

42. Grain Silos Project, Punjab, India



Photo Credit⁹¹

Background

A country known for its agricultural production, much of India's food grain is nonetheless stored in old warehouses. These outdated facilities use open-air cover and plinth (CAP) facilities, which are prone to damage and vulnerable to changing weather conditions. As a result, some USD 14 billion in food grain production was being damaged annually, according to the Food and Agriculture Organization (FAO).

The storage problem was particularly acute in Punjab, known as the "breadbasket" of India. Punjab produces around 22 percent of India's total food production, yet it had a seven million tons shortage in storage capacity. To help address this problem, the state government decided to pursue a pilot PPP with help from the International Finance Corporation (IFC) as transaction advisor. The PPP aimed to procure a private firm to build, own, and operate 50,000 metric tons (MT) of storage using silos, which are vertical sheet-metal, automatically operated structures that provide real-time monitoring of grain temperature and infestation. The silos were expected to facilitate bulk preservation and ensure the quality of stored grains for three years to avoid waste.

Project Structure

In 2010 the Punjab State Grain Procurement Corporation (PUNGRAIN), acting as the contracting agency, awarded a 30-year concession to LT Foods Limited, a Delhi-based food processing company with 40 years of experience in processing, storing, and marketing Basmati rice globally. The private partner was selected through a competitive bidding process based on a technical evaluation and lowest level of fixed tariff.

Under the contract, LT Foods is responsible for financing, designing, constructing, operating, and maintaining four 12,500 MT silos (total capacity of 50,000 MT) in Amritsar, Punjab. These silos

are to be used for storage of grain procured by the government for its food subsidy schemes and under its support-price operations. LT Foods was obliged to purchase the necessary land, build the facility, and prepare the silos for operation before the concession agreement became effective. At the end of the concession, the facility will remain with the private operator for private use. The total project cost was estimated at about USD 7 million. The project received debt financing from YES BANK and Rabobank.

PUNGRAIN maintains responsibility for: (i) procuring and delivering the grain in bags to the concessionaire for storage in the silos; (ii) making payments for guaranteed fixed storage service charges and variable service charges; (iii) setting standards and specifications; and (iv) monitoring and verifying the private partner's performance. Although PUNGRAIN retains the payment and demand risks, the financing, construction, commissioning, operating, and performance risks are transferred to the concessionaire. The fixed payments are meant to reduce the operating risks of the concessionaire.

The initial tariff for a fixed charge for the agreed tonnage (irrespective of the capacity used) was around INR 1,400/MT (USD 20/MT), and the variable reception and dispatch service costs were 7.5 percent of the fixed service charge. However, these rates were later deemed too high, resulting in the fixed fee being reduced to INR 1,100/MT (USD 16/MT) after a renegotiation process. It has been estimated that the government will save approximately USD 6 million over the concession period as a result of the renegotiated fee.

Lessons Learned

The 50,000 MT silos, which opened in April 2011, received a gold recognition award from the IFC, based on the role the project played in helping to reduce problems related to the conventional CAP

⁹¹ Thagadooran
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storage model and system of commission agents. The “Amritsar model of silos” project has become the role model for the Food Corporation of India (FCI) as well as other state governments in erecting silos across India.⁹²

This project benefitted from the following:

- A transparent and competitive bidding process, which helped lead to the selection of a qualified, experienced private partner on a least-cost basis;

- Clear delineation of the responsibilities and risks allocated between PUNGRAIN and the private partner, with objective and enforceable standards and specifications;
- Strong commitment to the project on the part of the public contracting party; and
- The willingness and ability of the parties to renegotiate the fixed storage fee to ensure the project's viability over the long term.

⁹² World Bank Group. *A Preliminary Review of Trends in Small-Scale Public-Private Partnership Projects*. Washington, D.C.: World Bank Group. 2014. Accessed June 14, 2019. <https://openknowledge.worldbank.org/bitstream/handle/10986/21060/932560WP0Box380ds0in0small0projects.pdf?sequence=1>;

World Bank Group. *India: Punjab Silos*. Washington, D.C.: World Bank Group, 2011. Accessed June 14, 2019. <https://library.pppknowledgelab.org/both/documents/1979>;

Sally, Madhvi. 2018. “Government Expects to Create 15 Lakh Tonnes Silo Capacity Under PPP by 2019.” *The Economic Times*, September 22, 2018. Accessed June 5, 2019. <https://economictimes.indiatimes.com/news/economy/agriculture/government-expects-to-create-15-lakh-tonnes-silo-capacity-under-ppp-by-2019/articleshow/65907877.cms?from=mdr>;

Aror, Archana. 2011. “Foods Processing co Ltd. Foods Sets Up Silos for Wheat Storage in Punjab.” *FNBNews*, May 2, 2011. Accessed June 5, 2019. <http://www.fnbnews.com/Top-News/Foods-processing-co-LT-Foods-sets-up-silo-for-wheat-storage-in-Punjab>;

Manuj, P. 2018. “Silo Storage of Food Grain in Gathers Momentum.” *The Hindu Business Line*, September 5, 2019. Accessed August 1, 2019. <https://www.thehindubusinessline.com/economy/agri-business/silo-storage-of-foodgrain-gathers-momentum/article24873035.ece>;

43. Kalangala Integrated Infrastructure Programme, Bugala Island, Uganda



Photo Credit⁹³

Background

Bugala Island, with a population of 60,000 located in Lake Victoria, Kalangala District, was situated within one of Uganda's poorest districts. Two-thirds of the economically active population on the island were engaged in fisheries and agriculture.

However, they lacked adequate infrastructure along the agricultural supply chain, such as safe, regular access to the mainland, and reliable electricity and clean water, which are vital for growing and promoting agriculture and fishing activities.

The complexity of developing multi-sector, small-scale island infrastructure had limited private sector investment in the island. In 2005 the residents sought assistance from InfraCo Africa's to rehabilitate and expand their infrastructure. To this end, InfraCo Africa partnered with the Ugandan government to establish a special purpose vehicle (SPV) called Kalangala Infrastructure Services (KIS) to oversee the provision of four infrastructure services on the island, namely a ferry boat connection, electricity, clean water, and roads.

Project Structure

KIS is a private, mixed-utility company created to design, finance, construct, own, operate and maintain four infrastructure projects, namely:

- Two roll-on/roll-off commercial ferries, each with a capacity of 18 vehicles and 109 seated passengers;
- A 1.6 MW hybrid solar and thermal power plant;
- A series of solar-powered, pump-based water supply systems to replace the existing system; and
- Upgrading the island's main 66 km road from an unpaved dirt road to a Class B gravel road.

The Government of Uganda offered political risk protection in the form of a sovereign guarantee under the SPV agreement. In the event of an adverse political event, the government agreed to purchase all project components with a termination amount sufficient to repay all equity and outstanding debt held by KIS.

The USD 44 million in capital costs would be financed through a combination of equity, debt, and grants. Equity capital would be provided by the Industrial Development Corporation of South Africa, the Uganda Development Corporation, InfraCo Africa, and the Emerging Infrastructure Fund.