

Floating Production What's New In December

(please reference IMA as the source if used)

Current Inventory – 319 oil/gas floating production units are now in service, on order or available for reuse on another field. FPSOs account for 65% of the existing systems, 75% of systems on order.

Another 24 floating LNG processing systems are in service or on order. Liquefaction floaters account for 13%, regasification floaters 87%. No liquefaction units are yet in service – all 3 are on order.

In addition, 98 floating storage units are in service, on order or available.

Number of Floating Production and Storage Units In Service, On Order and Off Field/Being Remarketed (as of 1 December 2013)

	<u>Total</u>	<u>Active</u>	<u>On Order</u>	<u>Available</u>
<u>Oil/Gas Processing</u>				
FPSO	211	157	38	16
Production Barge	9	8	1	0
Production Semi	48	40	4	4
Production Spar	23	18	4	1
TLP	28	24	4	0
Total	319	247	51	21
<u>LNG Processing</u>				
FLNG	3	0	3	0
FSRU	21	9	12	0
<u>Storage Systems</u>				
FSO	98	89	8	1

Trend in Inventory – The inventory of oil/gas floating production units is 16% greater than five years ago and 67% higher than ten years back. This comparison includes all units in service, on order and off field – but excludes LNG processing units. If the latter are included, the growth is 21% and 80% respectively.

Looking at specific type units, the number of FPSOs in operation, on order and available has grown from 116 units in December 2003 to 211 units in December 2013. The combined total of other oil/gas floating production units has grown from 75 units in December 2003 to 108 units today.

Available Units – 21 production floaters (16 FPSOs, 4 Semis and 1 Spar) have stopped producing and are available for redeployment. Another 3 production units (all FSRUs) on order do not have a field contract. In effect, 7% of existing or on order production floaters are looking for a field assignment.

Some of these available units are actively for sale. Some are being retained for use on another field controlled by the current owner. All require modification and upgrade to be reused. Depending on the new field, the cost to modify the processing plant, mooring system and refurbish the unit can easily exceed \$100 million.

The record for time off field between deployments is held by the *FPSO Falcon*. This VLCC-size FPSO has been available since early 2006 – after only 4 years of use by ExxonMobil off Nigeria. When ExxonMobil could not find a reuse or buyer, the 2.2 million barrel single hull unit was returned to SBM at end 2009. It has been laid up in Malaysia since. Ironically, *Falcon* was the first of several generic FPSOs that incorporate design features enabling relatively easy reuse on multiple fields.

Another FPSO just delivered to Brazil (OSX 3) could come on the re-sale market. The field operator (OSG) has financially collapsed and the lenders are looking to protect their position.

Recent Orders – Since the beginning of the year there have been orders for 22 production floaters with a total contract value of ~\$17.5 billion. The orders include 11 FPSOs, 2 TLPs, 1 Spar, 1 Barge, 6 FSRUs and 1 MOPU.

Here's what happened in November:

- EnQuest issued an LOI to Bumi Armada to lease an FPSO for use on the Kraken field in the UK sector of the North Sea. The contract was to be finalized by end November – but to date no news of the final award.
- Modec confirmed the EPCI contract + 20 year lease for the *MV27 Cidade de Caraguatatuba*. This FPSO is being supplied to Petrobras for use on the Carioca field.
- An earlier FPSO order became a casualty of rethinking investment decisions. Hyundai in April had been selected to build the \$1.9 million *Rosebank FPSO*. But on 22 November Chevron announced that it is not currently economic to proceed with the investment. As a result the project is back in planning stage with the scope of field development and cost of selected development option under new review.

The pace of production floater orders thus far this year has been running above the long term average. Over the past 15 years orders have averaged 1.6 units per month. The order intake pace this year has been averaging ~2.0 units per month.

But the market seems to be hitting resistance. FPSO orders in particular have been relatively weak. Over the past five years an average of 15 FPSOs have been ordered annually. This year orders will not reach this level.

Details for orders to date in 2013 are available [HERE](#)

Backlog of Planned Floater Projects – 231 floating production projects are in various stages of planning as of beginning December. As shown below, close to 60% entail use of an FPSO.

**Breakdown of Planned Projects by
Type Production System Required**
(as of 1 December 2013)

<u>Type System Required</u>	<u>Number of Projects</u>
FPSO	132
OTHER FPS	35
FLNG	26
FSRU	25
FSO	<u>13</u>
Total	231

Where Planned Projects are Located – Brazil is the major location of floating production projects in the planning stage. We are tracking 50 projects in Brazil – 22% of the visible planned floating production projects worldwide.

Several Brazilian projects will require multiple production units. Libra could require 12 production units, Jupiter 6 units, Lula 2+ units. When these large projects are taken into account, Brazil represents almost 30% of visible floating production system orders in the planning stage.

A breakdown of planned floating production projects by location is below.

**Location of Floating Production
Projects in the Planning Stage**
(as of 1 December 2013)

<u>Project Location</u>	<u>Number of Projects</u>
Brazil	50
Africa	49
SE Asia	38
No. Europe	22
GOM	20
Aust/NZ	15
Medit	12
SW Asia	12
Other	<u>13</u>
Total	231

Further Details – We have the capability to prepare detailed customized reports on all aspects of the floating production systems market. Our database contains

- up-to-date information on more than 230 production floater projects in the planning stage
- details on ~450 production or storage floaters in operation or under construction
- competitor historical market share data – EPC contractors, fabricators, equipment suppliers, leasing contractors, etc.
- other data useful for business planning, competitor benchmarking and market positioning

Just let us know your requirements – and we will be pleased to give you a proposal to prepare a detailed report tailored to your requirements and for your use only.

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