

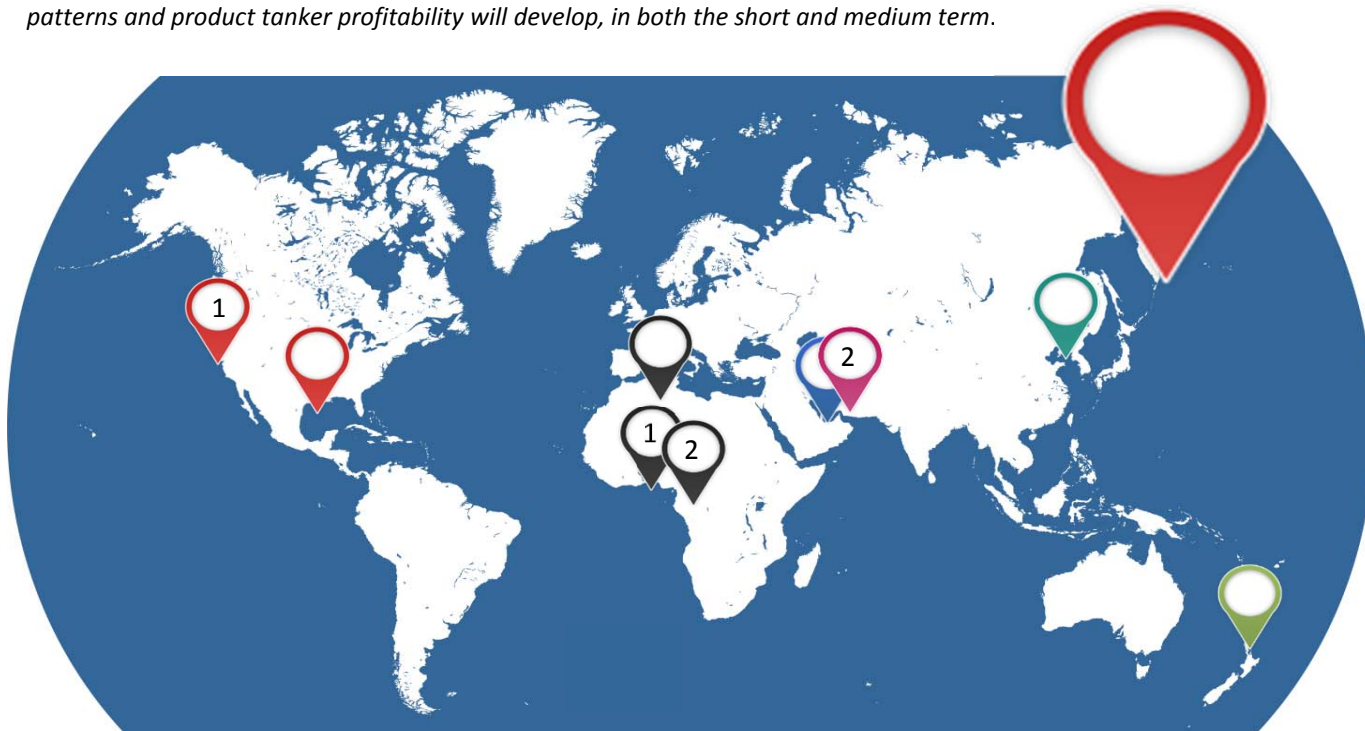
Weber Refinery Report



April 2016



In this month's Charles R Weber refinery report, we provide readers with the latest developments in the refinery sector as they relate to the seaborne refined product trade and refined product tanker shipping. The report mixes up to date news with detailed information about global refinery capacity and seaborne trade in order to understand how seaborne trade patterns and product tanker profitability will develop, in both the short and medium term.



Shell & Saudi Aramco plan to end Motiva partnership

- Mar 2016 - Shell and Saudi Aramco have just announced plans to break up Motiva after almost two decades, dividing its assets and leaving Aramco with one plant, the nation's largest crude oil refinery, in Port Arthur (600Kbd), Texas.

It is reported that Saudi Aramco wants to buy more US refining and chemical assets to expand its footprint in the world's largest energy market once the break-up of its Motiva Enterprises joint venture with Royal Dutch Shell is complete.

Shell will be left with the Norco (235Kbd) and Convent (240Kbd) refineries.

Some reports suggest that the Convent refinery, which has historically taken much of its feedstock from the Middle East, may be reconfigured towards a lighter domestic input slate.

By contrast, the Port Arthur refinery may see an increase in the volumes of Saudi crude - having taken just 48% of its crude from the Middle East in 2014.



India & Saudi Arabia seek energy cooperation

- Mar 2016 - Saudi Arabia and India say they want to transform their buyer-seller relationship in the energy sector to one of deeper partnership focusing on investment and joint ventures in petrochemical complexes and cooperation joint exploration in India, Saudi Arabia and in third countries.

Saudi Arabia is the largest supplier of crude oil to India, where oil demand grew by 5.7% last year and is expected by the IEA to increase 6.3% this year. It is believed that India may replace China as the world's centre of oil-demand growth.

India's oil consumption in January averaged about 4.25Mnbd, up 12% yoy, according to IEA. The country produces about 870Kbd of crude.

Another sign of India's growing demand for crude oil and refined products was the increasing call on its refineries to service domestic demand, which hit product export growth during 2H15.

Latest

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**Regulators allow ExxonMobil to restart refinery in**

Torrance - Apr 2016 - Just over a year after an explosion closed the plant - killing four workers, and creating a gasoline shortage in California - regulators have agreed a timetable to resume operations.

ExxonMobil is selling the facility to PBF Energy, but the plant must be operational as a condition of sale.

**Enoc evaluating Jebel Ali refinery expansion - Mar**

2016 - Emirates National Oil Company (Enoc) is evaluating the expansion of the 140Kbd refinery in Jebel Ali. The proposal is to add capacity of 75Kbd to increase income, according to its CFO.

The company, which last year secured a USD1.5Bn syndicated loan, expects to borrow from banks to help fund the expansion of the refinery, and may also issue an Islamic bond or sukuk in the next two to three years. Operations are expected to start in 2020.

**Sonatrach lets contracts for three new refineries -**

Mar 2016 - Sonatrach has awarded a series of contracts to Amec Foster Wheeler (AFW) to provide front-end engineering and design (FEED) for three grassroots 5Mta refineries to be located in Biskra, Tiaret and Hassi Messaoud, in Algeria.

In addition to atmospheric distillation, all three refineries will include LPG separation, hydrocracking; desulphurisation and bitumen production. The proposed Biskra refinery also will include a unit for lubrication oil production.

AFW's scope of work on the projects is scheduled to be completed during 3Q17.

**NZRC formally unveils Marsden Point refinery expansion - Mar 2016**

- New Zealand Refining (NZRC) has officially opened the long-awaited \$365Mn (NZ) Te Mahi Hou (TMH) expansion project at its 107Kbd Marsden Point refinery at Northland on the North Island's east coast.

Designed to improve profitability of the refinery as well as its environmental performance, TMH, which took four years to complete, also will result in increased production at the refinery of 2MnBbls/year.

It was also revealed that annual maintenance at Marsden Point, which is scheduled for April, will include unscheduled hydrocracker repairs.

**Iranian refinery investment in full swing - Mar 2016 -**

The Isfahan refinery in Iran is being renovated following the signing of a deal between the National Iranian Oil Refining and Distribution Company (NIORDC) and unnamed South Korean companies, according to Iranian media reports. It is also reported that China is to provide USD3Bn of finance for the development of the Abadan oil refinery.

Nine Iranian refineries currently process 1.8Mnbd, but only one facility is operating with an acceptable profit margin and the rest need major upgrades.

**Hengli awards technology contract for Dalian**

refining complex - Mar 2016 - Hengli Petrochemical (Dalian) (HPDC) has awarded a contract to DuPont to provide process technologies for an alkylation unit to be built at HPDC's grassroots crude-to-paraxylene integrated refining and petrochemical project in Hengli Petrochemical Industrial Park (HPIP) on Changxing Island in Dalian, Liaoning Province, China. DuPont said installation of the new units is planned for 2018, with start-up scheduled for 2019.

**Tomaro Island Port, Lagos, oil refinery on stream by**

end 2016 - Mar 2016 - Integrated Oil and Gas MD Anthony Iheanacho has said its USD116Mn 20Kbd modular refinery at Tomaro Island Port, off Takwa Bay, Lagos, would come on stream before the end of 2016, after being granted a provisional licence to commence preliminary work from the Department of Petroleum Resources (DPR).

The refinery would produce Automated Gas Oil (AGO) otherwise known as diesel, kerosene, export quality aviation fuel and fuel oil.

**Nine bidders for new Nigerian oil refineries - Mar**

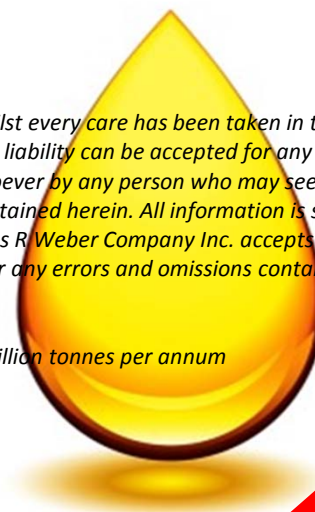
2016 - Vitol and Seplat Petroleum Dev are among nine companies that have submitted bids to construct new oil refineries in Nigeria. The successful companies will build near existing state-owned plants and add at least 250Kbd of refining capacity to the current 445Kbd.

Nigerian National Petroleum Corp (NNPC) said, "The aim is to leverage on the existing facilities to fast-track the take-off of the refineries as soon as possible."

The new, smaller refineries will become operational within 12-24 months, whilst the existing plants, located in the northern city of Kaduna and the southern cities of Warri and Port Harcourt, will be rehabilitated to operate at a minimum 70% of their capacity within the next six to eight months.

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Notes: Mta = million tonnes per annum



**Latest
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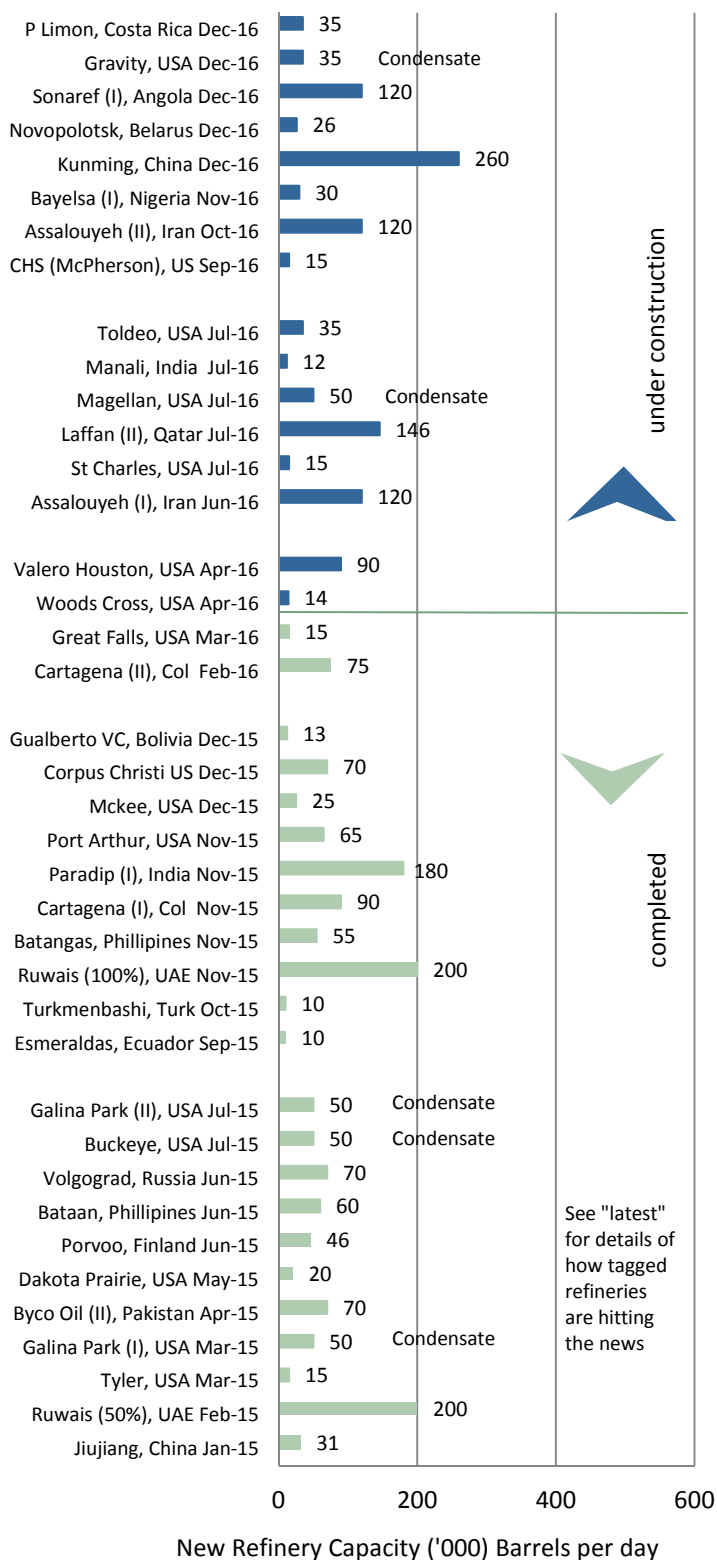
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Timeline

Recent and Planned Refinery Additions



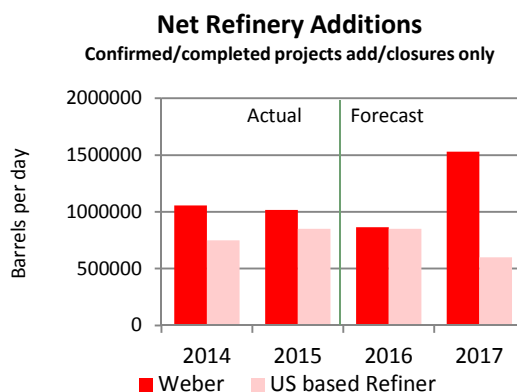
We estimate that net global refinery capacity increased by 1Mnbd in 2015. This built on increases of 1Mnbd in 2014, 1.4Mnbd in 2013 and 1.1Mnbd in 2012 (the latter two numbers are based on BP data).

In 2016 and 2017, we anticipate net refinery capacity additions of 0.9Mnbd and 1.5Mnbd respectively. After 17 new refinery additions (each adding ≥ 10 Kbd) in 2014 and 21 in 2015, we expected approx 20 projects to complete in 2016. However, the collapse in oil price is likely to cause delays to expansion projects, which may alter the picture significantly.

In 2014, closures accounted for 1Mnbd of capacity, and 1Mnbd has been confirmed for closure in 2015-16. A further 0.7Mnbd of capacity - spread between Japan, FSU and China - is also thought to be under threat of closure over the next two years.

It will be interesting to see if the new Chinese refinery capacity will succeed in backing out non-Asian imports into Asia, especially now that Chinese "teapot" refineries have now started to export. As of 1H15, North East Asia has seen strong product import growth, with regional exporters holding onto market share in the face of strong competition from the Middle East.

The refinery timeline chart (left) is derived from Weber's own detailed tracking of new refinery projects. The chart below compares our summary forecast for refinery additions 2015-2017 with that provided by a large US based refiner. This comparative forecaster factors in project delays beyond those reported by the refiners themselves. The US refiner has an interest, of course, in taking a conservative view of new projects coming online and has pushed some projects out beyond 2017.



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