arrival including ship husbanding & stevedoring services
- Route surveys including suggesting alternate routes & modes, if required
- Experience in Barge operations for coastal & inland waterways transportation
- Customs clearance license & capabilities of project registration & reconciliation
- Transportation of general cargo & ODC packages by hydraulic axles & mechanical trailers
- Warehouse & inventory management
- Information flow & shipment tracking

Key challenges - moving ODC consignments

- Selection of site very important from point of view of connectivity to major ports
- Connectivity to site including National Highways, State Highways, village roads
- Final approach road to site and local conditions
- Bridges and culverts enroute
- Permissions from Transport Authorities
- Availability of right equipments
- Competent and experienced operators
- Safety norms

Recommendations for smoother ODC movements

- Roads, bridges should be made to enable transportation of minimum load of 20MT per axle.
- Single Window system for permissions for nation-wide transportation of project cargo including ODC / Heavy lift packages, within a stipulated time frame. This should ideally be at the time of Project approval.
- At the Project finalisation / approval stage, there needs to be a mechanism so that the ports as well as the concerned road transport authorities are informed of the expected cargo thus enabling them to work on their resource planning and decision making.
- Last but not the least, *in the interest of the Nation*, gateway ports need to give adequate importance to project cargo instead of running after bulk cargo for revenue enhancement.

THANK YOU