

Floating Production What's New In March

(Please reference **IMAstudies** as the source if used)

Current Inventory – 320 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, 72% of systems on order.

Another 29 floating LNG processing systems are in service or on order. Liquefaction floaters account for 14%, regasification floaters 86%. No liquefaction floaters are yet in service – all 4 are on order. Several of the 11 active FSRUs are interim regasification units being used until the long term unit is delivered.

In addition, 102 floating storage units are in service, on order or available. The available unit (*FSO Queensway*) is stored in Labuan while being remarketed for a storage project.

Number of Floating Production and Storage Units In Service, On Order or Available for Reuse

(As of 1 March 2014)

	<u>Total</u>	<u>Active</u>	<u>On Order</u>	<u>Available</u>
<u>Oil/Gas Production</u>				
FPSO	211	156	36	19
Production Barge	10	8	2	0
Production Semi	48	40	4	4
Production Spar	23	18	4	1
TLP	28	24	4	0
Total	320	246	50	24
<u>LNG Processing</u>				
FLNG	4	0	4	0
FSRU	25	11	14	0
<u>Storage Systems</u>				
FSO	102	91	10	1

FPSO Owners – Ownership of FPSOs is spread over a large number of companies. There are 66 owners of FPSOs. But this overall figure disguises a relatively high concentration within a few companies. The top six FPSO owners own 95 units, or 45% of the FPSOs in service, available or on order. The remaining 55% is spread over 60 owners, more than half of which own only one FPSO.

Field operators own 52% of the FPSOs. Petrobras is clearly the dominant player. It owns 28 units, 13% of the total FPSO inventory. Other field operators with large FPSO ownership are CNOOC (14 units), ExxonMobil and Total (each 7 units), and BP, Chevron and Shell (5 units each).

Leasing operators own the remaining 48% of the FPSOs. SBM is the largest leasing company. It owns 17 units, 8% of the inventory. Next in line are BW Offshore and Modec (each 13 units), Teekay (10 units), Bumi Armada (7 units) and Bluewater (5 units).

In terms of control of FPSOs, Petrobras is the gorilla in the sector. Counting both owned and leased units, Petrobras has 52 FPSOs under its control – 25% of the FPSOs inventory.

A listing of the top FPSO owners is below. The entire list of owners is available [HERE](#).

**Top FPSO Owners In Terms of
Number of FPSOs Owned
(As of 1 March 2014)**

<u>Owner</u>	<u>Type</u>	<u>In Service</u>	<u>Available</u>	<u>On Order</u>	<u>Total</u>
Petrobras	FO	15	1	12	28
SBM	LC	9	3	5	17
CNOOC	FO	11	2	1	14
BW Offshore	LC	12	1		13
Modec	LC	9		4	13
Teekay	LC	8	1	1	10
Bumi Armada	LC	5		2	7
ExxonMobil	FO	7			7
Total	FO	5		2	7
Bluewater	LC	4	1		5
BP	FO	3	1	1	5
Chevron	FO	5			5
Shell	FO	5			5
Woodside	FO	4			4
ENI	FO	2		1	3
Fred Olsen	LC	3			3
OSX	LC	1	2		3
Petrofac	LC	2	1		3
Statoil	FO	3			3

Legend: LC=Leasing Contractor; FO=Field Operator

Note: Some units are jointly owned with other companies

Production Floater Orders – 68 production floaters are currently on order. The figure includes 36 FPSOs, 14 other oil/gas production units and 18 LNG processing units. In the later are 4 floating liquefaction plants and 14 regasification terminals.

The order backlog has remained around 70 units since mid-2012. But the composition of orders has changed. In the current order backlog are significantly fewer FPSOs (49 on order in mid-2012 vs. 36 now) and more regasification floaters (9 on order in mid-2012 vs. 14 now).

Fewer FPSOs on order reflects the slowdown in FPSO contracts during the past year. Only 11 FPSOs were ordered in 2013, down 20% from the average ordering pace over the past ten years. FSRUs on the other hand have been hot items. The current backlog of FSRU orders is more than

50% higher than in mid-2012. Included in the current order backlog are 6 speculative FSRUs being built without a use contract, reflecting the bullish market for regasification terminals.

The market over the first two months of 2014 has picked up a bit. Three production floater orders were placed in January/February.

- Petronas ordered a 2ND **FLNG** for use on the Rotan field off Malaysia. The \$2+ billion EPC contract was awarded to Samsung/JDC. Delivery is scheduled in 2018.
- ENI ordered a **production barge** for use on the Jangkrik field off Indonesia. The \$1.1 billion EPCI contract was awarded to Saipem/Hyundai/Chiyoda/Tripatra. Delivery is to be at end 2016.
- Exmar/Pacific Rubiales ordered a **regas barge** in anticipation of using the unit on a future terminal project. Wison Nantong will build the hull and handle the unit integration. Delivery is scheduled in late 2015.

Two other production floater contracts appear to have reached an advanced stage of negotiations. Premier is about to contract for a leased FPSO for the Catcher field in the UK North Sea. Premier has selected the preferred bidder and BWO looks like the winner. Premier also appears to have earmarked Teekay to supply a cylindrical FPSO for the Bream field in the Norwegian North Sea.

Despite the pick-up in orders in early 2014, it still looks like the production floater market is in a temporary slow period. The sector lacks the vibrancy of previous years.

Causing the slowdown is a mixture of cost escalation, inefficiencies caused by local content barriers, supply chain bottlenecks, oil companies pulling back on upstream investments and better financial returns from shale/tight oil and gas investments. These factors have been constraining – and will continue to constrain – deepwater project starts.

Backlog of Planned Floater Projects – 236 floating production projects are in various stages of planning as of beginning March. Of these, 57% involve an FPSO, 15% another type oil/gas production floater, 22% liquefaction or regasification floater and 6% storage/offloading floater.

**Breakdown of Planned Projects by
Type Production System Required**
(As of 1 March 2014)

Type System Required	Number of Projects
FPSO	134
OTHER FPS	36
FLNG	30
FSRU	23
FSO	13
Total	236

Brazil and Africa are the major locations of floating production projects in the visible planning stage. We are tracking 51 projects in Africa, 48 projects in Brazil – 42% of the visible planned floating production projects worldwide.

**Breakdown of Planned Projects by
Location of Field
(As of 1 March 2014)**

Project Location	Number of Projects
Africa	51
Brazil	48
SE Asia	42
GOM	24
No. Europe	21
Aust/NZ	14
Medit	11
SW Asia	12
Other	13
Total	236

In terms of future production floater requirements, Brazil clearly is clearly the leader – as several Brazilian projects will require multiple production units (up to 12 FPSOs in one project). When these large projects are taken into account, Brazil represents almost 30% of the visible floating production system orders in the planning stage.

For this reason the downsized business plan just announced by Petrobras should cause concern in the floating production sector. In late February Petrobras said its five year capital spending plan for 2014/18 would be almost 7% lower than the five year plan announced last year. While the planned cuts are to be from downstream investments, it remains to be seen if planned upstream investments – which include orders for 14 new production floaters over the next five years –will be fully protected in an investment downsizing environment.

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

Terms Used

FPSO – Floating Production, Storage and Offloading Vessel

FSO – Floating Storage and Offloading Vessel (no production plant)

FSRU – Floating LNG Storage and Regasification Unit

FLNG – Floating LNG Liquefaction Plant

Semi – Production Semisubmersible

TLP – Tension Leg Platform

SPAR – Production Spar (cylindrical shape)

FPS – Floating Production System (all types)