5 PRODUCT PORTFOLIOS

1. Transportation of cargo at a lower cost

Wentainer can transport cargo at a lower cost when compared to Ship and railway.

Cost of transportation of cargo per Ton is rs 1.41 for railway while it is 1.19, for a distance of 1 KM. However for wenatiner system it will be less than rs 0.10 for the same.

Since, Wentainer can avoid lot of energy losses that occur in ship,railway s/m and by using solar energy having lower energy cost it is possible to achieve lower transportation cost.

1. Water supply

It is possible to supply water for agricultural and industrial needs to the areas through which wentainer path passes through. It is possible to recover the cost of construction of the path from the profit of cargo transportation easily hence water supply can be done at a lower cost.

1. Generation and supply of electricity

It is possible to integrate solar panel onto the rail structure of wentainer system without any other additional cost. On a 1 km path solar panels together having a capacity of 600kw can be placed without additional cost and an energy of 2700kwh can be generated daily. Due to this solar energy it is possible to operate wentainer system without direct and indirect pollution.

By generation of energy for transportation it is possible to avoid service providers and their charges. The skyrocketing fossil fuels can be avoided by solar panels having a life span of 25-35 years with a very low constant generation cost.

Of the generated electricity half or less than it will be required for transportation. The surplus energy can be supplied to the grid or to nearby villages.

1. Profitable accommodation facilities

It is possible to provide accommodation facilities on the wentainer path due to its small width and height in a profitable way. This facility can be used to create commercial structures such as shops , structures for accommodation of poor can be done.

By acquisition of land and constructing wentainer path it will be possible to achieve transportation of cargo at lower cost, supply of water, generation of electricity and provide accommodation facilities parallelly.

1. Automation of the transportation system

Since inland transportation is done at lower speed the staff work hours are very long and it is necessary to provide food and accommodation on the barge/boat. All of this increases the cost.

However for wentainer system since it is fully automatic all of these costs can be avoided.

7) Product cost

To build wentainer pathway which can have large scale goods transportation (above 1 million TEU per year) and which is able to supply 12 TMC water (12 m3/s ) per year require Rs 7 crore to 10 crore per km.

To lay solar panels together of 600kw in a km requires Rs 3.5 Cr.

For a wentainer unit which carries 10 TEU requires rs .30 crore.

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8) Revenue

a) Income from good transportation

The comparison chart of three different transportation system on basis of construction cost, running cost, fuel cost and balance amount:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transportation Mode | Construction Cost (per KM) | Running charge (TEU/Km)\* | Fuel Cost (TEU/Km) | Balance amount  (running – fuel) |
| Railways | Rs 7-10 crore | Rs 19.74 | Rs 10.76 | Rs 8.98 |
| Inland Water ways | Rs 50-100 crore | Rs 8.67 | Rs 11.07 |
| Wentainer | Rs 7-10 Crore | Rs 0.30 | Rs 19.44 |
| \*Railway cost is kept as a base charge 1 TEU = 14 TON | | | | |

Therefore when one million TEU is transpoted through a 1km path for a year then the cost of transportation while neglecting fuel cost for various modes are:

Railways – Rs 8.98 x 1000000 TEU = .90 Crore

Inland water ways - Rs 11.07 x 1000000 TEU = 1.11 Crore

Wentainer – Rs 19.44 x 1000000 TEU=1.94 Crore

Therefore the payback period of different modes when doing the cargo transportation is (expense / balance)

Railways:

7 to 10 crore/0.90 Crore =9.44 years

Inland water ways:

50 to 100 Crore/1.11 Crore= 67.57 years

Wentainer

7 to 10 Crore/1.94 crore =4.38 years

Although both railway and wentainer system has the same initial construction cost, the wentainer system will be able to generate profit in half the time of that of railways i.e. in just 4.38 years the initial investment is returned and from that point onwards an annual profit of 1.94 Crores is obtained.

B) Income through water supply

Using wentainer pathway which is used for transportation of cargo water supply can be achieved without any extra cost.

The volume of water that can be supplied through a wentainer path in a year = 12 TMC

Amount of 1 TMC water = Rs 425 Crore\*

(\* Tamil nadu – Industrial water tariff)

Therefore, amount for 12 TMC water = 12 X 425 Crore = Rs 5100 Crore

Of water supply charge if 20% of amount is considered as profit, we get 5100 X (20/100) = Rs 1020 Crore.

If the water is supplied to a distance of 500km ( For example in the upcoming Kochi-Coimbatore-Chennai industrial corridor if we build a wentainer path and if we supply water from Kerala to TamilNadu), The profit we obtain every year in a Km path =1020 Crore/500 Km = Rs 2.04 Crore per year for a km

Since Kerala obtain 50% of sales rate by water supply, Kerala can gain a high income (Rs 425 Crore X 50/100 =212.5 Crore per TMC).

1 Wenatiner

Wentainer is an inland water transportation system. The main advantage of the system is that it can transport cargo with lower cost while not being affected by the problems that the existing inland water ways has.

2) Working

The wentainer system works as a convoy of boats in straight line(3.25m Width ) which is able to carry a container (33 TON) or equally weighing cargo. A three-rail system situated in the structure constructed above the water path helps in the movement and control of the wenatainer. The wentainer initiates movement by applying force onto the middle rail called puller rail , the other two rails along the sides of structure is used to guide the wenatainer along the path. Wenatiner system has an engine unit situated at the front boat of the straight convoy which applies the force on the rail. The entire system works with help of electricity generated by the solar panels situated above structure.

3) Advantages

The advantages of wentainer system over the conventional inland waterways systems are:

1. Cargo can be transported by using only one by third of energy used by a propeller system.
2. Can use solar energy directly which has lower generaton cost.
3. Direct and indirect pollution is minimized during the cargo transport.