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Teapot trepidation

While some independent refiners may be keen to join forces, high costs could dampen enthusiasm for mergers and alliances.

Upsetting the balance

China has shifted from a major importer of petrochemical products to a significant exporter, creating new challenges for existing market players.

CNOOC rents trucks to transport LNG

CNOOC has rented a convoy of 100 trucks to transport LNG from its main receiving terminals in southern China to alleviate gas shortages in the north.

China's crude web of influence

China is expected to acquire 3.8 million bpd in its equity oil from its overseas oilfields in 2017, up from 3.1 million bpd last year.

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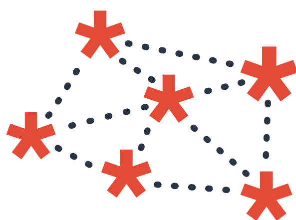

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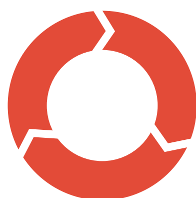

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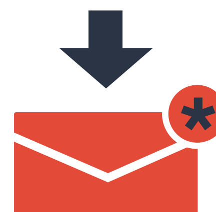

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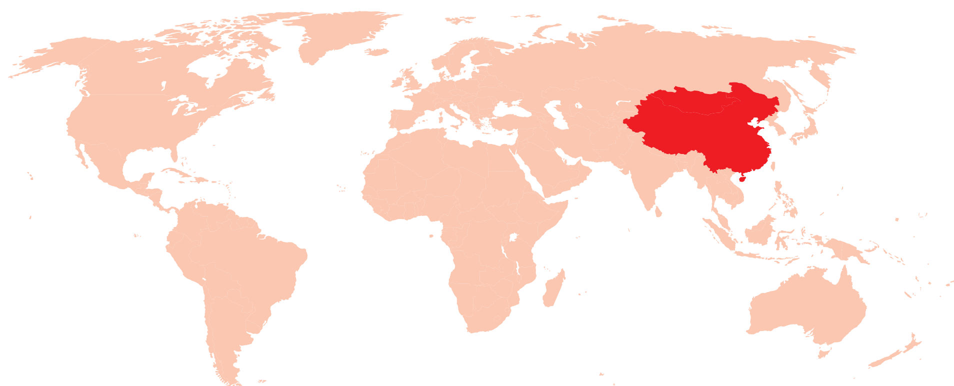

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China's teapots may baulk at consolidating in short term

While some independent plants may be keen to join forces, high costs could dampen enthusiasm for mergers and alliances, writes Jennifer DeLay

WHAT:
Government policy has generated some momentum towards consolidation this year.

WHY:
The impact of this development may be greater in light of efforts by Saudi Arabia to court larger teapots such as Rongsheng.

WHAT NEXT:
Between the need for light sweet crude and the high cost of modernisation, few teapots are likely to pursue consolidation in the short term.

INDEPENDENT refineries account for perhaps 20% of China's installed oil-processing capacity and around 20% of total crude imports. Most of these teapot plants are quite small, with design capacities well below 100,000 bpd. Only a few are large enough to stack up against the bigger facilities operated by the three state-run majors – Sinopec, PetroChina and China National Offshore Oil Corp. (CNOOC).

Nevertheless, officials in Beijing have sometimes encouraged teapots to band together – that is, to consolidate and streamline their operations. They have argued that this strategy will help save money while also facilitating improvements in environmental performance.

Even though most of the companies active in this sector are still smaller and far more low-profile than the majors, there has been some movement in this direction. In September, for example, a group of Shandong-based refiners secured permission to band together to form a new conglomerate that will be known as Shandong Refining Energy Group (SREG).

But are more such mergers or collaborative agreements likely in 2018?

Follow the leader

Some recent developments appear to make a case for further consolidation.

The government has taken several steps since the beginning of 2017 to remind small refiners that they face serious constraints on their business. It has not acted to reverse previous rulings such as Beijing's decision in 2015 to start granting some teapots the right to import crude oil directly, rather than buying it from one of the state-owned majors. But it has made it clear that it is ready to withhold the quotas for its own reasons.

In the second quarter of the year, for example, it suspended consideration of applications for new oil import quotas. It then resumed the quota process a few months later and revealed in October that it had granted new import permits to three independent companies. In a statement, it said it had granted three small refiners – Shandong Qingyishan Petrochemical Technology, Shandong Yuhuang Shengshi Chemical and Zibo Xintai Petrochemical – the right to buy another 1.5 million tonnes (11 million barrels) of crude oil before the end of 2017.

> "The government has taken several steps to remind small refiners that they face serious constraints on their business

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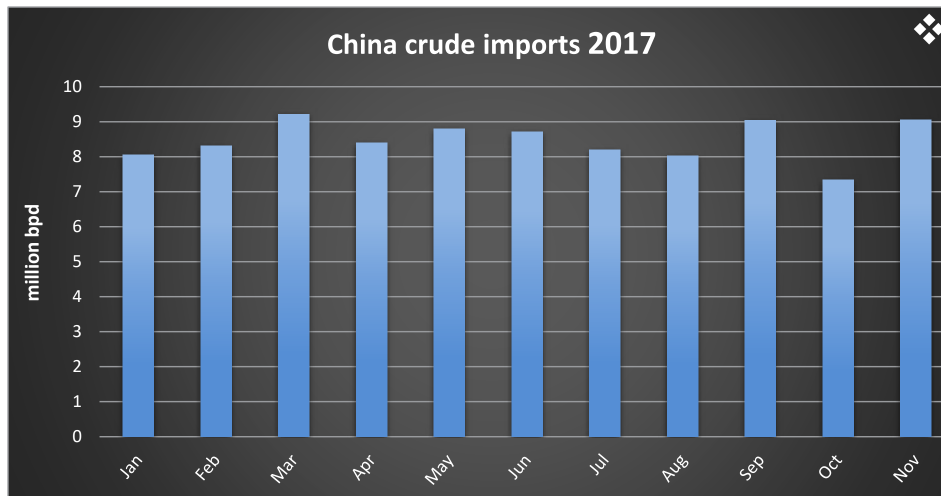
Oil tankers dock at Qingdao Port, which receives the majority of crude oil imported by China's teapot refiners. *Image: Qingdao Port*



But the National Development and Reform Commission (NDRC), China's top economic planning agency, has warned teapot operators of the penalties for failing to uphold commitments to the government. It reminded these companies that they were legally obligated to use all of their import quotas within the time allotted – that is, by the end of the calendar year. It also pointed out that they could be penalised if they failed to uphold previous pledges to upgrade or replace ageing and obsolete equipment in their plants.

These moves have not led to any major disruptions in the teapot sector. But they do serve to underscore the point that independent refiners cannot retain their direct access to imported oil without help. They depend on Beijing's willingness to grant that access, and as such they cannot afford to ignore suggestions from the government about the advisability of consolidation and other initiatives.

Go big or go home

Government policy is not the only factor that could encourage consolidation. Teapots may also opt to follow the example set by some of the larger independents.

The vice president of the marketing department of Saudi Aramco's Asian unit, Mushabab Al-Qahtani, told Bloomberg in late November that his company was holding supply talks with representatives of firms that are working on the largest oil-processing plants now under construction in China. He did not identify any of the Chinese parties, but Bloomberg named Rongsheng Petrochemical and Hengli Group as potential buyers of Saudi oil. Both companies are working on new refineries, with Rongsheng building a 400,000 bpd plant in Zhejiang Province and Hengli another similar-sized facility in Liaoning Province.

Most teapots are in no position to follow their example. Some companies are simply not as ambitious, while most of the rest are so much smaller than Rongsheng and Hengli that they do not need such large volumes of oil of consistent quality. Nevertheless, China is home to a number of ambitious independent refinery operators and consolidation might help them amass the funding and influence needed to realise their ambitions.

High price tag

The extent of such consolidation is likely to be limited, though, because of the heavy costs it would entail.

Many Chinese teapots are not just small; they are also older and/or less complex than the plants operated by the majors. As a result, they must use high-quality feedstocks such as light sweet crude to have any hope of producing mass quantities of gasoline that can be sold on the domestic market without violating domestic environmental standards. If they stick to cheaper raw materials, their output will include a larger share of heavy and more polluting fuels for which there is relatively little demand.

As such, these plants have relatively high material expenses, since light sweet crudes are more costly than the heavier, higher-sulphur grades that Al-Qahtani told Bloomberg Aramco hoped to sell to China.

Theoretically, these refineries could take steps to accommodate cheaper feedstocks. They could build secondary processing units to crack heavy fuels into lighter fractions and to reduce the sulphur content of their production. But these moves would also come at a price, since secondary processing units are expensive.

As a result, many teapot refineries are likely to decide against pursuing consolidation, at least in the short run. They may eventually try to follow the example set by larger independents such as Rongsheng, but they will not go beyond consideration and study before the end of 2018.❖

Chinese petchem exports upset world markets

The country has shifted from being a major importer of petrochemical products to being a significant exporter, with Graham Lees finding that this is creating new challenges for existing market players

WHAT:
China is forecast to contribute about 50% of all chemicals growth in the world by 2025.

WHY:
The country has undergone rapid downstream capacity expansions to cater for rising demand from sectors with more advanced manufacturing requirements.

WHAT NEXT:
While China has several structural imbalances in the downstream that it must address, Middle Eastern and Asian exporters must adapt their strategies to survive China's growing presence on the export market.

CHINA'S swing from a low-tech manufacturer of cheap products to sophisticated economy catering for high-end domestic consumer goods is turning it into a surplus petrochemicals producer, upsetting world markets with exports instead of imports.

That was the alarm raised at a Gulf Petrochemicals and Chemicals Association (GPCA) conference at the end of November, with warnings that Saudi Arabia and its five smaller Gulf neighbours must adapt quickly to the Chinese sector expansion to keep market share.

Between now and 2025 China will contribute about 50% of all chemicals growth in the world, the GPCA was told by the CEO of Saudi Basic Industries Corp. (SABIC), Yousef Al-Banyan, Xinhua Finance reported. Not only is China rapidly becoming self-sufficient in many petrochemicals; it is now a net exporter of some key commodities.

Export growth

China became a net exporter of purified terephthalic acid (PTA) in 2016, after imports ramped up to 7 million tpy in 2006 and stayed around that level until 2012.

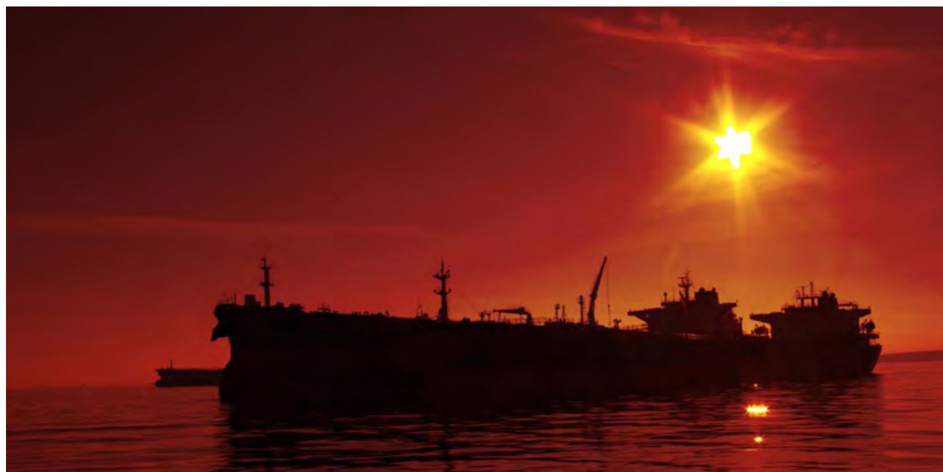
PCI Wood Mackenzie's vice president consulting, Steve Jenkins, told *NewsBase Intelligence (NBI)* that exports were likely to reach 1.5 million tpy of PTA by 2025. PTA is used in making high-end multi-purpose plastics.

The analyst also noted that years of extensive polyethylene terephthalate (PET) capacity additions had catapulted China into a large export position. PET is extensively used for plastic bottles and containers.

But China is still some way off being 100% self-sufficient in all petrochemical feedstocks. Imports of LPG, used in the making of ethylene and propylene and several other commodities, are rising.

China has been forecast to import 20 million tonnes of LPG in 2017, with demand projected to hit 55 million tonnes. The volume imported in 2016 was 16.1 million tonnes, up 33% year on year, General Administration of Customs (GAC) data showed.

While China's imports of polyethylene (PE) are likely to grow, polypropylene (PP) imports could fall as the country moves towards self-sufficiency.



Shifting supply lines

"In terms of threat to their traditional trade partners, it will be more apparent in the propylene chain than in the ethylene chain, with [PP] imports falling and more cost-competitive [PE] holding a structural advantage for North American and Middle East exporters," Jenkins said.

China's ethylene and propylene capacities between this year and 2025 are tipped by Wood Mackenzie to increase by more than 70% to reach more than 40 million tpy. But China is likely to remain deficient in ethylene and derivatives as far out as 2035, despite large investments. The change in supply and demand is underlined by recent figures for exports to China from the GPCA countries – Saudi Arabia, Bahrain, Kuwait, Oman, Qatar and the United Arab Emirates (UEA). They declined overall by 13% in 2016, marking the second year's decline after a 15% drop in 2015.

GPCA countries' China exports had been growing up to 2014. The value of petrochemical exports to China from the six Gulf countries in 2016 was US$11.3 billion, compared with a peak US$15.4 billion in 2014. One example of new petrochemicals demand in China being led by a growing urban middle class is the boom in smart hire-and-leave bikes in scores of major cities. From only 2 million bikes two years ago, there are now 30 million – spawning research and investment in plastic tyre technology involving state-run Sinopec.

A recent ICIS study noted: "These tyres are made of plastic and are airless. Sinopec developed a special styrene-ethylene-butylene-styrene (SEBS) applied on bike tyres, and … orders have exceeded its production capacity."

But it is not just the NOCs who are growing China's petrochemicals sector. The government is encouraging private companies to invest and innovate by granting feedstock import licences.

What next

One way that Saudi Arabia can maintain some handle on China's petrochemicals business is to team up with the Asian giant's downstream players.

In March, SABIC signed an agreement with Sinopec to investigate prospects for joint ventures.

This was then followed by a memorandum of understanding (MoU) in November, which saw the two agree to develop jointly a 400,000 bpd chemicals complex in the Middle Eastern kingdom.

For both Asian and the Middle Eastern aromatics producers, though, the battleground could prove to be gasoline rather than aromatics as refiners increase output to meet growing domestic market. Jenkins noted that China's benzene imports were likely to expand in the next five to seven years to meet growing demand for derivatives such as styrene, phenol and aniline.

China's petrochemicals sector is unbalanced in several areas, with structural barriers impeding faster domestic investment. For instance, its olefins industry cannot compete with low-cost ethylene from US ethane.

Some imbalances can be attributed to changing government policy diktats, especially the current drive by Chinese President Xi Jinping to reduce the country's severe air pollution.

The clean-up campaign targets coal usage and poor environmental-standard factories and has led to the temporary closure of some coal-to-olefins and other petrochemical operations.

At the same time, this is happening as the country's growing coal conversion industry, promoted by the National Development and Reform Commission (NDRC), delivers 15% of China's ethylene and propylene this year from virtually nothing in 2010. These imbalances will provide some opportunities for Gulf petrochemical exporters but they must adapt quickly to avoid being overwhelmed by a rising tide of Chinese products.❖

> "For both Asian and the Middle Eastern aromatics producers, though, the battleground could prove to be gasoline rather than aromatics as refiners increase output to meet growing domestic demand

CNOOC rents trucks to transport LNG cross-country

CHINA National Offshore Oil Corp. (CNOOC) has rented a convoy of 100 trucks to transport LNG from its main receiving terminals in southern China to alleviate gas shortages in the north. Northern China has only one LNG terminal and shortages are worsening.

Although trucking LNG to industrial customers has become more common this year, it is unusual for a company to resort to this on such a scale or across such large distances.

CNOOC did not say how much it had spent on renting the trucks but Reuters calculated that trucking LNG 2,400 km from its Zhuhai receiving terminal in southern China to Baoding – a major city in northern Hebei province – would take around two days and cost 50,400 yuan (US$76,257) per truck.

That would equate to nearly a third of the value of a 20-tonne cargo of LNG, based on offer prices of 9,000 yuan (US$1,368) per tonne on December 15. 17 trucks per day will make the journey. CNOOC has only one LNG receiving terminal in southern China, in Tianjin, and this is already operating at full capacity. "We hope to provide more LNG resources to north China with truck delivery," CNOOC said in its statement.

This follows an announcement the previous week that it had also rented two tankers to provide floating storage for LNG imports off China's coast. With northern China's gas shortages intensifying, China's National Development and Reform Commission (NDRC) ordered CNOOC and industry peers China National Petroleum Corp. (CNPC) and Sinopec on December 18 to reduce natural gas supplies to manufacturers of chemicals, methanol and fertiliser by around 15 mcm per day.

NDRC spokeswoman Meng Wei also said that Beijing had co-ordinated with the three major energy companies to augment supplies by raising gas output, boosting imports and accelerating infrastructure development.

China has been transporting 14 mcm of gas per day from southern to northern China, with plans to increase that to around 19 million tonnes per day, she added.

It also intends to buy 3.5 bcm of LNG in overseas markets in addition to an earlier plan to import 24.5 bcm over the winter.❖

Sinopec division signs Saudi LPG deal

CHINA Sinopec Fuel Oil Sales, a subsidiary of state-owned giant Sinopec, has signed an agreement with Saudi Aramco for the supply of LPG.

Speaking to Platts news agency, a source close to the deal, who did not wish to be named, said: "The cargoes will comprise both propane and butane and are expected to start delivery in the first quarter of 2018."

He added: "The cargoes under the contract will be priced according to Saudi Aramco's monthly CPs on an FOB basis, just like Saudi Aramco's other term contracts."

The source noted that the agreement would last for a year, with the option of renewal. The volumes of LPG to be delivered have not yet been made public.

Aramco has been sending LPG directly to China since 2016, eight months after Wanhua Chemical Group, a state-owned company with the largest propane dehydrogenation plant (PDH) in the country, reached a supply agreement in April the previous year.

The source went on to confirm that "this is Saudi Aramco's second direct sale of LPG cargoes to China and Sinopec Fuel also has the right to recommend a monthly contract price to Saudi Aramco".

As it stands, Sinopec Fuel has no significant LPG terminals or storage facilities in the country. As a result, it intends to share facilities with other operators – in particular other companies in the Sinopec portfolio – to receive the cargoes.

Recently, the International Energy Agency (IEA) said that overall Chinese LPG demand could expand by 250,000 bpd by 2022 from the 2016 level. This is predominantly expected to be driven by residential use, whereas much of the recent upturn in demand has been the result of higher usage as feedstock for petrochemical facilities.❖

AIIB lends BGG US$250m

THE Asian Infrastructure Investment Bank's (AIIB) first loan to China has been given to state-owned Beijing Gas Group (BGG), which is involved in executing the country's ambitious coal-to-gas conversion programme.

The AIIB, whose creation was led by the Chinese government, has advanced a significant US$250 million to BGG to finance the conversion of more than 216,000 homes in rural areas around the capital city of Beijing. It is part of a process that is expected to cost many billions of dollars and enrich gas connection-and-supply businesses.

The loan award coincides with the evident failure of the Chinese government-led campaign to replace coal burning this winter in the densely populated Beijing-Tianjin-Hebei (BTH) region with gas.

Overly enthusiastic

The central government set out plans months ago to cut coal consumption in this region in particular in order to tackle annual winter smog. The traditional boiler fuel for heating many apartment blocks is coal, for instance. In countless villages, coal is burned for heating and cooking.

Reports said the government's National Development and Reform Commission (NDRC) and other state agencies had banned coal use on pain of prosecution in many areas where there was no gas distribution infrastructure in place. Indeed, where there were pipelines there was often inadequate gas supply thanks to soaring demand on the back of colder winter temperatures.

The NDRC in recent days countermanded its coal-banning order and instructed several mothballed coal-fuelled power plants in the region, including an 850-MW plant in Beijing itself, to be re-fired, independent business news website Caixin said. This was because gas demand in the region exceeded supply by between 10% and 20%.

Beijing-based AIIB's president, Jin Liqun, a former a vice minister at China's Ministry of Finance, said the bank was advancing the US$250 million in support of China's campaign to reduce its reliance on coal.

Making connections

"With our unwavering commitment to helping members meet their environmental and development goals … it is only fitting that our first investment in China will introduce sustainable infrastructure that will reduce greenhouse gas [GHG] emissions and help vitalise one of the most important economic hubs in Asia," Jin said in a statement.

AIIB members' money will help BGG connect more than 500 villages in Hebei Province to gas infrastructure. The work will take up to 2021 to complete and is likely to enrich BGG, a subsidiary of major conglomerate Beijing Enterprises Holdings, which is owned by the Beijing municipal government. In fact, so desperate is the Chinese government to make its coal-to-gas campaign work, it is preparing to subsidise the switch, Bloomberg reported on December 11.

"[It] could cost the Chinese government and its financing vehicles as much as 381 billion yuan [US$57.6 billion] in subsidies," Bloomberg said citing estimates made by Morgan Stanley. "Gas distributors can receive as much as 10,300 yuan [US$1,559] per household, including 4,000 yuan [US$605] for connection fees, 2,700 yuan [US$409] for the gas heater, and up to 1,200 yuan [US$182] per year in winter gas subsidies for as long as three years."

Stock markets have caught on to this.

Share watch

Shares in Hong Kong-based China Gas Holdings have climbed 127% this year, and those in ENN Energy have risen 76%, and China Resources Gas 34%, Bloomberg said.

Gas business is also one of Beijing Enterprises Holdings' most profitable branches, so it is perhaps questionable why the AIIB is providing such a big loan in this particular case.

On the other hand, the Chinese government is the bank's biggest shareholder and the project complies with the bank's Sustainable Energy for Asia Strategy.

But the question remains: when will China ever be able to produce and import and distribute the volume of gas needed to eliminate a coal problem that embraces the whole country, and not just the Beijing-Tianjin-Hebei axis? The answer seems to be not in the near future at least.❖

China's overseas equity oil to reach 190 million tonnes in 2017

CHINA is expected to acquire 190 million tonnes of oil equivalent (3.8 million bpd) as its equity oil from its overseas oilfields in 2017, up from 155 million tonnes (3.1 million bpd) last year. According to Xu Jianshan, the director of Overseas Oil and Gas Investment Environment Research at CNPC Economic and Technology Research Institute, in 2018 the country's overseas equity oil will exceed domestic production to hit 200 million tonnes (4 million bpd).

In November, China produced 15.7 million tonnes (3.83 million bpd) of crude oil, down 2.5% from the same month last year, and bringing the total production to 180 million tonnes (1.32 million barrels), falling by 4.1% on year, data from the National Statistic Bureau show.

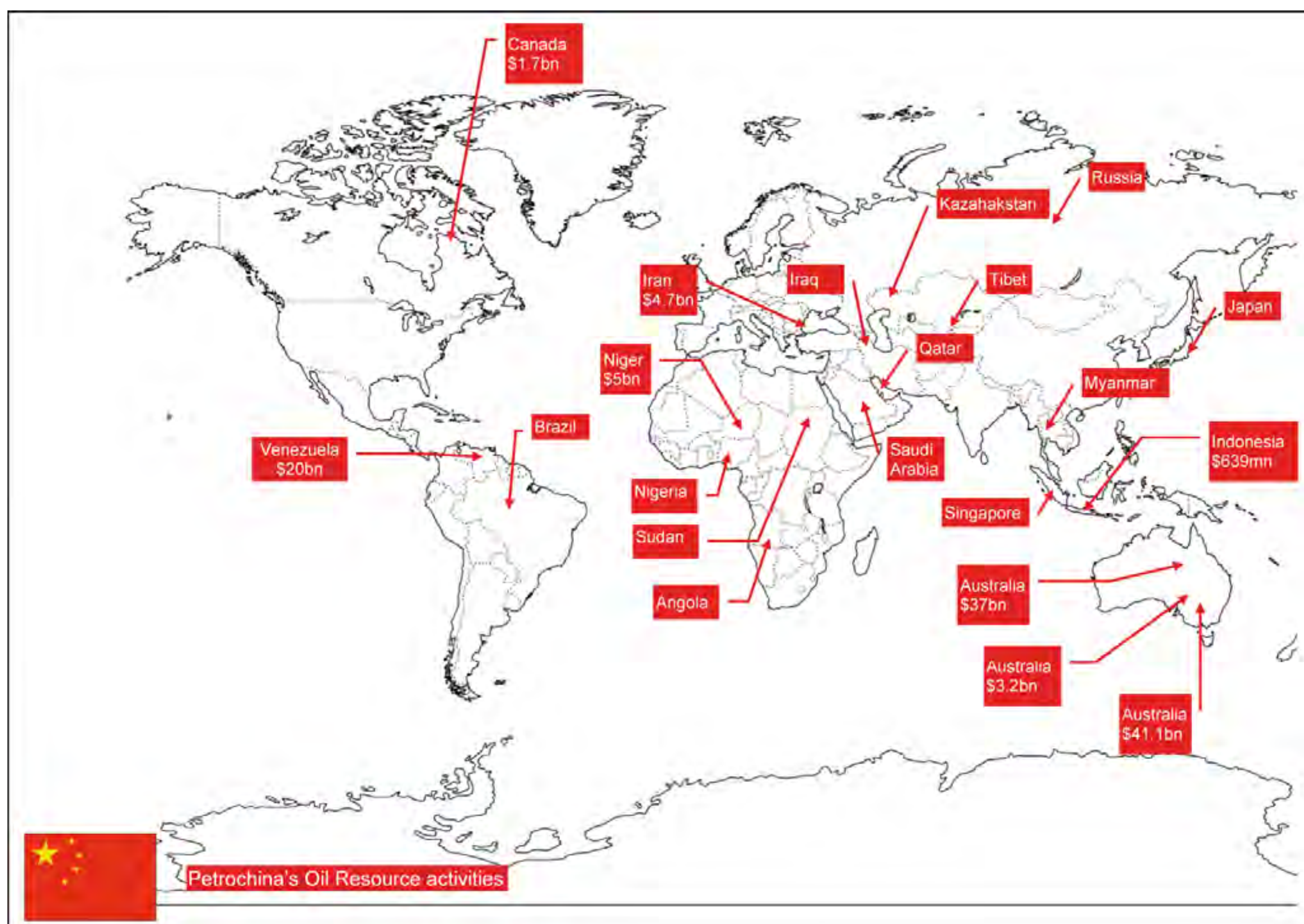
Since last year, China has been producing below 200 million tonnes of oil as oil companies have downsized crude production activities in part to save cost at some ageing fields in the north-east.

Xu told delegates attending the International Energy Executive Forum held in Beijing last week that the 190 million tonnes comprised 150 million tonnes of crude oil and 45 bcm of natural gas. Of the total, 30 million tonnes are produced in Africa.

He said that 50% of China's overseas equity oil was produced by China National Petroleum Corp. (CNPC), 28% by Sinopec and the rest came from China National Offshore Oil Corp. (CNPC) and independent oil and gas companies. He added that by the end of the year, 31 private independent Chinese oil and gas companies would be operating outside the country.

He added that by the end of this year, Chinese oil and gas companies were operating 210 overseas oil and gas projects.

Even though the country is increasing its overseas oil and gas production, not much of that has been shipped home for domestic consumption, Xu said, adding that most of the equity oil is sold in international markets. He noted that this trend would continue in the future.❖



Source: L'espace Politique

CNPC could replace Total in South Pars 11

CHINA National Petroleum Corp. (CNPC) could take over as lead partner in Phase 11 development of Iran's giant South Pars field if Total is forced to exit the project in the event of new US sanctions against Tehran.

Total signed on to the US$2 billion Phase 11 development project in July 2016 after international sanctions against Iran were broadly lifted and the implementation of the Joint Comprehensive Plan Of Action (JCPOA) in January that year.

However, US President Donald Trump refused in October to certify that Iran was complying with its obligations under the agreement, prompting speculation that the US could reimpose sanctions barring companies working in Iran from doing business in the US.

Total, which has committed to investing US$1 billion in the project, said it would have to withdraw from Iran if that situation were to arise, releasing its 50.1% operating stake in the project.

The deal Total signed includes a clause that allows the French firm to opt out and have partner CNPC, which holds a 30% stake, acquire its shares. Iran's PetroPars holds the remaining 19.9%. Doing this would leave CNPC with an 80% stake. Phase 11 is intended to produce 2 bcf (57 mcm) per day and supply the domestic market by 2021.

The situation remains unclear because there has been no further action on the certification matter by the White House or the US Congress. Total has suggested that if the US does take action, its future in Iran could depend on the interpretation of the wording of new sanctions and on the position of the EU, which intends to stick with the agreement reached by the international team and the Iranian government.

South Pars is the northern portion of the world's largest gas field, which lies in the Persian Gulf and is shared with Qatar, where the asset is known as the North Field.

Iran intends to develop South Pars through 28 or more phases that will eventually result in gas production of between 25-30 bcf (710-850 mcm) per day. Iran's Shana News Agency has reported that total combined output from active phases is around 600 mcm per day.

Work on Phase 11 is progressing as a consortium of Iranian companies, beginning with the construction and installation of two offshore platforms in the Phase 11 area at a cost of US$100 million.

Qatar has made considerable headway with the development of the North Field, as it is now the largest LNG producer in the world with a capacity of 77 million tpy.❖

ADNOC contracting surge continues

THE deepening involvement of China in Abu Dhabi's oil sector was confirmed in the final months of the year by movement on an upstream joint venture (JV) between the two governments conceived three years ago.

Meanwhile, the surge in activity at the emirate's main onshore concession continued with the launch of a new phase of expansion at the Al-Dabbiya oilfield and mounting hopes of imminent revival of a stalled gas project at the same acreage. The abundance of contracting opportunities emanating from Abu Dhabi National Co. (ADNOC) over the past six months was given financial context last month with approval of a five-year capital spending budget for the state firm of more than US$100 billion.

Technical bids have been submitted for the main engineering, procurement and construction (EPC) contract on the development of the offshore Bu Haseer field, located 150 km north-west of Abu Dhabi, by Al Yasat Petroleum Operations – a JV established in 2014 by Beijing-owned China National Petroleum Corp. (CNPC) and ADNOC to operate a concession comprising various portions of undeveloped onshore and offshore acreage.

Bu Haseer was the first field to be developed – with the local National Petroleum Construction Co. (NPCC) awarded the EPC contract in 2014 for an 8,000 bpd early production system (EPS) due for completion in 2018. The full-field development now out to tender calls for the installation of a new wellhead tower, a pipeline to the EPS facilities, water injection pipelines, subsea cabling and – under a separate contract – brownfield work to modify the nearby Das and Zirku Island processing hubs. This will target a capacity increase to 16,000 bpd.

ADNOC Offshore is handling the process on Al-Yasat's behalf. Previously Abu Dhabi Marine Operating Co. (ADMA-OPCO), ADNOC Offshore is a separate ADNOC subsidiary holding the concession for the bulk of offshore fields and operating extensive facilities in the area. Bidders are believed to include NPCC, India's Larsen & Toubro, the US' McDermott, the UK's Petrofac and Italy's Saipem. Published details of the concession and progress on development have been limited but the offshore acreage is known to include the Belbazem, Umm al-Dholou, Umm al-Salsal and Yaser fields, while the onshore portion is stated by Al-Yasat as comprising a total of 7,800 square km in the emirate's south-west. CNPC's maiden upstream involvement though the Al-Yasat JV was followed in February by the acquisition of an 8% stake in ADNOC Onshore alongside private sector counterpart CEFC China Energy. ADNOC Onshore is also the new name for the Abu Dhabi Company for Onshore Petroleum Operations (ADCO), which operates the majority of the emirate's main onshore fields.

A framework agreement was then signed with the Emirati giant in mid-November calling for the Chinese parastatal to consider participation in the former's offshore oil and sour gas developments. This has most immediate bearing on negotiations under way with numerous IOCs over stakes in the new concessions being formed in preparation for the break-up of the ADNOC Offshore concession on the existing agreement's expiry in March 2018.

In November, CNPC affiliate China National Petroleum Engineering & Construction Co. (CNPECC) also won the largest EPC contract awarded by ADNOC for several years – covering the expansion of the giant onshore Bab field.

Development upturn

Development has accelerated across ADNOC Onshore's concession since completion earlier this year of the sale of the 40% of shares allocated to foreign companies.

A recent result was the launch of the pre-qualification process for an estimated US$150-200 million EPC contract for the expansion by around 15,000 bpd of Al-Dabbiya, a shallow-water field in an environmentally sensitive area around 40 km southwest of Abu Dhabi City currently producing 145,000 bpd. A previous development at the field is due for completion next year by Italy's Technimont under a US$2.3 billion EPC contract awarded in 2014. This comes as part of the third-phase expansion of the operator's North East Bab (NEB) asset, which also includes the Rumiatha and Shanayel fields.

The latest project at Al-Dabbiya calls for the addition of 15 wells in two clusters, production manifolds and flowlines, gas and water-injection systems, a chemical-injection skid, pipelines and associated facilities. NEB was the only one of the four assets into which the main onshore concession has historically been grouped not to have been assigned an international lead during the apportionment of holdings in the operating company. France's Total assumed the role on the South East and Bu Hasa assets, while UK-based BP took the position at Bab.

A larger project – costed at the time at around US$1 billion – to develop non-associated gas reserves at Al-Dabbiya was paused in July last year as ADNOC undertook a review of all capital spending in light of the prolonged oil price downturn and wide-ranging corporate reform.

The aim was to produce 220 mmcf (6.23 mcm) per day of the much-needed resource. However, contractors are optimistic that the EPC tender will be revived next year.

ADNOC's capital expenditure budget of US$109 billion over the next five years was approved by the government's Supreme Petroleum Council in late November. Roughly 60% of the funds are envisaged being devoted to upstream activities, with gas development deemed the priority.❖

POLICY

China to shake up market with yuan-based futures contract

China is preparing to launch its own yuan-based oil futures contract, a move set to shake up the 96 million bpd global crude market currently dominated by trading in London and New York. No official launch date has been announced for the new contract, but traders and analysts in China say they expect trading in it to begin late this year or in early 2018. Trading will be based at the Shanghai International Energy Exchange, which has already conducted five test runs for the new contract, according to its website.

WSJ (US), December 20, 2017

China moves towards launch of carbon trading scheme

China has taken the first step towards launching its much-delayed carbon emissions trading scheme by setting emissions quotas for companies in the power sector. The long-awaited scheme, which is expected to be the world's largest carbon trading market, has been beset by delays and was initially scheduled for launch in 2017.

Environmentalists have hailed the plans for the country's carbon market as a sign that China, regularly criticised for its environmental transgressions, is moving towards a more sustainable future.

Since announcing plans for a national trading scheme two years ago, China has experienced numerous delays in trying to create a carbon market from scratch.

The biggest difficulty has been establishing a comprehensive data collection system. Data on baseline industrial emissions levels are crucial because they allow policymakers to set target levels and allocate carbon credits accordingly. Companies will be able to buy more credits on the market if they exceed their quotas, and sell credits to others if they emit less.

Although authorities took the first step in allocating emissions quotas for the power sector, there is some time to go before the market will be functional, environmentalists have warned.

Once credits are received, power companies will first test out the system by mock-trading credits, meaning they will not actually pay for trades. Enforcement of emission limits will begin in 2019 or 2020.

FT (UK), December 19, 2017

The US gives China draft proposal for tougher North Korea sanctions

The United States has given China a draft resolution for tougher UN sanctions on North Korea and is hoping for a quick vote on it by the UN Security Council, a Western diplomat has told media.

A senior official of the Trump administration confirmed efforts were underway to negotiate a new UN resolution but added that there had been no agreement.

Details of the draft given to China were not immediately available, but the United States is keen to step up global sanctions to pressure North Korea to give up a weapons programme aimed at developing a nuclear-tipped missile capable of hitting the United States.

Among the steps it wants is a tightening of restrictions on North Korea's supply of refined petroleum, which is capped by previous UN sanctions at 2 million barrels a year.

China, which supplies most of North Korea's oil, has backed successive rounds of UN sanctions but has resisted past US calls to cut off supplies to its neighbour.

Any move to curb exports of Chinese fuel to North Korea may have limited impact after China National Petroleum Corp suspended diesel and gasoline sales to its northern neighbour in June over concerns the state-owned company would not get paid.

Business has slowed steadily since then, with zero shipments of diesel, gasoline and other fuel in October.

The United States has also called on the UN Security Council to blacklist 10 ships for circumventing sanctions on North Korea, documents showed.

The documents said vessels had been conducting ship-to-ship transfers of refined petroleum products to North Korean vessels or transporting North Korean coal in violation of existing UN sanctions.

China responded to the announcement of a new US national security strategy that branded Beijing a competitor seeking to challenge US power by saying that cooperation between it and Washington would lead to a win-win outcome for both sides, but confrontation would bring mutual losses.

REUTERS, December 19, 2017

UPSTREAM

Sinopec awards Ordos tight oil block to subsidiary of listed unit

Sinopec Group has awarded rights to explore and develop a tight oil block in northern China's Ordos basin to one of Sinopec Corp's subsidiaries, the parent company said on its website.

Xunyi-Yijun block, more than 2,000 square km (700 sq miles) in size, has 21.7 million tonnes of proven geological reserves (158 million barrels).

Sinopec exploration and development unit in Henan province won the block, which is judged to hold deposits that will yield low output under low pressure and low permeability.

Sinopec's move to reform resource allocations and improve efforts to unlock challenging assets follows similar moves by PetroChina, which recently began transfers of exploration rights between subsidiaries.

REUTERS, December 19, 2017

Gazprom Neft in talks with China's ZPEC over east Siberian oil fields project

Russian oil producer Gazprom Neft is in talks with the Chinese drilling company Zhongman Petroleum and Natural Gas Group Corp (ZPEC) over it taking a stake in Gazprom Neft's Chonsk oil fields development project in Siberia, two sources at the Russian company told media.

The Chonsk project consists of three fields some 100km from the East Siberia-Pacific Ocean pipeline, Russia's key route for oil exports to Asia.

The project requires advanced drilling and extraction techniques due to the variable permeability and porosities of the carbonate reservoirs, Gazprom Neft has said.

On its website, ZPEC said that its major clients include Chinese top energy companies CNPC, Sinopec as well as Russia's Lukoil and Gazprom Neft itself.

Vadim Yakovlev, first deputy chief executive with Gazprom Neft, told media in October that the company may establish a joint venture with a Chinese company for the Chonsk project, offering a 49% stake. He did not name a company.

The Chonsk fields could contain more than 210 million tonnes of oil and 270 billion cubic metres of gas according to Russian estimates. Gazprom Neft has been performing exploration work with a view to starting production after 2020.

REUTERS, December 19, 2017

LNG spot prices hit three-year high in Asia

Asian spot prices for LNG have climbed slightly more than 10% over the past month to around US$10.50 per million Btu. The latest rise has pushed the price 90% or so higher than half a year ago. The key fuel for power generation in Asia has been climbing since autumn, buoyed by increased demand in China. But reports on December 11 that a crude oil and natural gas pipeline system linking North Sea oil and gas fields with the northern UK could be shut down for weeks created additional upward pressure.

"Concerns that the demand-supply situation will tighten in the UK" have flown through to LNG spot prices in Asia, said senior analyst at Sumitomo Corp Global Research Mikiko Tate. A December 12 fire at a natural gas pipeline facility in eastern Austria's Baumgarten an der March disrupted supply to neighbouring countries, prompting Italy to declare an emergency. Natural gas prices in Europe temporarily jumped.

"Asian LNG spot markets have been gradually being integrated with natural gas markets in other regions, although the extent of the integration is not as tight as with crude oil," said researcher Yoshikazu Kobayashi of the Institute of Energy Economics, Japan, explaining the link between the events in Europe and Asian LNG spot prices.

NIKKEI (JAPAN), December 20, 2017

MIDSTREAM

China takes a driving seat in global oil markets

China has been the world's largest oil consumer since 2011 and became the biggest crude oil net importer in 2015. And while the rest of the world has struggled to run down crude oil inventories, it has continued to build up stocks.

The country has built increasing its influence in the global oil markets, with domestic demand surging more than five-fold from 1990, to 12.4 million bpd, and crude oil imports growing at a double-digit rate in 2017.

As a result, China has taken the driver's seat of global energy demand growth, given the glut that has plagued the markets since late 2015.

According to the Energy Information Administration (EIA), China, along with India, is expected to be one of the largest contributors to non-OECD crude oil consumption growth, with Chinese demand forecast to increase by 400,000 bpd annually in 2016 and by 300,000 bpd in the 2017 year to date. The EIA forecast another 300,000 bpd increase in 2018.

A larger use of gasoline, jet fuel, and hydrocarbon gas liquids (HGL) has boosted the country's petroleum consumption, overtaking the US in 2017.

After shooting up to 9.2 million bpd, imports have come down, to about 8.2 million bpd. A declining production at China's main oilfields such as Daqing and Shengli, along with lower oil prices, has provided further incentives to buy crude oil from the international market rather than producing it domestically at a higher cost per barrel.

As a result, domestic production covers only a third of Chinese oil demand. Although consumption growth has slowed, it was still up by 2.9% in the first seven months of 2017, somewhat decelerating from the 3.25% and 6.4% growth posted in 2016 and 2015, respectively, according to ICIS calculations.

HELLENIC SHIPPING NEWS (GREECE), December 18, 2017

Sinopec Oilfield Service wins natural gas pipeline project

Sinopec Oilfield Service Corporation has said that it has won a bid for construction of the seventh section of natural gas pipeline from Qianjian to Shaoguan promoted by Sinopec Xinjiang Coal-based SNG Transmission Pipeline Co.

The bid price amounted to approximately 1.12 billion yuan (US$170.39 million), the company said in an exchange filing. The bid price represents approximately 2.6% of the company's operating revenue last year.

The construction period of the project is expected to be 30 months, it added.

NIKKEI MARKETS (CHINA), December 20, 2017

KOGAS to co-operate with CNPC in natural gas business

Korea Gas Corporation (KOGAS) has signed a memorandum of understanding (MOU) with China National Petroleum Corporation in Beijing on December 15 for cooperation in natural gas business.

CNPC, which ranked fourth in the Fortune Global 500 this year, is one of the largest petroleum and natural gas developers in the

world and its scope of business includes oil refining, petrochemical development, natural gas piping construction and engineering. At present, KOGAS and CNPC are working together in Mozambique for resources development and LNG liquefaction and in Canada for LNG liquefaction.

According to the MOU, their cooperation in the future covers trading for stable natural gas supply, LNG storage tank construction, LNG terminal trial run, etc. They are going to work with each other to deal with the so-called Asian premium and foster the development of the Northeast Asian natural gas market, too.

Earlier, on December 13 and 14, KOGAS discussed joint overseas resources development with Sinopec Group and Beijing Gas and cooperation in the field of LNG trading with China National Offshore Oil Company (CNOOC). In addition, KOGAS discussed its cooperation with Chinese energy companies for stable gas supply in winter with regard to the Chinese government's Coal to Gas Switching policy.

BUSINESS KOREA (SOUTH KOREA), December 19, 2017

DOWNSTREAM

Fuel shortage triggers jump in coal prices

China's thermal coal prices jumped recently as natural gas shortages across the north spurred an unexpected resurgence in demand for coal-fired power.

Coal futures jumped to 689.8 yuan (US$104) per metric tonne on December 11, topping a previous all-time high of 688.8 yuan set the previous week.

China Coal Price Index, the first index of its kind in the country, rose by 0.7% to 156.6 on December 8. The price of 5,000-kilocalorie coal and 5,500-kilocalorie coal in the northern ports reached 591 yuan and 612 yuan per tonne respectively on December 8, up by 5 yuan and 2 yuan respectively from a week earlier.

The increase comes after the country was forced to put the brakes on its ambitious push to convert millions of households to gas or electric heating. Because of a gas shortage, people have been told they can return to coal heating if needed.

On December 7, the Beijing municipal government ordered an immediate restart of coal-fuelled generators to ease the shortage of liquefied natural gas in northern China.

The city was told by the National Development and Reform Commission to immediately resume the backup coal-fired power plant run by China Huaneng Group.

The Huaneng coal-fired power plant, with an installed capacity of 845 MW, was shut in March in a bid to reduce harmful emissions in the city.

On December 4, the Ministry of Environmental Protection told northern regions to allow coal burning in places that have not converted to gas or electric heating in order to "ensure a warm winter" for the public.

Four central government branches, including the National Development and Reform Commission and the Ministry of Environmental Protection, would send inspection teams to 11 provinces across northern China to ensure households have heat during winter, Xinhua reported.

China holds one-third of the world's coal reserves; in 2016, the fuel accounted for around 62% of the nation's basic energy needs.

Wu Lixin, deputy director of the strategic planning research department at the China Coal Research Institute, said the country has made great efforts to reduce emissions from coal-fired power plants. Currently, the smoke and pollutant emission of half of the country's coal-fired power plants are similar to those of gas-fired power plants

CHINA.ORG (CHINA), December 20, 2017

China's bunker fuel market seen moving towards use of mass flow meters

Bunker fuel traders in China say the use of mass flow meters at local ports is increasing amid growing expectations their usage will become mandatory in the near future.

A Shanghai-based trader told media: "[MFMs] will become increasingly common... government agencies have been encouraging suppliers to adopt and install MFMs for bunkering operations," adding that the use of MFMs was already common in the bunkering of fuel to ships not registered in China.

"MFMs may become mandatory for all bunkering operations in the near future," the source added.

No official data on the use of MFMs in China has yet been made available. However, a major bunker supplier in the Chinese market that "around half our barges are fitted with mass flow meters." Singapore became the world's first port to make bunker fuel oil delivery using MFMs compulsory in January 2017.

"The government has yet to make a decision on the use of MFMs, but there is talk in the market that it will happen eventually," a Chinese trader said.

However, some traders doubted the use of MFMs would become the market norm in the short to medium term.

"There's no such announcement from the government yet, and it would be an assumption to say it would happen soon," another Chinese trader said.

MFMs measure the fuel's flow rate in the pipe, gauging the quantity, mass and density of the bunker fuel passing through, minimizing discrepancies between the volume and quality of what is delivered and what is invoiced.

PLATTS (SINGAPORE), December 15, 2017

Mixed aromatics unlikely to return to glory days in China

Mixed aromatics, a key component of blended gasoline, could be past its heyday in China as the government tightens the taxation system and considers imposing a consumption tax on the product.

A drop in mixed aromatics use for gasoline production will have implications for China's overall gasoline supply and exports as blended gasoline, typically produced by independent blenders, accounts for up to 20% of the country's total output. The remaining 80% comes from refineries.

In China, all liquid oil products, except for jet fuel, are subject to consumption tax. But petrochemical products and illiquid products like bitumen are not as the government has been keen to encourage their production and consumption. This has left mixed aromatics outside the net of consumption tax.

This led to a surge in China's mixed aromatics imports in recent years. Blenders using mixed aromatics for blended gasoline have been able to evade the consumption tax and earn higher margins. But the government recently overhauled the taxation mechanism making it harder for blenders to evade consumption tax on gasoline.

The consumption tax on gasoline stands at Yuan 1.52 per litre (US$0.23 per litre).

China's mixed aromatics imports in the first 10 months of 2017 rose 7.7% year on year to 8.95 million metric tonnes, compared with a rise on 134.4% in the same period of 2016, according to data from the General Administration of Customs.

Market sources said that the trend of wider tax collection was clear and expected mixed aromatics imports to fall in the future.

PLATTS (SINGAPORE), December 17, 2017

China orders big oil firms to cut own gas use to ease shortfall

China has ordered the country's biggest explorers to cut their use of natural gas to divert more of the fuel to the north, where a harsh winter is causing shortages.

China National Petroleum, China Petrochemical and China National Offshore Oil should reduce the consumption of natural gas in their refineries, oil drilling and liquefied natural gas factories to secure more supplies for residential use, National Development and Reform Commission official Meng Wei said at a press briefing in Beijing. The three companies should collectively cut gas consumption for their own use including to petrochemical factories by 15 million cubic metres a day, he said.

China has been scrambling to secure more gas for residential use after the country's push to implement coal-to-gas conversion projects led to an unprecedented increase in consumption of the fuel and caused shortages in Northern Provinces such as Hebei and Shandong. Some regions have been allowed to burn coal after shortages of natural gas left people without heating amid freezing winter temperatures.

Switching industrial and residential users to gas pushed demand up 19% during the first 10 months of the year, according to data from the NDRC.

a Beijing-based analyst at Sun Hung Kai Financial, Tian Miao, said that the new policy may have a limited impact on China's supply of refined fuels as the country has already produced more than it can consume.

China's oil processing in November inched up to another record amid startups by new facilities and as independent refiners ran at the highest in a year to meet rising diesel demand. Refiners processed about 12.08 million bpd in November, up about 0.2% from October and 8% higher than a year ago.

BLOOMBERG (US), December 18, 2017

Chinese companies' overseas equity oil yield to top 200 million tonnes in 2018

Chinese companies' overseas equity oil yield is expected to exceed 200 million tonnes in 2018, almost equalling China's domestic annual oil output, an executive with the China National Petroleum Corporation (CNPC) has said.

According to a report released by the China Petroleum Enterprise Association, investment and output of Chinese oil and gas companies in Belt and Road countries accounted for over 50% of their total overseas investment and production respectively.

Executive Director of the China CEFC Energy Company, Zang Jianjun, said: "China is expected to increase its dependence on oil and gas imports for a considerable time to come, thus cooperation in the field will remain important between China and the Belt and Road countries".

XINHUA (CHINA), December 20, 2017

SERVICES

Sponge able to separate oil and water developed by Chinese scientists

An artificial sponge that can separate oil and water, and therefore be used to treat industrial wastewater, has been developed by Chinese scientists, Chinese news outlets have reported.

The porous material is made up of a nano-crystalline cellulose and graphene composite and has a high absorption capacity.

Liu Dongyan, a researcher from the Institute of Metal Research at the Chinese Academy of Sciences in Shenyang, Liaoning Province, told the media that the sponge is 97% effective at separating water and oil.

According to Liu, industrial sewage contains various oils and organic components that become ecologically hazardous once mixed with water. However, the new material provides a low-cost industrial sewage treatment solution, as the base material of the polyurethane sponge is cost-effective and only the small amount of graphene in the coating is expensive.

"With the increase in graphene production, the price will gradually decrease," she said.

The research has been published in the latest issue of Advanced Materials Interfaces, an international journal that publishes top-level research on interface technology.

When it comes to water-cleaning technology, Chinese researchers revealed a mechanism that uses electron beam irradiation to treat industrial wastewater in October, thereby ushering in a new era of radiation technology in China.

GBTIMES (CHINA), December 20, 2017

Acid-test for technology that could save China from climate change

From smog-choked cities to sludge-filled rivers, stories about China's environment in recent years have painted a bleak picture. But China is not the first country to put economic development above protecting the environment. All of today's wealthy countries, including the UK during the industrial revolution and the US after World War II, got rich doing the same.

What's different about China is the pace of development, the scale of its impact, and the timing. Never in human history have so many people been pulled out of poverty so quickly. China's unprecedented development, which has relied on fossil fuels to the point that the country is now the world's biggest emitter of greenhouse gases, comes at a crucial time for the world. If we don't reduce greenhouse-gas emissions to zero by 2060, we'll be staring down the gun at climate menaces humans have not faced in our time on the planet.

The good news is that, unlike the US, the world's second-biggest emitter, China, appears truly committed to climate action. The country has pledged to hit peak emissions

by 2030 and to ensure emissions fall rapidly after that.

These commitments aren't just posturing. China has been the world's largest market for renewable energy for a few years now. In 2006, the country had 100 MW of solar-power capacity and 2,600 MW of wind-power capacity installed. Merely 10 years later, those figures were 77,800 MW and 159,000 MW—a 778- and 61-fold increase, respectively. For comparison, in the US—still a much a richer country than China—there was 40,000 MW of solar-power capacity and 90,000 MW of wind-power capacity in 2016.

China, though, still must grapple with the reality faced by any developing economy in the 21st century. The country's growing demand for energy is outpacing its ability to replace dirty sources like coal with clean, renewable ones. While the construction rate of new coal-fired power plants has slowed, it hasn't stopped altogether. Further, even if China stopped building new coal plants tomorrow, the country has come to so deeply rely on the fossil fuels—more than 70% of its electricity currently comes from coal, compared to about 40% in the US—that it would continue to emit significant greenhouse gases for years to come. China's energy demand is so high right now that it simply cannot afford to stop burning coal and other fossil fuels.

These contradictions make China the perfect case study for large-scale deployment of carbon capture and storage (CCS). Experts say that if there's any country that really needs this technology, which enables power plants to burn coal or natural gas without putting carbon dioxide emissions into the atmosphere, it's China. Better still, they insist, thanks to a heavy-handed government and large state-owned enterprises, if there's any country that can pull it off at mass scale, it's China.

QUARTZ (US), December 15, 2017

MOVES

All Chinese oil traders want for Christmas is a futures contract

All Yuan Quwei wants for Christmas is to trade oil futures on a Chinese exchange. She's among the mass of speculators that have pumped trillions of yuan into the country's fledgeling commodities bourses, trading in everything from eggs to iron ore futures with extraordinary intensity.

She's now waiting for the launch of China's long-delayed domestic crude contracts, and hoping it'll be in time for Christmas.

Few derivatives have generated quite so much hype as China's yuan-denominated oil futures. Discussed more than two decades ago and since postponed, shelved and re-born, they're closer than ever to finally starting.

For the first time, the world's biggest oil buyer may open commodity futures to foreign investors as it looks to wrest control over pricing from international benchmarks and promote the use of China's currency in global trade.

The Shanghai Futures Exchange has said the fifth round of testing had passed smoothly while the State Council was said to have given its approval for the futures to start, one of the final regulatory hurdles to the listing. There's still no official start date, and neither the exchange nor the securities regulator will confirm when that may be.

BLOOMBERG (US), December 14, 2017

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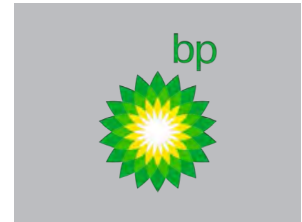

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