

**Sector:**

**Logistics**

**Project Title:**

**Cold Chain Facilities**

**Project Description**

Cold chains are essential for storage and distribution of perishable goods and temperature sensitive pharmaceuticals and biological preparations and forms an integral part of their supply chain. The present cold storage capacity in the Country is grossly inadequate and with a positive future outlook for the agro, food processing, retail and pharmaceutical industry there is an urgent need to scale up and develop integrated cold chain facilities across the Country.

The Government of Madhya Pradesh proposes to develop modern cold chain facilities in the State. The key component of the facility would be the temperature controlled warehouses of varied capacities, refrigerated transport vehicles and other auxiliary facilities. The envisaged project would have end-to-end capabilities across the entire supply chain and would cater to the requirement of various industries where controlled atmospheric conditions are necessary for storing raw materials, intermediate and finished goods.

The key storage unit will be established at Ratlam on over 1.5 acres of land and would be linked with large number of villages (collection center) via the refrigerated transport vehicles. A new concept of village refrigerator would be employed under which 5 – 10 tonnes refrigerator (village refrigerator) would be established in far off villages and would act as miniature cold storage units.

The key components of the envisaged cold chain unit are as follows:

S.No	Components	No of Units	Capacity
1	Cold Storage	1	3000 MT
2	Refrigerated Transport Vehicle	5	4 – 5 tonnes
3	Village Refrigerators	20	5 – 10 tonnes
4	Cold Chain Containers	50	0.5 – 1 tonnes

**Key Target Market**

The envisaged facility would especially cater to the following industries:

- Milk and Milk Products

- Fruits and Vegetables
- Meat and Meat Products
- Packed Food
- Beverages
- Biologicals

### **Project Rationale**

Agriculture and horticulture are two prominent sectors of MP's economy. A large portion of the annual production constitutes of perishable commodities for which temperature controlled storage is essential. At present due to gross deficit of cold storage capacity, a large part of the perishable production is wasted and the farmers are forced to sell it at throw away prices in the harvesting season only. Further, due to inadequate numbers of cold chains, there is a frequent shortage of perishable agriculture commodities in the post harvest season leading to inflation in the price of essential goods.

There is an urgent need to build the integrated cold chain functions across the State in order to provide advanced environment controlled warehousing and transport solutions, right from the farm till end use consumption. It will assist in storage of significant quantity of commodities to enable uninterrupted supply throughout the year.

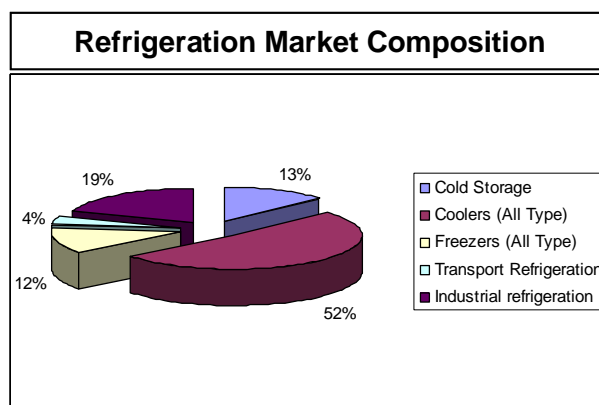
Since MP is poised to be the next hub of food processing, pharmaceuticals, herbal and logistics industry, the development of cold chain infrastructure is imperative as it forms an integral part of their supply chain.

The facility would also assist in various immunization programmes for storage and supply of temperature sensitive vaccine and other immunological as the coverage area of such programmes are severely restricted in the absence of adequate logistic support.

### **Market Potential and Demand Dynamics**

65% of Indian population is engaged in agriculture and it is a key sector with profound impact on the nation's economy. The total agriculture output contributes nearly 40% to the national income. The Country approximately produces nearly 137 million tonnes of fruits and vegetables annually. Since most products are perishable they require specialized environment controlled facilities for prolonged storage and transport.

India is the world second largest producer of fruits and vegetables. The annual production of fruits is 46.8 mn tonnes while the annual production of vegetables is around 91 mn tonnes which accounts for 10% and 14% of the global production respectively. Although the Country's annual horticulture production is in excess of current consumption but in the absence of adequate cold storage facilities a large part is wasted. The amount of waste is estimated to be nearly 20-25% of the production which is equivalent to 20 million tonnes or USD 10 bn. Occasionally this leads to shortage of essential commodities in the market and inflation of prices resulting into imports.



The total market size for the cold storage in 2003-04 was about 28 million tonnes. The smaller capacity storage at hotels, restaurants airports etc accounts for nearly 2/3<sup>rd</sup> of the total capacity while the rest is contributed by large cold storage with capacities ranging from 1000 - 10,000 tonnes.

Commodity wise distributions of cold storage capacity in the counter is as follows:

Commodity	Units	Capacity (lakh tonnes)
Potato	2012	92.82
Multipurpose	447	7.63
Fruit & vegetable	198	1.07
Fish	360	0.73
Meat & Fish	30	0.15
Milk & dairy Product	272	0.68
Others	101	0.36
<b>Total (check)</b>	<b>3443</b>	<b>103.53</b>

Significant gap exists between the required and available capacity of cold chains in the Country. The changing lifestyle and shifting consumption pattern indicates

towards increasing use of processed and packaged food. A robust supply chain with advanced environment controlled functions is imperative to support the industry.

At present there are 115 cold storage units located in 23 district of MP. Presently these are mainly used to store potato which is a key perishable commodity used in the State through out the year. Due to high demand, ample potential is there to establish cold chain units in the State.

### Why Madhya Pradesh?

- The Strategic central location of Madhya Pradesh provides incomparable advantage for logistic industry. The State has near equidistance connectivity with the key commercial centers of the Country and has a well developed infrastructure of roads, rails and airports. 5200 km of National Highway runs across the State while the total length of the roads in the State is estimated around 67,600 km. MP also has 5000 km of rail networks with 425 trains passing through the State daily.
- MP has 5 operational domestic airports. The Indore airport has the capability to handle international flights. The mammoth transport infrastructure of the State provides connectivity with all the key cities and major ports.

The State has a thriving agriculture industry and it is expected to become a key agro and food processing hub. Already, FMCG giant Proctor & Gamble and pharmaceutical major such as Ranbaxy, Lupin having a presence in the State. Thus in future, the State would require huge storage capacities and would offer lucrative opportunities for cold storage industry

### Location Analysis

Ratlam has been identified as the ideal location for establishing the cold chain.



### Government Support

The State Government will be the key facilitating agency for the envisaged project. It would extend key fiscal and non-fiscal benefits to the project developers.

<b>Proposed Capacity</b>
The proposed capacity for the cold storage units is 3000 metric tonnes.
<b>Proposed Investment</b>
USD 1.1 mn or 5 crores INR
<b>Returns</b>
The Internal Rate of Return is estimated around 20-25%
<b>Coordinating Agency</b>
Madhya Pradesh Warehousing corporation