Floating Gas & FLNG Solutions
With the industry transitioning, SBM Offshore is developing a solid portfolio and business strategy to meet the needs of an evolving energy mix, with a more dominant role for gas and renewables in the future.

SBM Offshore takes a holistic approach allowing operators to finance, develop and monetize their projects. Our success using this integrated approach has ensured optimum results for project financing, engineering design, project management and operations.

Our starting point is to engage early on with clients and partners to assess the overall needs of a project – not just the technical requirements. While continually transforming our products and services to adapt to market demand, we have implemented new business models to facilitate the development of offshore projects in an economical, predictable and sustainable manner.

We leverage 60 years’ experience in the offshore energy sector including 20 years with large offshore gas projects and eight years of LPG FPSO operations. Our capabilities are complemented by the experience of selected partners to ensure that clients’ goals are met for success.

SBM Offshore believes the oceans will provide the world with safe, sustainable and affordable energy for generations to come.

We share our experience to make it happen.

“By leveraging our access to financing options and our capabilities and experience across the entire lifecycle from the early concept definition stage to operations, we are opening doors to more possibilities and widening the range of solutions for our clients.”

Bruno Chabas, CEO
SBM Offshore Floating Gas & LNG Solutions

As a world leader in offshore floating solutions, SBM Offshore offers its expertise to achieve clients’ goals. Our approach is rooted in 20 years of designing, building and operating large offshore gas, LPG and FLNG projects. Our success rests on combining our capabilities with the experience of selected partners.

2005 - 2013

Sanha LPG FPSO

SBM Offshore made history with Sanha as the industry’s first new build LNG FPSO when the vessel came on-stream offshore Angola in April 2005. It was operated by SBM Offshore for over 8 years with an uptime record of 99.7% and 0 LTIs. During this period, the Sanha LPG FPSO had a production capacity of 32.7 million bbls of propane and 21.7 million bbls of butane per day, and had a storage capacity of 135,000 cubic metres of propane and butane.

2007 - 2013

Cash Maple

Cash Maple field, located on Block 2/12 in the Southern North Sea, has been developed as an FPSO. Cash Maple is operated by Shell. The field is expected to produce gas for 15 years with an average production rate of 170 MMcfd and peak 200 MMcfd.

2008

New build FLNG

SBM started developing the early design for its FLNG - complemented by the expertise of its partners. Today’s new build FLNG design is ideal for small to mid-scale LNG fields; provides production storage capacity up to 200 k m3; is suitable for lean and rich gas streams and all key liquefaction technologies. It reduces the life cycle cost by benefiting from SBM Offshore’s lessons learned and technical standards. It is designed to achieve high production uptime. It can be offered on a turnkey or lease and operate basis.

2009

Independence Hub

SBM Offshore’s 8,000 ft (2440 m) Independence Semi-sub pipeline to shore. Independence Hub - deepwater record. The design made possible the development of associated gas in the Santos Basin.

2011

Cool™LNG Transfer System

SBM Offshore developed a connector for LNG hoses is our experience of hose connectors. Cool Connector 2007 - 2013

2013 - 2018

Deep Panulake MOPU

The Deep Panulake project produced and processed natural gas from the Deep Panulake field, approximately 250 kilometres (155 miles) southwest of Halifax, Nova Scotia on the Scotian Shelf. The platform was designed to produce up to 300 million cubic feet per day (MMcf/d) of natural gas. Design by SBM Offshore.

2013

FPSO Cidade de Paraty

Gas processing capabilities ensuring high uptime. Since coming on stream, SBM Offshore has built a strong operations track-record in gas processing capacity up to 173 mmcf/d for production off Brazil with operations of its ‘Generation 3’ FPSOs for pre-salt fields. The design includes a mature gas plant, with sophisticated gas processing and compression technology. It encompasses the use of membrane technology for CO2 removal and gas re-injection at extreme fluid density. Reliable performance of the gas plant is instrumental in ensuring production of the unit.

2014

Conversion FLNG

One of SBM Offshore’s conversion solutions is the patented TwinPac™ FLNG concept

2015

FPSO Cidade de Paraty

TwinPac™ FLNG concept. The design comprises two LNG tankers converted into a single integrated hull, which allows for greater storage capacity than a single tanker and optimises deck space. There is isobaric safety in design due to liquefaction technology selection and best practice approach, which includes dual nitrogen liquefaction system to avoid use of flammable material. The TwinPac is suitable for lean gas streams.

2016

LNG-to-Wire

LNG-to-Wire is a floating power plant delivering clean and low cost electricity to coastal areas. Built to deliver offshore standard reliability, it generates efficient base load capacity using LNG as a fuel source. Combined cycle technology is used to achieve efficient power generation. The concept is based on converting an existing LNG carrier and therefore provides a low cost and schedule efficient solution. This modular solution can accommodate power demands between 100MW and 500MW. The use of existing LNG tanks provides up to 75 days of autonomous power generation. The unit can be jetty or turret moored.

2017

Prelude Turret

SBM Offshore was first to offer state-of-the-art FPSO turret mooring technology. The method brings concrete benefits to FPSO operations.

2018

New Age FLNG FEED

SBM is enabling the development of stranded gas reserves through a strong operations track-record in gas processing capacity up to 173 mmcf/d for production off Brazil with operations of its ‘Generation 3’ FPSOs for pre-salt fields. The design includes a mature gas plant, with sophisticated gas processing and compression technology. It encompasses the use of membrane technology for CO2 removal and gas re-injection at extreme fluid density. Reliable performance of the gas plant is instrumental in ensuring production of the unit.
SBM Offshore is a recognized technology pioneer and market leader in floating production solutions with more than 300 cumulative years in operations and a track record across the full lifecycle from engineering to operations and from decommissioning to life extension. SBM Offshore’s solid results make it the leader in its market for the following: total daily oil and gas production, the number of years of operating experience and the number of FPSO units (34) delivered to date.

This unique experience allows SBM Offshore to optimize the cost equation across the lifecycle by leveraging the valuable feedback from the construction and operational phases into the design of the unit. In addition, benefits in terms of an efficient floater design translate into high performance operations for mature offshore gas and LNG production.

SBM Offshore is continually working to meet the challenges of the energy transition by building on its history of pioneering innovation and complete EPCI solutions including unrivalled offshore operations. We are developing solutions that lower both capital investment and operational cost without compromising on safety and reliability.

SBM Offshore supplies floating production solutions over the full product lifecycle with several distinct phases:

**TECHNOLOGY**

To maintain its leading position SBM Offshore continues to invest in new technology as well as advancing its field-proven technologies to improve efficiency and performance, which translates into cost optimization across the full lifecycle. Approximately 2% of its 2017 revenue was dedicated to all R&D projects across its product lines.

**FINANCING**

Past successes illustrate our leadership in project financing. SBM has financed over 20 FPSO projects since 1999, leveraging its access to financing through strong relationships with top banks. We have taken pioneering steps in the financing of FPSOs by going beyond the traditional bank route and making use of US Private Placement (USPP) and Export Credit Agencies (ECA). We bring financial confidence to a project by facilitating project pre-completion financing and ensuring investment in the asset over its design life. In addition providing the lease option for the unit frees up and de-risks a project for our clients.

**OPERATIONS**

SBM Offshore supplies floating production solutions over the full product lifecycle with several distinct phases:

**ENGINEERING**

- FPSOs
- Semi-submersibles
- Mooring systems
- Process modules

**CONSTRUCTION**

- Topsides
- Hulls
- Turret mooring systems
- FPSOs
- FLNGs
- Semi-submersibles
- Terminals

**SAFETY**

SBM Offshore’s HSSE policies and practices evolve in tandem with the industry with priority for an incident-free workplace and minimum risk to the health and safety of all its personnel.

Key to its safety strategy are:

- Inherent safety in the design of its units is critical especially at the early stages of a project where fundamental choices are made.
- Key focus is on further developing maintenance procedures as part of its asset integrity strategy to ensure safe and reliable operations over the lifecycle of the vessel.
- Process Safety Management is of paramount importance – particularly for the more complex processing units.

**PROJECT MANAGEMENT**

SBM Offshore’s strength lies in its expertise for project management, benefitting clients by de-risking their developments and ensuring predictability. We are recognized as a trusted contractor with a vast track record of delivering on schedule and on budget (FPSOs being our forte).
Leveraging its track-record, SBM Offshore can offer an all-round proposition to clients in the development and monetization of their offshore gas and FLNG projects. As an experienced and reliable player in the industry combined with our partnerships across the value chain, including our finance partners, we are a project facilitator. We can bring predictability and lower risk to the process.

By focusing on the areas of the value chain where we bring most value and by integrating our capabilities into our clients’ overall strategy, we ensure a perfect fit and the desired results. Engaging early on we can enable the project green light by bringing our gas trading partners into the equation and by facilitating financing. We view a project in its entirety and employ a holistic approach, thereby being able to offer economical and solid solutions across the value chain together with our partners (both technical and financial).

SBM Offshore has developed a safe and reliable portfolio of solutions for FLNG facilities. Offering both new build and conversion concepts for mid-scale FLNG, we enable a highly economical approach for exploiting small and medium sized offshore gas fields. To facilitate an integrated, all-round solution for clients, we engage with partners for solutions on FLNG topsides, LNG transport, grid off-take.

LNG Value Chain

Gas reservoir lifecycle

INVESTMENT
EPCII LEASE & OPERATIONS
LENG OFFTAKE

Financing - Predictability in schedule & cost - credibility - trust - lower risk

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99%
HISTORICAL PRODUCTION UPTIME

+ 300
YEARS CUMULATIVE OFFSHORE OPERATIONS

FLNG FEEDS
RELIABILITY

LARGE OFFSHORE GAS PROJECTS

SBM Offshore focus
Outside of SBM Offshore focus
Cryogenic offloading
The sole intention of this factsheet is to share general information.

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