

# Jettyless LNG Terminals



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Building on more than 40 years of experience in the design and operation of Single Point Mooring (SPM) systems, Bluewater has developed cost effective solutions for LNG transfer. The Bluewater Jettyless LNG Terminals are an alternative for conventional LNG ports.

These SPM systems are installed nearshore to receive and moor LNG Carriers for loading or offloading. LNG is then transferred between the Carrier and the LNG storage onshore, either directly or by utilising a Floating Storage Unit (FSU) for temporary storage offshore.

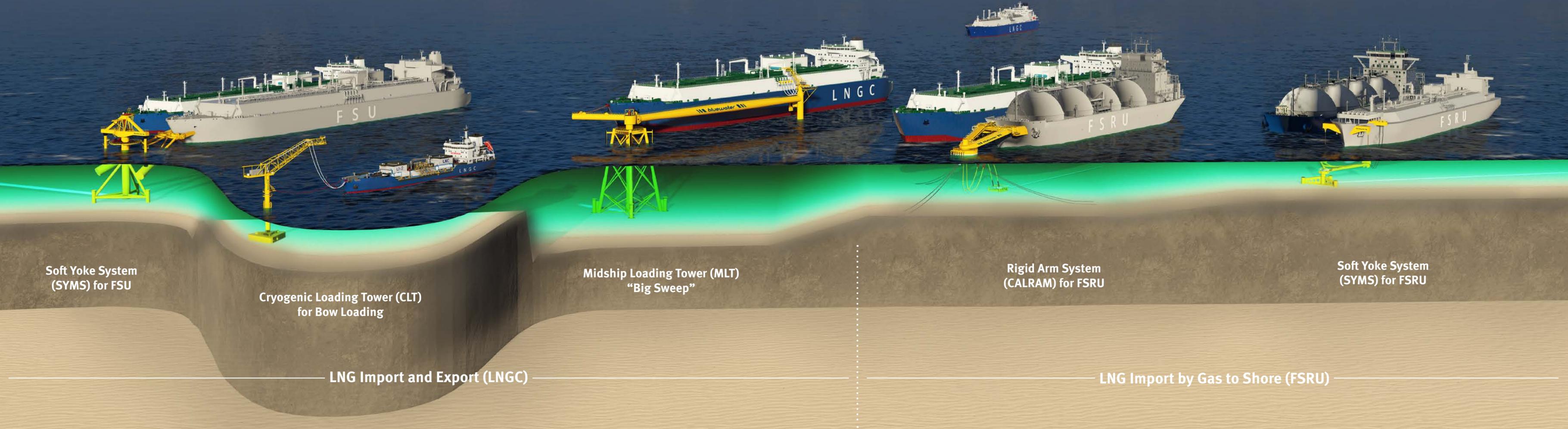
In case of gas demand, a Floating Storage and Regasification Unit (FSRU) can be utilised to receive LNG from a Carrier and transfer gas to shore-based facilities.

The field proven SPM technology allows the moored LNG Carrier to weathervane freely and align with the wind, waves and current. A high availability of the terminal for different sea states is one of the key advantages based on our decades of experience.

A typical range of Bluewater LNG terminals is available for individual needs, including systems for small- and large-scale import or export of LNG or other liquified gasses.

- Nearshore **Jettyless** terminals to load or offload LNG Carriers
- Suitable for all sizes of LNG Carriers
- Based on field proven **Single Point Mooring technology**
- Suitable for benign to harsh environmental conditions
- Qualified core LNG technology applied

 **bluewater**  
Jettyless LNG Terminals



# Specifications

## LNG Import and Export



### Soft Yoke Mooring System (SYMS) for FSU

*Conventional LNG Carriers / Benign to moderate sea states / Permanent FSU mooring for LNG storage*

*The SYMS is a system for permanently mooring of a Floating Storage Unit to store and either import or export LNG. Typically utilised for cases where the capacity of the onshore LNG storage is limited whilst LNG is transferred subsea through the SYMS from/into the FSU. Conventional LNG Carriers moor alongside the FSU to transfer the LNG by means of side-by-side loading. This SPM system is suitable for benign to moderate sea states. A range of soft yoke type systems is available to match the individual needs.*



### Cryogenic Loading Tower (CLT) for Bow Loading

*Small to large size dedicated LNG Carriers / Moderate to harsh sea states*

*The CLT is a system to moor dedicated LNG Carriers to import or export LNG. Aerial hoses are connected from the tower to the bow loading system of the Carrier. This SPM design is scalable to moor small up to the largest size LNG Carriers, whereas the minimum water depth depends on the LNG Carrier size. LNG transfer can be performed in moderate to harsh sea states without tug support, subject to the LNG Carrier capabilities. The CLT is unmanned and fully remote controlled.*

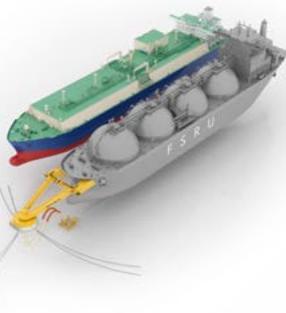


### Midship Loading Tower (MLT) "Big Sweep"

*Conventional LNG Carriers / Moderate to harsh sea states*

*The MLT is a system to moor conventional LNG Carriers to import or export LNG. Aerial hoses are connected from the tower to the midship manifold of the Carrier. The arm of the MLT is equipped with heading control to match the heading of the weathervaning LNG Carrier. This design provides a high availability in harsh sea states and requires limited tug support. The MLT is unmanned and fully remote controlled.*

## LNG Import by Gas to Shore



### Rigid Arm Mooring System (CALRAM) for FSRU

*Conventional LNG Carriers / Moderate to harsh sea states / Permanent FSRU mooring*

*The Rigid Arm System permanently moors a Floating Storage & Regasification Unit to receive LNG and transfer gas to shore-based facilities. This field proven design is easy to install and disconnect the FSRU offshore. The integrated SPM buoy will remain on location surviving most harsh sea states. The LNG is transferred from conventional LNG Carriers to the FSRU by means of side-by-side loading.*



### Soft Yoke Mooring System (SYMS) for FSRU

*Conventional LNG Carriers / Benign to moderate sea states / Permanent or disconnectable FSRU mooring*

*The SYMS with a permanently moored Floating Storage & Regasification Unit is able to receive LNG and supply gas to shore-based facilities. This conventional SPM system is applied for benign to moderate sea states. The LNG is transferred from conventional LNG Carriers to the FSRU by means of side-by-side loading. A range of soft yoke type systems is available to match the individual needs, including disconnectable systems.*

## References



-  Bluewater Offices
-  FPSO & FSO Systems
-  Turret & Tower Mooring Systems
-  Buoy Terminal Systems



Download the  
digital brochure