



Press Release

Kawasaki Rikuso Transportation Co., Ltd. Sets Up West Bengal's First Solar Powered Temperature - Controlled Warehouse In Singur

Singur, 21st January, 2019: Kawasaki Rikuso Transportation Co., Ltd. (KRT), headquarter in Tokyo has set up West Bengal's first **Solar Powered Temperature - Controlled Warehouse** in **Singur** for temporally storage of vegetables for farmers. The Solar Powered Temperature-Controlled Warehouse project has been inspired by **Ms Mamata Banerjee**, Hon'ble Chief Minister, Govt Of West Bengal. The project was today inaugurated by **Dr Amit Mitra**, Hon'ble Minister in charge, Department of Industry, Commerce & Enterprises, Department of Finance, Department of Information Technology & Electronics and Department of Micro Small and Medium Enterprises and Textiles in the presence of **Mr. Subrata Mukherjee**, Hon'ble Minister in Charge, Panchayat and Rural Development, **Mr Tapan Das Gupta**, Hon'ble Minister in Charge, Department of Agriculture Marketing, **Ms Asima Patra**, Hon'ble Minister of State, Department of Programme Monitoring (Independent Charge), Department of Agriculture, Department of Fisheries and Department of Backward Classes Welfare, **Mr Rajesh Kumar Sinha**, IAS, Secretary, Department of Agricultural Marketing, **Shri JP Meena**, IAS, District Magistrate Hooghly, **Mr Katsuo Matsumoto**, Chief Representative of JICA **Mr Masayuki Taga**, Consul-General of Japan, **Mr Kazuya Nakajo**, Chief, JETRO, & **Mr Keiichi Higuchi**, **President, Kawasaki Rikuso Transportation Co., Ltd.**

Farmers can grow and increase their income by adding values through keeping freshness of their vegetables using the Temperature-Controlled Warehouse, situated at Tapasi Malik Krishak Bazaar, in Singur district, Hooghly, West Bengal. The warehouse is directly connected to the auction hall of Krishak Bazaar so that the function of Bazaar will be enhanced dramatically. The warehouse has been built with the support of JICA (Japan International Cooperation Agency) and the land has been provided by Government of West Bengal.

“Conventional large capacity warehouses are normally constructed in remote location from farmers which leads to the farmers, who do not own trucks, experience difficulties to avail these warehouses. KRT owns and operates solar powered warehouse with 24x7 temperature-control function in Japan, and it has been serving logistics services to mainly to packaged foods and confectionery companies. By utilizing its temperature and humidity control experience and knowhow, we decided to introduce and apply this technology to India. To make those warehouses ‘affordable’ to farmers, we have decided to deploy many small warehouses within the predetermined limited geographical area. Under this concept, farmers can choose the closest warehouse from his/her farm”, said **Mr Keiichi Higuchi**, **President, Kawasaki Rikuso Transportation Co., Ltd.**



The most important objective for setting up this warehouse is to increase the income level of farmers by allowing them to utilize this temperature-controlled warehouse to keep the freshness of vegetables which will eventually increase the value of those vegetables. West Bengal produces lots of quality vegetables. Since not many temperature-controlled facilities available, vegetables become rotten, thrown away, or sold with heavily discounted price.

In 2019, KRT is planning to build more warehouses in North Bengal at the Krishak Bazaars in Phansidewa and Dhupguri. In addition to these warehouses, KRT is going to invest intensively in Northern Bengal with the 5 year-plan of building 100 solar powered temperature-controlled warehouses in that area.

Characteristics of Solar Powered Self Generating And Charging Temperature Controlled Warehouse

System Operation

The system will generate electricity from PV panels to operate A/C and charge batteries simultaneously during daytime. It will discharge electricity from batteries to operate A/C during evening time or rainy days when PV panels cannot generate enough electricity, thus temperature can be controlled 24 hours. Farmers will be able to store their vegetables safely and electricity bills from local utility company can be minimized.

Value Add Activity Room is prepared in the warehouse to contribute to promote branding of local vegetables. Value Add Activities mean works/activities to add additional value to vegetables to be sold to consumers such as grading, selection, and packaging which will allow commanding higher price possible than selling them in simply volume, hence it will contribute to increase the income level of farmers. Also, we are expecting to contribute to make “Made in Singur” a brand of those locally grown vegetables.

Controlling temperature and humidity by “Shikkui” and “Nizuri”

Seven Hundred Kilogram of Japanese “Shikkui Plaster” was applied on the surface of inside wall of the warehouse to make 6mm thickness. Also “Nizuri” was installed on the wall. “Shikkui Plaster” is a Japanese traditional wall making material and it was used in ancient warehouses to store rice and salt when A/Cs were not available. Shikkui is made from slaked lime, sand, glue, and shredded plant fibers mixed and kneaded with water and it absorbs moisture to protect the growth of molds under the Japanese climate with high temperature and humid.

“Nizuri” is another traditional technique used in Japanese warehouse by installing wooden made lattice works on the wall. In addition to protecting walls from bumps by cargo, it also allows chilled air circulating through lattice works so that moisture does not stay in a certain place. This will eventually protect the growth of molds, ie providing Food Safety and Security.



Warehouse Specifications	Dimension 1,921 ft ² (Battery Room: 393 ft ² , Value Add Workspace: 510 ft ² , Temp Controlled Storage: 765 ft ²)
Solar Power Generation Facility	82Kw: 255Wp x 322 PV Panel (multi crystalline silicon) Supplied by Tata Power Solar Systems Limited
Storage Batteries	2V 420Ah x 240 cells supplied by TAB (Tovarna Akumulator Baterij d.d)
Power Conditioners	25Kva “Cool Room” Hybrid system, Grid Connection, supplied by Optimal Power Solutions Pvt Ltd.
Air Conditioner	Cooling Capacity (Min-Max): 14.1 (7.0-14.1) Kw, 4.0 TR 4 Way Cassette Type PLY-SP48BA (Indoor Unit), PUY-SP48KA (Outdoor Unit) Supplied by Mitsubishi Electric India Pvt. Ltd.

About Kawasaki Rikuso Transportation Co., Ltd. (KRT):

Kawasaki Rikuso Transportation Co., Ltd. (KRT) was founded by late Mr. Yoshie Higuchi in 1924 and it has been operating trucking, warehousing, and customs clearance services in Japan. Headquartered in Tokyo, KRT has 17 warehouses/dispatching offices in all over Japan. KRT has been serving logistics services mainly to Packaged Food and Beverage Companies such as Meiji (the largest confectionary company in Japan), Cadbury, and Coca-Cola. Thus, its expertise in storage and transportation of confectioneries and chocolates which requires control of temperature and humidity. KRT applies this experience/ knowhow in addition to the 24x7 operation of solar powered warehouse in Saitama, Japan to India.

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