Weber Refinery Report

December 2015

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.

China's teapot refineries set to export for first time - *Nov 2015* - "Teapot" or "tea kettle" is the collective term for Chinese independent refiners. In September, seven "teapots" were granted crude oil import licences for the first time, having previously relied on purchasing from Chinese state oil companies.

The landscape has now changed again as of mid-November when "teapots" were granted permisson to export refined fuel for the first time in 2016, freeing up China's refining capacity for sales abroad as the government aims to cut a local glut and boost investment.

Currently only state-owned refiners and some smaller state oil firms are allowed to sell abroad.

The Ministry of Commerce has told the "teapots" they can now apply for 1Q16 fuel export quotas, but it is unclear how many teapots will apply for permits.

Some estimates suggest that an additional 3-5Mntonnes (24-40MnBbls) of products will be sold abroad next year, in addition to the roughly 30Mtonnes assigned to the country's state-owned refiners this year.

"Teapots" mainly generate gasoline and gasoil/diesel. China's "teapot" refineries have a total oil-processing capacity of almost 220Mta (approx 4.4Mnbd), which is equivalent to 30% of Chinese total refinery capacity (14Mnbd).

JX Holdings and TonenGeneral Sekiyu consider merger - *Nov 2015* - Japan's two largest oil refiners, JX Holdings and TonenGeneral Sekiyu, are considering a business integration, though no final decision has been made. The refiners plan to merge by 2017 following approval from the Fair Trade Commission.

JX Holdings said, "Due to the severe business environment surrounding the oil industry, we are considering the merger with TonenGeneral in order to strengthen the competitiveness of our petroleum business."

Ruwais refinery now operating at 100% - *Nov 2015* - Abu Dhabi Oil Refinery's (Takreer), fully commissioned Ruwais refining complex, in the UAE, is now operating at 100% rates at its newly expanded capacity of over 800Mnbd expansion.

1 **Iran in talks to invest in refineries abroad** - *Nov 2015* - Iran has started negotiations to buy shares in oil refineries in Europe, Latin America and Asia. Tehran was in talks to buy a stake in India's Essar Oil, though Essar have denied this and it has signed a non-binding agreement with Rosneft.

Latest

If you have questions or comments, please contact Charles R Weber Research
John M Kulukundis: jmk@crweber.com, **George P Los**: gpl@crweber.com
www.crweber.com

Refinery proposed for Sarnia, Canada - *Nov 2015* - A group of Canadian oil and petrochemical executives is proposing a new 50-100Kbd refinery at the Sarnia petrochemicals hub in Ontario in a bid to boost downstream refined fuels and petrochemicals production within the country.

Walter Petryschuk, retired petrochemical engineer and former manager of Suncor's Sarnia refinery said the proposal is driven by the need to process more of Canada's crude oil within the country, rather than shipping it unprocessed to US refineries, which ends up costing Canada "billions of dollars" in potential added value, along with many jobs.

Even with a new refinery, Ontario, Canada's largest fuel-consuming province, will still rely on imports for part of its refined fuel requirements.

1 **IMF Impressed with Sonaref Refinery in Lobito** - Nov 2015 - On a visit to the site of the greenfield Lobito refinery, Angola, the IMF reported that the project was crucial to the economic development of the country. The completion of the first of the two phase project is unclear, although it was initially scheduled to come on stream this year

Pemex lets contract for Tula refinery upgrade - *Nov 2015* - Pemex has awarded a contract to Fluor Corp to provide additional services related to the modernisation and expansion of the 315Kbd Miguel Hidalgo refinery in Tula, Hidalgo state, Mexico.

The USD1.1Bn contract includes delivery of detailed engineering, procurement, and construction (EPC) services for utilities and off sites associated with the refinery's upgrade, which will increase processing capacity to 340Kbd. Mechanical completion of the refinery's modernisation is scheduled for 2Q18.

1 **Honeywell completes work at Angarsk refinery** - *Nov 2015* - Honeywell Process Solutions (HPS) has completed works at Rosneft's Angarsk Petrochemical, the largest oil refining and petrochemical complex in the Irkutsk region of Eastern Siberia, Russia. The upgrade will simplify operations and improve the process efficiency of the refinery's delayed coking unit.

Saudi Arabia & Indonesia near agreement to build refinery - Nov 2015 - According to Indonesia's Energy Minister Sudirman Said, Saudia Arabia and Indonesia are near an agreement to build their first jointly owned refinery in the Southeast Asian country, with the contract signing expected by the end of this year.

The refinery is tentatively planned to have a capacity of 300Kbd, but no cost estimate has been divulged

1 **Fuel production begins at expanded Cartagena refinery** - *Nov 2015* - New units at Colombia's expanded Cartagena Refinery, began producing petroleum products earlier this week. The first distilled products were produced with a supply of 90Kbd of crude, although this is expected to increase to 165Kbd by March 2016.

Refineria de Cartagena (Reficar), a unit of Ecopetrol and operator of the refinery, said that the fuels being produced include diesel, petroleum naphtha, LPG and jet fuel.

2 **Contract awarded for hydrogen unit at STAR refinery** - *Nov 2015* - STAR Rafineri has awarded a contract to Technip to provide technology, as well as detailed engineering and procurement for equipment, to be implemented at a hydrogen plant that will be built near the planned 214Kbd SOCAR Turkey Aegean Refinery (STAR) in Izmir, Aliaga, Turkey.

In addition to the hydrogen plant, the proposed USD5.6Bn STAR refining complex will include a 66Kbd hydrocracker, a 40Kbd delayed coker and a 28Kbd continuous catalytic regeneration reformer. It will include hydrotreating capacities of 20Kbd for naphtha, 26Kbd for kerosene and 68Kbd for diesel.

The integrated refining and petrochemical complex remains on schedule for start-up in 2018.

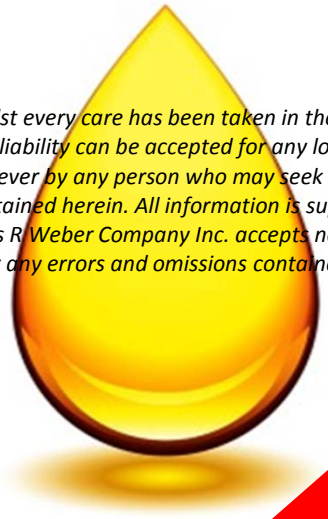
1 **Contract awarded for upgrade of Cilacap refinery** - *Nov 2015* - JGC and Encona have won a 30Bn yen (USD243Mn) contract from Pertamina to repair and upgrade the Cilacap oil refinery in Central Java, Indonesia, and targeted for completion by September 2018.

The contract covers the design and construction of equipment to refine gasoline from locally produced oil, including a catalytic reformer and a hydrodesulphurisation unit.

2 **Kazakhstan & China sign agreement on Shymkent refinery reconstruction** - Nov 2015 - Petro Kazakhstan Oil Products and China Petroleum Engineering & Construction (CPECC) have signed an additional agreement for the implementation of Phase 2 of the reconstruction and modernisation project of Shymkent refinery.

The reconstruction project is aimed at increasing the processing capacity from 5.25Mta to 6Mta, as well as increasing manufacture of light oil products from 61% to 89%, bringing quality of the products to Euro-3 standard.

Disclaimer: *Whilst every care has been taken in the production of this study, no liability can be accepted for any loss incurred in any way whatsoever by any person who may seek to rely on the information contained herein. All information is supplied in good faith and Charles R Weber Company Inc. accepts no responsibility for any errors and omissions contained within this study.*



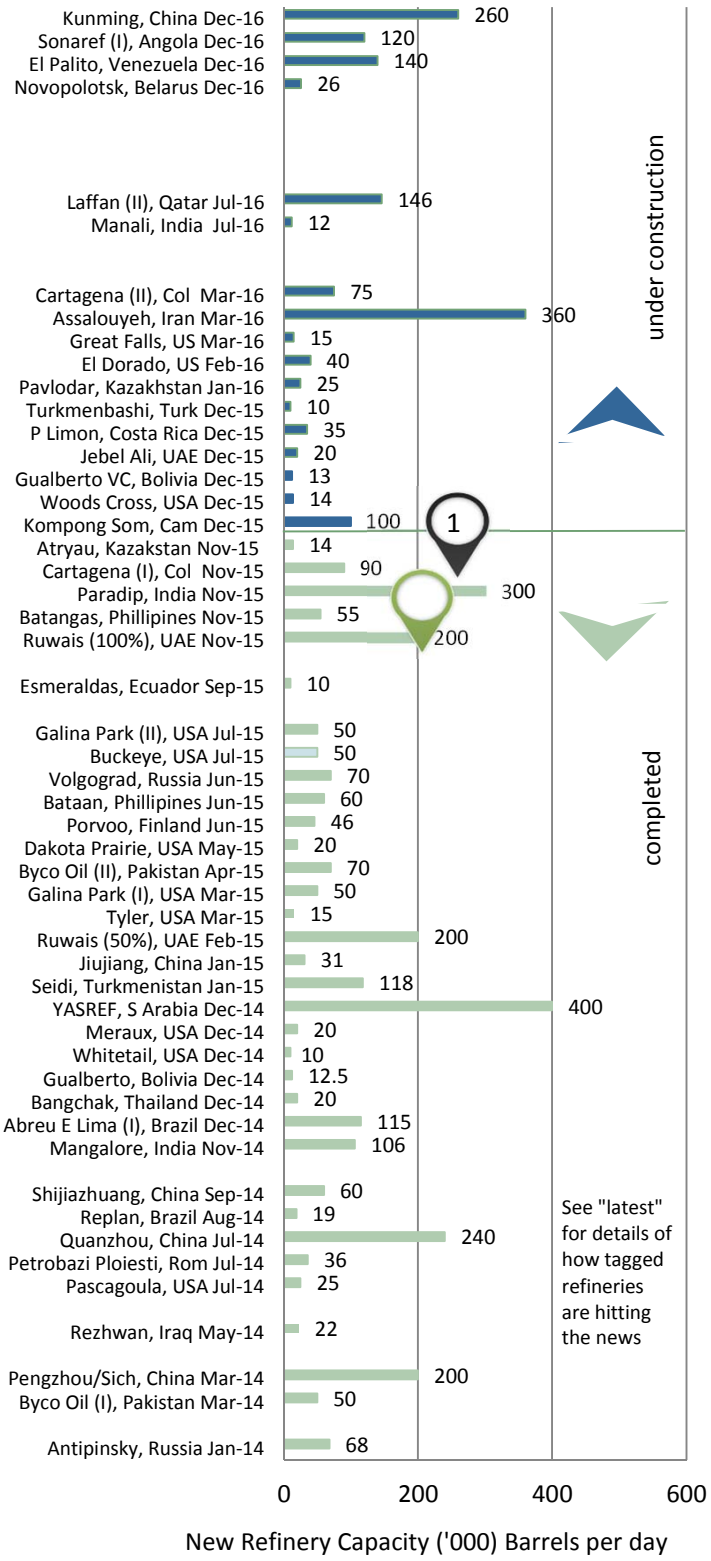
Latest

continued...

If you have questions or comments, please contact Charles R Weber Research
John M Kulukundis: jmk@crweber.com, **George P Los**: gpl@crweber.com
www.crweber.com

Timeline

Recent and Planned Refinery Additions



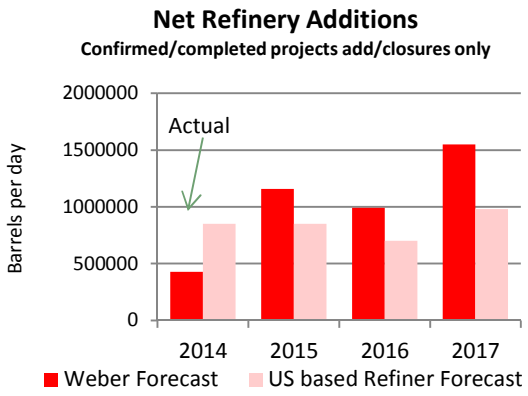
We estimate that net global refinery capacity increased by 0.4Mnbd in 2014 (revised down from 0.8Mnbd in May, as we pushed the new 400Kbd Ruwais refinery opening back from 2014 to 2015). This built on increases of 1.4Mnbd and 1.1Mnbd in 2013 and 2012 respectively (the latter two numbers are based on BP data).

In 2015 and 2016 we anticipate net refinery capacity additions of 1.1Mnbd and 1Mnbd respectively. After 16 new refinery additions (each adding >=10Kbd) in 2014 and 22 scheduled for 2015, 2016 is starting to look increasingly congested with a potential 20+ projects. However, we expect delays and cancellations to expansion projects, which may alter the picture significantly.

In 2014, closures accounted for 1Mnbd of capacity, and 1Mnbd has already 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 the potential to start exporting from 2016. 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.



If you have questions or comments, please contact Charles R Weber Research
John M Kulukundis: jmk@crweber.com, **George P Los**: gpl@crweber.com
www.crweber.com