DEVELOPING A CLEAN ENERGY SOURCE FOR THE NEXT GENERATION

Mozambique LNG is emerging as a leader in the global LNG industry, with 75+ trillion cubic feet (Tcf) of estimated recoverable natural gas discovered to date in Mozambique’s Offshore Area 1. The project sponsors have the expertise, skill and knowledge to safely deliver one of the world’s most significant LNG projects.
Huge quantities of natural gas produced in remote regions, such as northern Mozambique. Mozambique resources are ideally suited for a large-scale liquefied natural gas (LNG) development. Due to the relatively high cost associated with the development of an offshore natural gas field and construction of an onshore LNG facility, the seller must secure long-term LNG sales/marketing agreements with buyers and ensure LNG shipping agreements are in place to economically support the project.

The LNG Sale and Purchase Agreement (SPA) is the contractual commitment between a seller and a buyer. SPAs are typically long-term (20-year) agreements, and they are built upon the foundations of the seller’s gas reserves and the long-term creditworthiness of buyers necessary to secure project funding. Typical buyers of LNG include major end-users (gas utilities, power companies, large industrial users) as well as foreign government-controlled distributors.

In addition to specifying the volume commitment, pricing, and delivery market over the term of the agreement, SPAs also establish basic design parameters and operating procedures of both seller’s and buyer’s facilities. In addition, SPAs establish who is responsible for shipping and where ownership of the LNG cargo is transferred to the buyer. For example, under a free on-board (FOB) SPA, the buyer provides the ships and takes title to the LNG at the seller’s loading terminal. Alternatively, under a delivered ex-ship (DES) SPA, the seller provides the ships and title to the LNG takes place at the buyer’s discharge port. In either case, ships are typically owned and operated by reputable, experienced LNG shipping companies under a time charter arrangement.

During operations of the onshore LNG facility, the natural gas will be treated, conditioned and cooled to approximately -160°C. The liquefaction process reduces the volume of the gas by 600 times, making storage and shipping easier. The LNG will then be delivered from specially designed storage tanks through refrigerated pipelines to a nearby jetty for offloading into purpose-built LNG ships.

Once the LNG is loaded onto a LNG ship, the vessel maintains the LNG in liquid state for delivery to markets around the world. The LNG ship essentially acts as the “pipeline” for delivery to other markets around the globe.

LNG ships come in various sizes, shapes, and designs. There is no “one size fits all.” Ship size is optimized project-by-project. All ships are double-hulled, and the shipping industry has an excellent safety record over the past 40+ years. In addition, LNG is clean, non-corrosive and non-toxic.

One-way voyage times from Mozambique to terminals in northern India might take 7 days, whereas a LNG cargo delivery to certain Japanese markets would be approximately 17 days in duration. When the LNG ship reaches its final destination, the LNG is offloaded at the buyer’s re-gasification terminal. The LNG is transferred into storage tanks and then undergoes vaporization, a process that heats the LNG to convert it back into natural gas. The clean-burning natural gas is then delivered to the intended end-users for energy supplies.