NEXT GENERATION SEMI-SUBMERSIBLE
SBM Offshore is one of the world’s leading providers of floating production systems for the offshore energy industry. As a full life cycle solution provider, we design, build, install and operate a large fleet of assets, including FPSOs, Complex Turrets, Semi-Submersibles, TLPs, and Floating Gas solutions.

To enable competitive offshore energy across all market cycles, SBM Offshore has developed and adopted the Fast4Ward™ philosophy. This approach is focused on reducing cycle time to energy delivery, de-risking projects, and improving quality & safety.

The Fast4Ward™ methodology has been used to develop the Next Generation Semi. This solution is the result of a collaborative effort between SBM Offshore, Operators, partners, and suppliers.

Our people have unrivalled experience in the EPCI turnkey delivery and operation of large complex floating production units and can safely and confidently deliver FPU solutions with cost and schedule certainty.

**SBM EXPERIENCE AND CAPABILITIES**

- 2 production units and 3 drilling units delivered
- Own, maintain and manage expansion of Thunder Hawk for Third Party Production
- 8,000ft (2440m) Independence Hub deepwater record
- DeepDraftSemi® SCR-friendly design
- In-house fully coupled riser, hull and mooring analysis
- Extensive model testing
- Quayside topsides integration and commissioning
- Riser intervention
- Load capacity and real estate for future risers and/or topside expansion
- No sea chests and no penetrations in the hull – inherently safe
BASIS OF DESIGN AND KEY DECISIONS

In conjunction with a wide range of major Operators, SBM Offshore established a Basis of Design (BoD) that is closely aligned with a significant number of anticipated future field developments. In addition, the Next Generation Semi is designed to be scalable up to 120,000 BOPD without significant redesign.

- 60,000 BOPD (scalable to 120,000)
- 70 MMSCFD (scalable to 210 MMSCFD)
- 40,000 BPD Produced Water (scalable to 80,000 BPD)
- Future Water Injection 60,000 (scalable to 120,000)
- 4 SCRs plus optional slots, 2 Umbilicals plus optional slots
- 25 year design life
- ILMC Mooring System
- Normally Unmanned Hull
- ABS Approval In Principal
- USCG & BSEE reviewed

During the development of the Next Generation Semi, SBM Offshore made certain key decisions in close collaboration with Operators, partners and key vendors with regards to the design and planned engineering, procurement, construction and installation philosophies.

Each choice is supported by a Key Decision Note (KDN) which identifies the criteria and rationale of the decision, plus highlights the recommendations, references and risks. The KDNs are available within our FEED package.

EXECUTION PLAN

HULL
SBM’s fabrication friendly hull offers a number of key benefits such as; standardization of key components, reduced internal equipment due to proposed normally unmanned hull design and simplification of welding and connection points.

TRUSS DECK
SBM’s two-layer Truss Deck enables increased safety and efficiency, whilst reducing construction time and cost. Main utilities are located on the lower deck, allowing for topside modules to be individually installed and pre-commissioned as they are delivered.

MODULAR TOPSIDES
As opposed to stick building from the ground up, SBM has leveraged its rich history of FPSO topside modular design and transferred this to the Semi-Submersible sector. Modular design allows for simultaneous fabrication of topside equipment in either the same yard or multiple yards in Asia or Gulf of Mexico.
Adopting the five key principles of Fast4Ward™; putting our Client’s needs first, standardization of key equipment, ensuring flawless execution, fostering an integrated supply chain and deploying value adding digital solutions, the Next Generation Semi offers the market a range of beneficial Value Propositions:

**Early Engagement & Collaboration:**
- 5 major Operators participated in the FEED
- Another 10+ Operators consulted throughout
- Key vendors & partners also provided valuable input

**Cost Effective Solution – balance of CAPEX & OPEX:**
- FEED complete & proven design reduces time to market
- Standardization of key components
- ILMC vs traditional chain jack leads to ~1700 tons weight savings
- Flexible fabrication – Asia or Gulf of Mexico

**Cost & Schedule Certainty:**
- Proven execution model
- Strategic vendor & yard agreements in place
- Modular design based upon SBM Offshore’s FPSO experience & track record

**Flexible & Scalable Solution:**
- Hull easily scalable to enable 60,000 -120,000 BOPD
- Topside modules interchangeable for varying reservoir properties or increased throughput
- Multiple options to meet any Client need or specific request

**Digital Ready:**
- Innovative, value adding digital solutions included
- Overall digital roadmap defined, leverage from SBM Offshore’s Digital FPSO initiative
- Easily plugged into Operators’ holistic digital field development

**Commercial & Financial Flexibility:**
- Transparent commercial roadmap
- Innovative financial models (turnkey, lease & operate, PHA)
- Standalone or wider field developments