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Midwestern works with contractors to provide them with the industry’s most reliable pipelayers. With knowledge from the field, contractors’ desire to utilize fleet tractors and Midwestern’s expertise, sideboom conversions make practical alternatives. The above 1998 CAT D8R with LGP undercarriage and extended rear idler (for maximum stability) was converted to a pipelayer with Midwestern’s new M583CH sideboom attachment. It features a 25,000 lb rated winch package, outstanding visibility, and a multi-functional, electro-hydraulic controller for precise control. **Midwestern is the leader in hydraulic sidebooms.**
The onshore pipeline industry has weakened due to the oil price downturn. While the current lack of investment in the development of new projects will likely impact the market towards the end of the decade, CAPEX and installation activities are expected to be sheltered in the near term by prior sanctioned projects.

The onshore pipeline market has been affected by sustained low commodity prices, as operators look to reduce budgets and maximise cost efficiencies. Investment in early feasibility studies and front-end engineering and design work for new projects has been curtailed, meaning that the market is likely to experience a degree of downturn towards the end of the decade, even if the oil price recovers.

The global number of kilometres installed will rise by 5%, from 59,769 - 63,025 km. Projects expected to contribute to this rise include the 5,200 km West-East IV gas pipeline (China) and the 2,500 km Gwadar-Kashgar oil pipeline (Pakistan). Subsequently, global CAPEX in 2017 is forecast to increase by 12%, from US$40.6 billion to US$45.6 billion.

Post-2017, Douglas-Westwood expects a decline in both additional kilometres installed and CAPEX towards the end of the decade, as the market experiences the delayed impact of the oil price downturn. Global CAPEX is forecast to decline by 24% in 2017 - 2021, reaching US$34.8 billion in 2021. While installation activity is expected to fall by 21% over the same period, total CAPEX in 2017 - 2021 is forecast to increase by 5%, amounting to US$22,028.8 billion.

As per the previous five years, North America is expected to contribute the largest proportion of additional kilometres installed over the forecast period, albeit with a reduced market share of 36% compared with 44% over 2012 - 2016. Key projects expected to contribute to installation activity within the region over the forecast period include the Alaska Stand Alone gas pipeline and the Canadian Prince Rupert gas transmission project.

North America will also dominate OPEX, accounting for 37% of the market. Operations and maintenance (O&M) expenditure allocated to technical and land management support are expected to account for 21% and 8% respectively of total OPEX in 2017 - 2021.

Public opposition will continue to act as a key barrier to installation activity over the forecasted period. Notably, both the Keystone XL and Dakota Access pipelines have experienced delays due to fierce opposition on environmental grounds. Security also remains a prominent obstacle. Route surveillance is an ongoing concern for the TAPI pipeline, which will pass through Afghanistan’s southern Helmand province and Pakistan’s Balochistan province.

Geopolitical issues also have the potential to delay interregional pipeline projects. For example, the signature of an agreement for Gazprom’s TurkStream was suspended until October 2016 following political tensions relating to the conflict in Syria. Conversely, lifting international nuclear-related sanctions against Iran in January 2016 could be a potentially significant opportunity for contractors within the global supply chain.
Pipeline Induction Heat (PIH) provide specialist field joint coating services at spool base locations, offshore pipe lay barges and onshore pipeline construction projects around the world, involving the use of state-of-the-art equipment and processes for the application of a wide range of field joint coating materials.

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What's happened so far with the Dakota Access pipeline?

Throughout 2016, one particular project seemed to become more infamous as the months passed: the Dakota Access pipeline (DAPL).

In July, the US Army Corps of Engineers issued a formal Finding of No Significant Impact after conducting an environmental review of DAPL. For months, the Standing Rock Sioux tribe has been protesting against DAPL, stating that the line will threaten its water supply and cultural heritage. Its points have attracted interest across the world, with thousands of environmentalists supporting its efforts.

The US$3.8 billion, 1172 mile project would carry approximately 500,000 bpd of crude oil from North Dakota’s oilfields, through South Dakota and Iowa, to an existing pipeline in Patoka (Illinois) where shippers can access Midwest and Gulf Coast markets.

At a recent meeting, Gazprom’s management committee took note of information regarding the progress made on the Nord Stream 2 pipeline. Basic engineering is currently underway for the Nord Stream 2 pipeline’s offshore section and the landfalls in Russia and Germany. Geotechnical surveys are being carried out in the Bay of Greifswald’s offshore and onshore areas, which will be traversed by the pipeline. National Environmental Impact Assessment (EIA) reports are also under development, along with a consolidated EIA report.

Allseas has been chosen to lay the first string of the gas pipeline. In early December, Nord Stream 2 AG and Allseas inked a Letter of Intent for laying the first string’s offshore section. They will also have the option to collaborate on the second string. Gazprom has expressed confidence that the pipeline would come onstream before the end of 2019.

Activists were frustrated with the US presidential race, with Hillary Clinton refusing to take a position on DAPL and Donald Trump having close financial ties.

With ETP beginning preparation for tunnelling under Lake Oahe, protesters blocked a construction yard where equipment was kept.

ETP claims that the Corps’ decision to halt construction at the lake is unjust and a reinforcement of the Administration’s lack of interest in enforcing and abiding by the law. The company said it was confident that the previous review process conducted by the Corps was thorough and comprehensive.

The DAPL operator also made two court filings, seeking a judgment to declare that ETP has the legal right to build, complete and operate DAPL without further action from the Corps.

On 4 December, the Corps denied ETP a permit for the construction of the final section of pipe—a decision that was celebrated by the thousands of protesters (Native Americans, environmentalists and other groups).

“Although we have had continuing discussion and exchanges of new information with the Standing Rock Sioux and Dakota Access, it’s clear that there’s more work to do,” stated Jo-Ellen Darcy, Corps’ Assistant Secretary for Civil Works.

ETP responded by stating the decision is “a purely political action,” adding that it is committed to bringing the project to completion.

Standing Rock Sioux’s Chairman, Dave Archambault II, said he was “thankful that there were some leaders in the federal government that realised that something is not right even though it’s legal.”

While this may be a small victory for the protesters, it may also be short-lived. Newly elected US President, Donald Trump, supports the project and policy experts believe that he could reverse the decision.

While the Corps has decided that more time is required to complete further studies and to consider alternative routes, ETP still plans to press on with construction of the final section along its planned route.

Protests began in April and have continued through spring, summer, autumn, winter and they are now entering into the New Year.
TurkStream investment requirements announced

An explanatory document attached to the draft bill on the ratification of the TurkStream intergovernmental agreement has stated the amount of investment that is needed for the construction of both lines.

The document revealed that around US$7.3 billion of investment is required to implement the project in full. This figure includes the amount that was spent on the South Stream project, thus taking the financial losses sustained due South Stream being halted into account.

Meanwhile, Russia's energy committee supposedly stated the agreement will be voted out in the State Duma in January.

Pavel Zavalny, Chairman of the Russian State Duma Committee of Energy, reportedly said: “We hoped voting would take place this year, but the last session of the Duma will be held on 21 December [...] The first session of the Duma will be held on 9 January. The agreement has not yet been submitted to Duma’s approval.”

The Russian government approved a draft legislation on 16 December. As a result, Russia will be able to ratify its agreement with Turkey on the project.

On 10 October, Russia and Turkey signed an agreement for the implementation of TurkStream.

Despite facing setbacks since its announcement in late 2014, under the agreement, TurkStream will see the construction of two underwater pipes in the Black Sea, with an annual capacity of 15.75 billion m³ each. The pipes will deliver Russian gas to Turkey and a hub on the Turkish-Greek border. From there, the gas can be transferred to other European countries.

The onshore stretch of the first leg will be owned by Turkish customers and the onshore stretch of the second leg will be controlled by a joint venture. Gazprom will own the rights for both offshore legs of the pipeline.

The Russian Energy Minister, Alexander Novak, said that construction of the pipeline will commence in 2017 and construction of both the onshore and offshore sections will be completed by the end of 2019.

Trans Mountain challenged by environmentalists

Less than a month after the Canadian government approved the expansion of Kinder Morgan’s Trans Mountain pipeline, Ecojustice filed for a judicial review of the government’s decision with the Federal Court of Appeal. Approval of the expansion was announced on 29 November.

Dyna Tuytel, a Lawyer for Ecojustice, reportedly stated that it is seeking to block the government’s decision on the grounds that it failed to consider killer whales that live in the proposed main shipping lane for the crude tankers. The tankers may also affect salmon; a key source of food for the whales. The recommendations of the National Energy Board (NEB), which the government adopted, did not include measures to protect the whales.

“The pipeline expansion could push the [killer whale] population toward extinction at a time when numbers were recovering,” Karen Wristen, Executive Director of the Living Oceans Society, said.

Tuyel reported: “The ones that we are concerned about are the Southern resident killer whales [...] [the pipeline is expected to add] seven times more tankers, which contribute to noise and interferes with hunting and communication.”

However, a spokesperson for the pipeline claimed that the additional tanker traffic is only 7% of the volume of commercial vessels that move through the area. Therefore, the expansion will have a minimal impact on the whales.

While Ecojustice hopes for a hearing in February, a final decision could take over a year. Moreover, this case cannot halt construction, which could begin in September 2017, subject to receiving local permits.

Virginia to benefit from Mountain Valley?

Virginia Petroleum Council (VPC) Executive Director, Miles Morin, called on the Federal Energy Regulatory Commission (FERC) to approve the Mountain Valley pipeline.

In his letter to FERC Secretary, Kimberly Bose, Morin explained the benefits that would come to Virginia with an increase in the state’s energy infrastructure.

Morin wrote: “Virginia’s natural gas use is increasing, having grown more than 50% from 2004 - 2014. This growth in use corresponds with lower gas prices, which are saving customers money and spurring economic growth [...] Natural gas is going to be an important part of the nation’s energy portfolio for generations. We need to build infrastructure to get cleaner, cheaper fuel to market in order to help spur the economy and help consumers save money on fuel costs. The proposed Mountain Valley pipeline would achieve these goals in a responsible manner.”
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Events DIARY

23 - 25 January 2017
European Gas Conference
Vienna, Austria
http://www.europeangas-conference.com/

14 - 18 February 2017
Pipe Line Contractors Association
Scottsdale, USA
http://www.plca.org/

22 - 24 February 2017
AOG 2017
Perth, Australia

27 February - 2 March 2017
PPIM
Houston, USA

28 February - 2 March 2017
OPT
Amsterdam, the Netherlands
https://energy.knect365.com/offshore-pipeline-technology/

26 - 30 March 2017
NACE Corrosion
New Orleans, USA
http://nacecorrosion.org/

26 - 30 March 2017
StocExpo Europe
Rotterdam, the Netherlands

4 - 7 April 2017
Gastech Japan 2017
Chiba-city, Japan
http://www.gastechevent.com/

9 - 13 April 2017
NASTT’s 2017 No-Dig Show
Washington D.C., USA
http://noligashow.com/

Belle Fourche pipeline rupture update
On 5 December, a local landowner discovered an oil spill in Belfield (North Dakota). The Belle Fourche pipeline rupture split over 176,000 gal. of crude oil, according to the pipeline’s operator, True Companies. The spill oil equated to a loss of approximately 4200 bbls before the line was shut down. While the cause of the spill is still being investigated, Wendy Owen – a spokeswoman for True Companies – stated that it may have occurred when a hillside slumped due to snowfall.

It was reported that the North Dakota Department of Health, along with contractors, has been working to isolate the area surrounding the spill and attempted to burn some of the oil. Cleanup crews had recovered 52,752 gal. as of 13 December. The crews have since been testing to assess whether burning the leaked product would be a viable option for the cleanup operation.

Environmental Scientist for the North Dakota Department of Health, Bill Suess, said: “It’s going to take some time. Obviously there will be some component of the cleanup that will go towards spring.”

The Belle Fourche spill has been described as “sizeable” by the Associated Press, who continued to highlight that it is not the largest oil spill to occur in North Dakota, and that it appears that the spill has not entered the Little Missouri River and has not threatened drinking water sources. Moreover, a containment band has been set up in the Ash Coulee Creek to prevent it from spilling into the river.

This spill occurred after months of protests against the Dakota Access pipeline (DAPL) in the state. A key worry of those opposed to DAPL is that a pipeline leak could contaminate drinking water. The proposed DAPL route contains a section of pipe that would be built under the Missouri River, which is the primary water source of the Standing Rock Sioux tribe.

It has since been reported that “the discovery of [the] oil pipeline spill earlier this month in western North Dakota has received heightened attention because of the battle over DAPL being built about 150 miles to the southeast.”

Rayayna pipeline reopened
After a two year long blockade of a major oil pipeline, the Rayayna Patrols Brigade of the Petroleum Facilities Guard has agreed to reopen the Rayayna pipeline, which can transport over 400,000 bpd of oil.

“The National Oil Corporation (NOC) should start its work as soon as possible and we, as the Petroleum Facilities Guard, pledge to protect and defend the wealth of the Libyan state,” a statement issued by the armed group said.

The key pipeline carries oil to terminals in western Libya from the Al-Sharara and Al-Feel oilfields. Both of the oilfields could restart production in the very near future, highlighted security officials on 13 December. Supposedly, reopening the fields could add 365,000 bpd to Libya’s production.

According to the NOC, stoppage of the two oilfields and pipeline has resulted in losses of US$27 billion.

The NOC plans to raise production to 900,000 bpd in the near future, later increasing this figure to 11 million bpd in 2017. However, while a NOC source confirmed the deal, they also highlighted that resumption of production is not guaranteed since similar pledges have fallen through in the past. Without these pipelines, the NOC’s goals most likely will not be reached.

News Highlights
➤ Construction continues in the Southern Gas Corridor
➤ PHMSA issues order to Belle Fourche Pipeline after crude leak
➤ Iran denies pipeline deal
➤ NEB clarifies Towerbirch pipeline status

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Honeywell receives SCADA contract for TAP
Trans Adriatic Pipeline AG (TAP) has selected Italy’s Honeywell SRL for the engineering, procurement and installation of its supervisory control and data acquisition (SCADA) telecommunications and security systems.

The scope of work includes system detail engineering, graphic interface development, block valve station controls, security and telecommunications systems. The SCADA and security system will provide integrated, centralised and seamless monitoring and control along the entire 878 km gas transportation system.

All data will be transmitted back to the supervisory control centre in the pipeline receiving terminal in southern Italy.

Ian Bradshaw, Managing Director at TAP said: “With this appointment, TAP has completed the award of all major strategic contracts for pipeline construction. I want to congratulate Honeywell for its successful bid and thank all the companies who participated in this tender round. The SCADA telecommunications and security system is a key piece of equipment which will ensure safe and effective pipeline operations.”

In 2016, TAP has awarded contracts for onshore construction for the Albanian and Greek pipeline section (March 2016), offshore construction and offshore line pipes (April 2016), compressor stations (May 2016), as well as fibre optic cable (June 2016).

Energy Transfer awards contract management solution to Apttus
Apttus was selected by Energy Transfer as its contract management solution provider. Energy Transfer is a master limited partnership that owns and operates one of the largest portfolios of energy assets in the US, including nearly 71,000 miles of pipelines transporting natural gas, natural gas liquids, refined products, and crude oil.

Energy Transfer sought out a solution to ensure the correct billing and tracking of its contracts throughout a network of over 7000 service companies. Apttus’ contract lifecycle management capability and flexible platform enables Energy Transfer to build effective operational business processes around a contract-centric business, offering many ways to engage, interact and meet the needs of individual service providers.

Energy Transfer expects Apttus will help solve its challenges by providing a flexible, accessible solution that Energy Transfer and its contractors will adopt to improve efficiency and accuracy of these processes while strengthening the relationships between all parties.

Energy Transfer expects Apttus’ solution to help deliver increased visibility to cost of services through digital rate sheets to automate the entry and verification of billing rates; increased efficiency in onboarding new service providers; increased internal and external contract compliance; increased efficiency in the administration of quality control programmes related to service providers; and real time monitoring of key project milestones, project claims and other performance analytics related to Energy Transfer’s service providers.

“Apttus delivers the most accessible, comprehensive and innovative contract management solution with the largest community of professionals dedicated to quote-to-cash advancement and customer success,” said Kirk Krappe, CEO at Apttus.

“Companies like Energy Transfer depend on Apttus to show tremendous impact in heavily regulated industries, while also delivering better experiences and outcomes to their own vast networks,” Krappe added.

Serimex contracted for Norwegian welding project
Serimex, a Vallourec subsidiary and leader onshore and offshore welding solutions, has been awarded a welding pipeline contract by Technip for a major project in Norway.

This milestone project marks the beginning of a new era for the company, making Serimex Technip’s exclusive subcontractor for welding operations at Technip’s spoolbases and onboards its S-lay vessels, following the strategic partnership signed earlier this year. Thanks to this agreement, both companies have the opportunity to combine their expertise and deploy Serimex’s welding technology.

Production welding for the project was scheduled to begin before the end of 2016, preceded by a welding quality procedure testing programme in Orkanger. Production welding will include double-joint welding in Technip’s adjacent facility where 12 m long tubes will be welded end to end. The resulting 24 m long tubes will then be transferred to the mainline production workshop where they will be welded into pipesticks, ready for spooling onto the Technip reel-lay vessel. Production welding will include 1865 double joint welds and 1865 mainline welds.

In order to satisfy the requirements of the customer and guarantee an optimum level of quality for the welds to be carried out, Serimex’s teams in northern Europe have worked closely with the central functions from Serimex’s Welding Technology Centre (near Roissy Charles de Gaulle) on a R&D programme and have used the advanced Saturnax-09 system.

Intertek awarded Nord Stream 2 contract
Nord Stream 2 AG has awarded Intertek an inspection and expediting framework agreement for the Nord Stream 2 pipeline.

“We are very proud to have been awarded this framework agreement and are excited to be part of what is such a pioneering, large-scale project. All of our employees are dedicated to Intertek’s purpose: bringing quality and safety to life, and we look forward to supporting the safe and successful completion of the Nord Stream 2 project,” said Jan-Jörg Muller-Seller, EVP Global Resources at Intertek Group.

The Nord Stream 2 project will see the construction and development of a twin pipeline system. The system will stretching 1200 km and will transport natural gas large reserves in northern Russia to homes and businesses across Europe.

Nord Stream 2 builds on the Nord Stream pipeline system, which opened twin pipelines through the Baltic Sea between 2011 and 2012. The new pipelines will have a design capacity of 55 billion m³/y and will increase capacity from Russia to Germany, in turn helping to safeguard Europe’s long term energy supply.

Complex projects (such as pipeline construction) benefit from technical services that ensure high material quality, prompt deliveries, vendor compliance and adherence to contractual and regulatory requirements. Intertek’s inspectors and expeditors will be involved at various points of the project to facilitate the project’s specialist requirements, minimise risks and maintain safety.
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T.D. Williamson
Ng Weng Hoong explains how higher oil prices since early 2016 have weighed on Asia and Australasia’s slowing economy.
After reaching their highest levels in nearly a year, Asia’s mostly energy-deficit economies are watching nervously as crude oil prices continue to defy bearish forecasts. Brent crude traded above US$53/bbl in early October in the hopes of production cuts by OPEC, winter demand in northern Asia and stockbuild in China and India. Early in the year, the global benchmark crude was trading below US$30/bbl.

The forecast of oil prices falling below US$20/bbl, presented by Goldman Sachs and Morgan Stanley in January 2016, is looking increasingly unlikely. Asia’s energy importers would have welcomed that. Having benefitted from the energy price collapse since mid 2014, the region is at risk of a reversal of fortune from a sustained oil price recovery.

Asian economies will be hit as the US Energy Information Administration (EIA) anticipate the price of Brent to increase from an average US$43.43/bbl in 2016, to US$50.99/bbl in 2017. The EIA expects Asian oil demand to grow 2.8%, from 31.33 million bpd in 2015, to 32.2 million bpd in 2016 and by a further 2.6%, to 33.05 million bpd in 2017.

The World Bank is even more bullish with its forecast for crude prices, expecting a surge to an average US$55/bbl in 2017, from US$43/bbl in 2016. The bank estimates that Asian economies could lose 0.2 - 0.5% of GDP for every US$10/bbl increase in the crude price.

Much will depend on whether Organization of Petroleum Exporting Countries (OPEC) members will fully implement their 28 September agreement to curb supply. The cartel, which accounts for approximately one third of global production, agreed to limit output to 32.5 million - 33 million bpd, with details and the final decision revealed on 30 November.
At the meeting in the Algiers (Algeria), rivals Saudi Arabia and Iran seemed to have set aside their differences to broker the cartel’s agreement for its first production cut in eight years. While the reduction represents less than 0.8% of global production, it was welcomed as an important first official attempt by the cartel to rein in supply since late 2008. Russia has tentatively agreed to support OPEC’s decision to cut production by 750,000 bpd.

The World Bank appears to believe the agreement has substance, stating: “The plan, which effectively ends two years of unrestrained production, marks an important policy shift for Saudi Arabia, OPEC’s largest producer.”

In its latest survey of 45 Asia-Pacific economies, the Asian Development Bank (ADB) forecasts slower growth in the near term, amid tougher global conditions — including higher oil prices. The bank said that it expects the economies to grow by a collective 5.7% in 2016 and 2017, down slightly from 5.9% in 2015. The survey covered some of the region’s smallest economies, such as the Cook Islands, Fiji, Kiribati and the Marshall Islands, to giants including China, India and South Korea.

China’s nearly US$11 trillion economy is expected to grow by 6.6% in 2016 and 6.4% in 2017, down from 6.9% in 2015.

The Indian economy will continue to outperform China’s over the next two years, boosted by expanded private consumption as a result of rising wages and pensions, and improving rural incomes. The ADB expects India’s economy to grow by 7.4% in 2016 and 7.8% in 2017, compared to 7.6% in 2015.

Barring any new major supply disruptions, ADB expects the Brent price to average US$43/bbl in 2016 and US$50/bbl in 2017. However, the US$7/bbl increase will not be enough to help the region’s net crude exporters, as most are used to managing their economies on US$100/bbl oil.

“While many energy exporters have sovereign wealth funds to allow early windfalls to be applied to later contingencies, prolonged low energy prices will require reviews on how the funds should be managed and used,” said the ADB.

The region’s net energy exporters include Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Mongolia, Brunei, Indonesia, Malaysia, Myanmar, Vietnam and Papua New Guinea.

Asia’s refining capacity growth to slow down

Asia’s dependence on oil product imports will rise in the coming years as its refining capacity and throughput will grow at a slower rate.

US-based consultant ESAI Energy expects the region’s crude demand and refinery throughput to rise by 400,000 bpd through 2017, compared with 700,000 bpd in 2015 and 2016.

Bain & Company predicts that Asia’s import dependence will rise further, as the region’s refiners have largely failed to add or upgrade production capacity to take advantage of low feedstock cost over the last two years.

ESAI Energy sees decline in Asia’s product exports

In its latest Global Fuels Outlook report, ESAI Energy said that Asia’s net exports of gasoline and middle distillates have peaked.

“In the next two years, the combination of lower exports of these products and modestly growing imports of other products will negatively impact the increase in Asian refinery throughput,” said ESAI’s Principal Consultant, Andrew Reed.

ESAI predicts Asia’s middle distillate surplus, which exceeded 1.2 million bpd in 2015 - 2016, will decline by 180,000 bpd in the next two years. The region’s gasoline exports will fall by 75,000 bpd from its current historical high of 260,000 bpd.

“Until now, higher Asian exports of gasoline and middle distillate roughly offset increases in the region’s imports of other refined products,” explains Reed.

Citing India as an example, he said its expanded refining capacity and operations have boosted gasoline and middle distillate exports to record levels.

“In the next couple years, however, refiners will not increase output as much as in the past, and more of those products will be supplied to the domestic market.”

Bain foresees refinery shakeout

Bain & Company anticipates Asia’s uncompetitive refiners will fold for failing to prepare for the challenges of increased global competition, the expanded flows of new crude grades, tightened regulations and higher environmental standards.

“While these global trends will affect the entire refining sector, some countries are better positioned than others to thrive over the next decade,” said Dale Hardcastle, Leader of Bain’s Southeast Asia oil and gas practice.

Market, operating conditions and quality of asset portfolio will be key to the refiners’ ability to compete, as explained in the firm’s ‘Full Potential for Oil Refiners in a Challenging Environment’ report.

The report found that the region has largely failed to reduce oil and gas product imports because its refining capacity expansion has not kept pace with demand growth.

State-owned firms in China and other parts of Asia are expected to benefit from the region’s rising oil demand.

Hardcastle stated: “Refiners in the Asia-Pacific are well positioned to withstand the shift in the flows of crude feedstock and refined products around the world, but we anticipate continued pressure amid ongoing changes in the sector. This means that even the most favoured players will have to work hard to maintain their full potential.”

China

China’s increased oil buying, to stock up its strategic petroleum reserves, may have kept crude prices from plunging below US$20/bbl as was feared at the start of the year.

Instead, Brent has held above US$40/bbl for most of 2016, thanks to a combination of slower supply growth and continued strong global demand.

Another factor could be at play: Chinese oil buying for stockpiling at a faster rate than previously reported. Since launching its strategic stockpiling programme in 2004, the Chinese government has told the local media that it has accumulated just under 300 million barrels of crude to ward off supply disruption.

However, according to US-based satellite imaging firm Orbital Insight, China may have accumulated as much as 600 million barrels at its eight official terminals located in seven cities. Seven are aboveground in the cities of Huangdao, Zhoushan, Zhenhai,
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Dalian, Dushanzi, Lanzhou and Tianjin, while Huangdao also has an underground terminal.

Orbital Insight based its estimate on a study of satellite images of the country’s aboveground storage facilities, its calculations of the capacity of each terminal and tank, and existing data from industry sources. The number would be significantly larger if underground tanks and oil kept in floating storage tanks were available.

In 2009, China launched the first phase of a long term plan to build large storage terminals across the country. It has reportedly stepped up its oil purchase programmes over the last two years in order to take advantage of low prices.

At a September briefing in London, US ratings agency Standard & Poor described China’s stockpiling plans as one of the biggest “wildcards” driving the global oil markets today. With China unwilling to provide timely accurate data of its oil stockpiling and buying patterns, traders are relying on estimates and media reports to make decisions.

According to the EIA, China’s oil consumption will grow by an annual average of 3.4% over the next two years, to 11.67 million bpd in 2016 and 12.06 million bpd in 2017. Stockpiling will account for a significant portion of this growth, with imports running at over 7.4 million bpd in 2016.

**Japan**

Saudi Arabia’s state-owned oil giant, Aramco, will increase the amount of crude it currently stores on Okinawa Island, from 6.3 million bbls to approximately 8.3 million bbls in 2017.

The new three year agreement with Japan Oil, Gas and Metals National Corporation (JOGMEC) will enhance energy security for both countries as part of their push for expanded bilateral ties. Japan will have first call on the stored oil in the event of any supply disruption, while Saudi Arabia will boost its crude stockpile outside of the Middle East to supply its Asian customers.

The deal was announced during Deputy Crown Prince Mohammed bin Salman’s recent visit to Japan, who led a high level Saudi delegation that included Energy Minister Khalid al-Falih, other ministers and Saudi Aramco CEO, Amin Nasser.

Japan initiated the crude storage agreement in 2010 when it offered Saudi Arabia free stockpiling services in exchange for security of supply. At that time, Brent was trading at over US$100/bbl amid fears of the stability of global supply.

In a separate deal with JOGMEC, state-owned Abu Dhabi National Oil Company (ADNOC) also agreed to expand its crude stockpile on Okinawa by 2 million bbls, totalling approximately 8.3 million bbls.

**Kazakhstan**

The government of Kazakhstan has announced that the country’s much-delayed giant Kashagan oilfield had exported its first cargo after resuming production on 12 October. Operator North Caspian Operating Company (NCOC) delivered the first cargo of 26 500 t of Kashagan’s light 45-API gravity crude through the country’s pipelines.

In a statement, Energy Minister Kanat Bozumbayev said “everything is in order,” as four active wells began producing a total of 90 000 bpd at the Caspian Sea project.

Backed by recoverable crude reserves estimated at 10 billion bbls, industry officials believe Kashagan — the world’s largest discovery in the last 30 years — could be pumping out as much as 370 000 bpd by end 2017, and 1 million bpd by the end of the decade. Predictably, these projections have struck fear with OPEC members.

However, predictions of oil production in Central Asia will have to be taken with caution. The protracted delay and cost overruns associated with the 16 year development of the Kashagan field itself are instructive.

Discovered in 2000, the field started production in 2013 but was immediately shut down when underwater pipelines carrying crude were corroded. NCOC invested heavily to rebuild the pipelines.

State-owned KazMunayGaz is NCOC’s largest owner with a 16.88% share. Its partners include Italy’s Eni, France’s Total SA, Royal Dutch Shell Plc and US major Exxon Mobil Corporation, which each own hold a 16.81% share, while China National Petroleum Corporation (CNPC) has 8.33% and Japan’s Inpex Corporation owns the remaining 7.56%.

**India, Saudi Arabia and the UAE**

India expects Saudi Arabia and the UAE to join Iran in storing crude at its newly launched strategic stockpile terminal in Mangalore in Karnataka state.

Petroleum Minister, Dharmendra Pradhan, expressed his hope for an imminent deal with the two Arab oil producers, after news that Iran had shipped 2 million bbls of crude for storage at the 1.5 million t (11 million bbl) terminal.

The cargo was received by Mangalore Refinery and Petrochemicals (MRPL), and was delivered to the storage cavern operated by the Indian Strategic Petroleum Reserves (ISPRL).

The deal has put Iran ahead of its Arab rivals, which have been unable to agree on an oil storage arrangement with India despite years of negotiations.

India has developed a total of 5.33 million t of storage capacity to date: Mangalore (1.5 million t), Visakhapatnam in Andhra Pradesh state (1.33 million t), and Padur in Kerala (2.5 million t).

**India and Russia**

The geopolitics of the international oil trade are about to be redrawn, with a consortium led by Russia’s Rosneft PJSC making a proposed US$12.9 billion purchase of India’s privately owned Essar Oil Ltd in the biggest corporate deal between the two countries.

In acquiring Essar’s 20 million t oil refinery and port facilities in Vadinar, a nationwide chain of 2,700 retail stations, the Russian oil and gas giant and Switzerland-based commodities trader Trafigura will gain access to one of the world’s fastest growing fuel markets whilst India strengthens its search for energy security by reducing its traditional supply dependence on the Middle East and Africa.

The Middle East will have to contend with a new rival supplier into India’s energy market, while China will face increased competition from another major Asian buyer for Russian oil and gas. The US and Europe, in a new Cold War with Russia, must factor in India’s position as New Delhi and Moscow...
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will build on the political dimension of this new Rosneft-Essar connection.

On the domestic front, the deal marks an important breakthrough for the business-minded Modi in opening up the country’s heavily protected energy sector to foreign investors. When elected to office in May 2014, Modi made India’s inefficient energy sector a key target of his reform agenda. The sale of Essar Oil represents India’s single largest foreign direct investment transaction, and will likely open up the country’s other energy assets to global players.

In a statement, Essar said the transaction placed a value of US$10.9 billion on its refining and retail assets, and US$2.9 billion on Vadinar port and related infrastructure. Rosneft also sold an additional 11% share in an upstream subsidiary, Vankornet JSC, to India’s state-owned ONGC Videsh Ltd for US$930 million.

Igor Sechin, Rosneft’s CEO, and ONGC Videsh’s Managing Director, Narendra Verma, signed the transaction in the presence of the country’s two leaders, boosting the Indian firm’s stake to 26%.

With the sale, Indian firms now have a total 49.3% stake in Vankornet. Earlier, a consortium of Indian companies comprising Oil India Ltd, Indian Oil Corporation Ltd and Bharat PetroResources Ltd completed its purchase of a 23.9% stake in Vankornet.

Vankor holds 265 million t of oil and condensate reserves and 88 billion m³ of natural gas.

**Australia**

Australia’s petroleum trade will exhibit two opposing trends for the fiscal year (FY) ending 30 June 2017: falling crude and condensate exports, and rising product imports.

Crude and condensate exports will fall by 2.6%, from 241 000 bpd in FY15 to 235 000 bpd in FY16, according to a Department of Industry, Innovation and Science forecast.

Going in the opposite direction, Australia’s product imports will surge by 18% to 593 000 bpd, to reflect the decline in domestic fuel production following the closure of two ageing refineries.

The fall in export volumes is consistent with the decline in crude and condensate production, as companies are cutting back on upstream budgets on account of weak oil prices.

“Australia’s output is expected to fall by 5% in 2016 - 2017 to 301 000 bpd as natural decline at established fields outweighs new supply, such as condensate production from the Gorgon project in Western Australia,” the Department recently stated.

The report did offer a consolation: the earnings from crude and condensate exports are expected to rise 5.7% from AUSS$5.47 billion last year to AUSS$5.78 billion in FY16 (AUSS$ = AUSS13). This is due to “rising oil prices, which will more than offset the anticipated decline in export volumes.” It expects the crude price to rise from an average US$44/bbl in 2016 to US$55/bbl in 2017.

The report continued: “Persistent low prices have seen producers reduce investment or exit the industry, sowing the seeds for tighter future supply conditions.”

However, rising oil prices will have a double edge, as Australians will end up paying more for their imported fuels. While the department did not provide a forecast for Australia’s fuel import bill for FY16, it projected an 18% surge in import volumes. Furthermore, it has observed that imported refined products represented 62% of domestic consumption in FY15, up sharply from 53% the previous year.

Australian refineries will remain under competitive pressure from newer and much larger plants in the Middle East and Asia supplying products to markets around the world.

**Exploration and production headed for further decline**

The Department of Industry, Innovation and Science explained that oil and gas explorers are losing their appetite for Australia, with investment expenditure now at its lowest in over a decade.

The department recently reported that petroleum exploration expenditure in Australia had declined for a sixth consecutive quarter in June, falling by 34% to AUSS283 million.

“Exploration activity now stands at its lowest level since the March quarter [of] 2006,” the report said.

The report confirms consultant EnergyQuest’s earlier finding, that the oil price collapse since mid 2014 is having a devastating impact on Australia’s upstream oil and gas sector.

CEO, Graeme Bethune, said last year’s drought in offshore drilling marks the beginning of “a prolonged period of very low Australian offshore activity,” despite the large take up of new acreage in offshore release programmes between 2012 and 2014.

Bethune stated: “The total number of exploration and development oil and gas wells drilled in Australia nearly halved, falling from 1534 in 2014 to just 821 in 2015, including exploration wells falling from 119 to 54. In that time, exploration spending fell from AUSS1034 million in 4Q14 to AUSS446 million in 4Q15. This is Australia’s lowest oil exploration spend in a decade.”

Production is in even worse shape than exploration, with 2015’s output of 76 million bbls, the lowest since 1970.

Low oil prices have resulted in significant downward revisions of reserves, leading to negative reserves replacement ratios over the past year. This has greatly reduced the valuation of oil and gas companies listed on the Australian Securities Exchange (ASX), which saw its energy index fall to an 11 year low in January 2016.

The reduced investment in exploration will further depress future production, with the Department of Industry predicting Australia’s output of crude and condensate to fall by 5% to 301 000 bpd in the current fiscal year to June 2017. In 2015, production fell by 3.5% to 317 000 bpd.

BP confirmed the industry’s growing risk aversion to Australia, with its announcement to discontinue its AUSS600 million exploration programme to drill in the Great Australian Bight (GAB) off the coast of South Australia.

BP said the project will not be able to compete with other upstream opportunities in its global portfolio in the foreseeable future.

“We have looked long and hard at our exploration plans for the GAB but, in the current external environment, we will only pursue frontier exploration opportunities if they are competitive and aligned to our strategic goals. After extensive and careful consideration, this has proven not to be the case for our project to explore in the Bight,” said Claire Fitzpatrick, BP’s Managing Director for Exploration and Production in Australia.
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