

NATIONAL

PM Modi banks on BPCL Kochi to lead petro-chem revolution

The PM said the use of CNG as clean fuel is being promoted by expanding the coverage of City Gas Distribution (CGD) network in the country.

Expressing his desire that BPCL-Kochi Refinery leads the petro-chemical revolution in South India and supports the growing needs of a new India, Prime Minister Narendra Modi has said it was the Central government's endeavour to see that petro-chemicals, most of which are being imported now, are manufactured in the country itself.

Dedicating the `16,504-crore Integrated Refinery Expansion Project (IREP) of BPCL here on Sunday, the PM also listed out many steps by the government, which have succeeded in giving the right results. Modi said the Ujjwala Yojana has brought cheers to many.

"While nearly six crore LPG connections have reached the households of the poorest of the poor since May 2016, more than 23 crore LPG consumers have joined the Pahal scheme. The transparency in the scheme has helped in identifying ghost accounts, multiple accounts and inactive accounts. Over 1 crore customers have given up LPG subsidies under 'Give it up' initiative," he said.

From the same venue, Modi also laid the foundation stone for Petrochemical Complex, and inaugurated Mounded Storage Vessel at IOCL LPG bottling plant, Kochi, and laid the foundation stone for Skill Development Institute at Ettumanoor.

IREP will be a modern expansion complex and transform Kochi refinery into the largest PSU refinery in India with world-class standards.

It will be equipped for the production of cleaner fuels for India. It will double the production of LPG and diesel and commence production of feedstock for petrochemical projects in this plant, he said.

The PM said the use of CNG as a clean fuel is being promoted by expanding the coverage of City Gas Distribution (CGD) network in the country. After the successful completion of 10 CGD bidding rounds, more than 400 districts in the country will be connected for providing piped gas supply.

Besides, the government has reduced oil import by 10 per cent and saved precious foreign exchange, he said.

He expressed happiness that Kochi refinery will now be able to produce propylene after execution of IREP. Besides, the other niche petrochemicals will find use in different products such as paints, inks, coating, detergent and many other articles. He expressed hope that all these many ancillary industries will come to Kochi and business opportunities will be expanded.

Union Minister of Petroleum & Natural Gas Dharmendra Debendra Pradhan said the petrochemicals project, which when commissioned in 2022, will help India to reduce imports by over `13,000 crore, besides boosting the local economy and generating jobs in Kerala.

Governor P Sathasivam, Chief Minister Pinarayi Vijayan, Union Minister Alphons Kannanthanam, Agriculture Minister V S Sunil Kumar, K V Thomas MP, and V P Sajeendran MLA were also present on the occasion.

<http://www.newindianexpress.com/states/kerala/2019/jan/28/modi-banks-on-bpcl-kochi-to-lead-petro-chem-revolution-1930861.html>

Visakhapatnam to soon get gas pipeline services

The denizens of Visakhapatnam can soon avail gas pipeline services. Reportedly, the Gas Authority of India Limited (GAIL) has taken up the project with a whopping budget of about Rs.1000 crores.

As per a report by AndhraJyothi, the project will be executed in two stages. While the pipeline works between Visakhapatnam and Kakinada will be done in the first stage, the works between Visakhapatnam and Srikakulam will be worked upon in the later stage.

Reportedly, the length of the entire pipeline will be 210 Kms. About 252 approvals need to be acquired for this project to begin. There will be still 24 approvals in the further stages that need approval. Currently, the pipeline works between Visakhapatnam and Kakinada are under progress. R Chadha, Executive Director GAIL, while speaking to the media informed that the gas pipeline works in Visakhapatnam will be completed by May and the services are expected to begin by June. Even though this project was proposed seven years ago initially, a few delays in the approvals played the spoilsport, dragging the project's initiation, as informed by a few sources from GAIL.

<https://www.yovizag.com/visakhapatnam-gas-pipeline-services/>

India: Tata Motors' 3.8L NA SGI CNG engine receives BS6 certification

In the run-up to its BS6 preparations, Tata Motors announced that it has received BS6 Type Approval certificate for its 3.8L NA SGI CNG engine from ARAI (Automotive Research Association of India). It is the first OEM in India to achieve BS6 certification for a CNG engine for commercial vehicles. This certification includes meeting the tailpipe mass emissions as well as compliance to On-Board Diagnostics (OBD) norms as mandated by government regulation.

Rajendra Petkar, Chief Technology Officer of Tata Motors said, "This BS6 engine certification milestone has been achieved with intense design and development focus, by leveraging in-house capabilities and those of our technology partners. We have worked hard to build a leadership position in the market by providing our customers with economical, best-in-class natural gas vehicle products in the commercial vehicle market and this development of BS6 solution will further reinforce our market offering."

The 3.8 NA SGI CNG engine is a naturally aspirated engine i.e. it does not need a turbocharger. It produces a maximum power of 85 Ps @ 2500 RPM with a torque of 285 Nm @ 2500 RPM. This combustion occurs at stoichiometric conditions in the engine. It engine comes with sequential gas injection technology, pioneered by Tata Motors in India. Exhaust after-treatment system featuring three-way catalytic converter reduces pollutants below limits mandated by regulation.

The 3.8 NA SGI CNG engine will power 4T to 9T GVW buses and trucks such as 407, 709 and 909 (existing BS4 versions), which are already very popular models in the market, with the best-in-class fuel efficiency. Truck applications also include water tankers.

BS6 norms will come into force in India from 1 April, 2020. The upgrade from BS4 to BS6 is a complex engineering, a challenge that demands not only pushing the technological advancements to the limits, but also calls for a turnaround of the infrastructure and facilities required for this development, which is highly capital intensive with long lead execution periods. In this regard, a state of the art “Emission Test Facility” has been installed at the company’s Power Systems Engineering Division (PSE), in its Engineering Research Centre (ERC) in Pune.

<http://www.ngvjournals.com/s1-news/c5-products/india-tata-motors-3-8l-na-sgi-cng-engine-receives-bs6-certification/>

Opportunities for India in Myanmar’s energy sector

Myanmar is reportedly planning to open fresh bids for its oil and gas blocks to international companies. In the last few years, the Myanmar government has taken concrete steps to restructure its energy sector and has identified natural gas as an important component of its energy master plan.

This is a welcome development for India, which has substantial experience of operating in Myanmar’s energy sector. Besides, both India and Myanmar are keen to expand the scope of cooperation in the realm of energy sector. Earlier, though India could not secure the deal to build a gas pipeline from Myanmar to India’s eastern region, India has continued to remain engaged with the energy sector of its eastern neighbour. For instance, India has positioned itself as a key stakeholder in the China-Myanmar gas pipeline.

But having said that, India must be careful and not underestimate the regional complications that might impact India-Myanmar energy relations. The issue of Rohingya refugees has historically existed between Bangladesh and Myanmar, but the magnitude of the problem has substantially increased in recent years. Also, the possibility of gas trade between India and Myanmar would be contingent upon the “availability of surplus energy” with the latter, as argued by ORF researchers Anasua Basu Ray Chaudhury and Pratinashree Basu in their research paper.

The issue of Rohingya refugees, at least for now, may create complications for any possible trilateral pipeline between India, Bangladesh and Myanmar. Yet, if the possibility of building a trilateral pipeline project faces challenges, then India could fall back on the alternative route mentioned in a feasibility report by the Gas Authority of India Ltd. (GAIL) in 2006, which had envisaged constructing a bilateral pipeline between India and Myanmar via India’s north-eastern States. This alternative scenario in the current context must also explore the technical option of supplying natural gas to Bangladesh from the Indian side at a later stage. In his interview to Dhaka Tribune in 2017, Dr. Badrul Imam, Bangladesh’s energy expert, had noted that Dhaka should consider the option of sourcing any surplus natural gas from the Indian State of Tripura. However, in an ideal scenario, as argued by Dr. Mirza Sadaqat Huda, an energy expert based in Singapore, in 2013, it would make sense for India, Myanmar and Bangladesh to

join hands for any future proposed trilateral gas pipeline to fulfill their energy and economic interests as well as strengthening political relations.

It also needs to be mentioned that during this author's field work in Myanmar in the year 2015 for a South Asia Network of Economic Research Institutes (SANEI)-funded project on the theme of exploring prospects for cross-border electricity trade in South Asia for the National Institute of Advanced Studies (NIAS), Bengaluru, he noticed the keenness of the Myanmar government to invite western companies to operate in their hydrocarbon sector.

Perhaps in any future round of bidding for energy blocks, to strengthen its own energy export diversification strategy, Myanmar must consider exporting surplus gas to markets in India and Bangladesh. For instance, India has announced ambitious plans to increase the contribution of natural gas to 15 percent by 2030 in its energy mix. India's network of domestic pipelines is being expanded to ensure availability of gas to more consumers in the transportation and domestic sectors. Similarly, appetite within Bangladesh for natural gas has also been rising consistently, but the country is constrained due to limited domestic production.

It would also be important to understand China's current energy strategy in Myanmar. In its efforts to make a transition to natural gas in a major way, China's appetite for natural gas is also increasing. Hence, it will not be surprising if China yet again competes in the proposed bidding rounds for energy blocks. Chinese companies, thus, may continue to provide a stiff competition to Indian companies in Myanmar's energy sector.

For another reason too, the future bidding rounds in Myanmar may be different and competitive. The last round (2013-14) showed that the interest of foreign companies to invest in Myanmar's energy sector was gradually increasing. So, the presence of foreign companies would make future bidding rounds more competitive for Indian companies. India must therefore explore a variety of arrangements such as going alone or joining hands with different foreign companies to undertake any future stakes in Myanmar and even for building a gas pipeline to India.

Therefore, to establish a firmer and sustainable presence in Myanmar's energy sector, India must offer Myanmar a comprehensive package that encompasses Myanmar's current and future needs, while simultaneously drawing benefits for its own energy plans.

<https://www.orfonline.org/expert-speak/opportunities-for-india-in-myanmars-energy-sector-47543/>

Rescue plan for gas-based power plants in works

New Delhi - The government proposes to use the National Clean Energy Fund (NCEF) to support gas-based power projects, including the 31 stressed ones, as it looks to launch one of the biggest rescue operations for these clean fuel-run power plants that are on the verge of complete shutdown in the absence of fuel and viable power purchase agreement.

Sources privy to the development told Financial Chronicle that allocation to NCEF may be doubled in next fiscal from the level of Rs 29,645.29 crore transferred to it by till the end of FY18. A large portion of additional fund will be used to support gas-based power plants including a proposed new Rs 18,000 crore subsidy scheme that will enable these fuel starved plants to run using a mix of domestic and imported gas.

The NCEF was created out of cess on coal at Rs 400 per tonne to provide financial support to clean energy initiatives and an Inter-Ministerial Group chaired by the Finance Secretary was constituted to approve the project/schemes eligible for financing under the fund.

The coal cess collected from 2010-11 to 2017-18 amounts to Rs 86,440.21 crore, out of which only Rs 29,645.29 crore have actually been transferred to NCEF. Whereas, the amount financed from NCEF for projects is only 15,911.49 crore i.e. only about 19 per cent of the total amount collected as coal cess.

“The Parliamentary Standing Committee on Energy has also expressed concern over shoddy progress of NCEF and its negligible support to gas-based power projects that also comes under clean the definition of clean energy projects. We have accessed the situation and now asked finance ministry for higher transfers to NCEF that can support stress in the gas-based power sector,” said an official source privy to the development.

“The Committee feels that this fund should be used for its intended purpose i.e. to support clean energy initiatives and it should not be diverted to compensate GST losses. Diversion of this fund to unrelated activities reflects poorly on our commitment towards cleaner environment and shows Government's apathy towards clean energy projects. Since it is levied on coal as that is a polluting fuel, so the amount collected should be used to promote cleaner fuel. The Committee, therefore, recommend that financial support should be extended to gas-based power projects from NCEF for their sustainability as natural gas is also a clean energy source,” the committee said in its recent report.

Higher support to develop gas-based economy will immediately benefit 31 stranded projects worth 15,000 MW belonging to Essar Power, Torrent Power, GSPC, Reliance Infra, GMR, GVK, NTPC, and Lanco. Another 10,000 MW of projects running but at lower load factor of 25-30 per cent could also take advantage of the new scheme.

India's total installed power capacity stands at around 350 Gigawatt (GW). Of this, 7.2 per cent or 25 GW comprised gas-based power plants. However, gas-based projects were responsible for only 3.8 per cent or 49.77 Billion Units of India's total electricity generation in FY18. This was mainly because 14,305 MW of gas-based capacity is currently stranded due to non-availability of domestic gas and un-affordability of imported gas.

According to industry reports, investments ranging from Rs 4-5 crore per MW have been made into these stranded gas-based projects, out of which around 70-80 per cent of the capital cost has been financed by banks using public money. Also, cost escalation ranging from 50-75 per cent of the original project cost has been experienced on account of delay primarily due to non-availability of gas.

The price of domestic gas at present is \$ 3.36/MMBTU (October 2018 to March 2019). The gas price at power plants remains in the range of \$ 4.0 - 5.5/MMBTU for domestic gas and \$ 10-12/MMBTU for RLNG. Pooling these two will substantially bring down the fuel cost for generators. Also, subsidy to discoms will allow them to buy power from gas units.

Though Central Electricity Authority (CEA) has classified only 14,305 out of total gas-based capacity of 24,867 MW as stranded due to fuel shortage, almost entire capacity remains stressed and remaining plants are also running at sub-optimal levels and able to support just interest component on loans.

The domestic natural gas production in the country during 2017-18 was about 86.93 MMSCMD as against 89.57 MMSCMD in 2014-15. From 2011-12 to 2016-17, domestic gas production had been continuously declining, while in 2017-18, there was a slight increase. The import of RLNG has been continuously increasing from 50.78 MMSCMD in 2014-15 to 72.13 MMSCMD in 2017-18 and about 50 per cent of the country's requirement of gas has now been met by the imported gas.

The total domestic gas allocated to power projects is 87.12 MMSCMD but the average domestic gas supplied to gas-based power plants during 2017-18 was only 25.71 MMSCMD which is 70 per cent short of the allocation. Due to this shortfall, the PLF of gas-based power plants has come down to 24 per cent which used to be 67 per cent in 2009-10.

<http://www.mydigitalfc.com/companies-and-markets/rescue-plan-gas-based-power-plants-works>

Use of biofuel in military aircraft cleared; IAF to start with transport aircraft

The Indian Air Force is expected to use biofuel for its transport fleet and helicopters following the clearance given by the Centre for Military Airworthiness and Certification

NEW DELHI: In a significant move, the use of indigenously produced biofuel for military aircraft has been cleared after months of exhaustive ground and flight trials, officials said on Thursday.

The Indian Air Force is expected to use biofuel for its transport fleet and helicopters following the clearance given by the Centre for Military Airworthiness and Certification (CEMILAC).

"The indigenously produced biofuel has been finally cleared for use by the premier airworthiness certification agency of the country," a senior defence ministry official said.

An IAF official said the approval will enable the force to fulfil its commitment to fly the maiden IAF An-32 aircraft on January 26 with a blend of bio-jet fuel.

The clearance is a major step for continued testing and eventual full certification of the bio-jet fuel for use on a commercial scale by civil aircraft, he said.

In a meeting on Tuesday, the CEMILAC deliberated in detail the results of various checks and tests conducted on bio-jet fuel as per procedure recommended by top national and international certification agencies, the official said.

"On being completely satisfied with the performance parameters, the agency has formally granted its approval for use of this fuel, produced from non-conventional sources such as non-edible vegetable/ tree borne oil to be used on military aircraft," the defence ministry said.

The bio-jet fuel has been produced from seeds of Jatropha plant sourced from Chhattisgarh.

"Increased demand of bio-jet fuel would give impetus to increase in collection of tree-borne non-edible oil seeds, which, in turn, will help generate ancillary income, increase remuneration for tribal and marginal farmers, and entuse cultivation/ collection of oilseeds," said the ministry.

<https://timesofindia.indiatimes.com/india/use-of-bio-fuel-in-military-aircraft-cleared-iaf-to-start-with-transport-aircraft/articleshow/67675942.cms>

75% of AP people to have access to natural gas in 2 years

Andhra Pradesh -Roughly, 75 per cent of the population of Andhra Pradesh will have access to natural gas in the next two years, according to officials of Petroleum and Natural Gas Regulatory Board (PNGRB), which organised a roadshow to promote the tenth City Gas Distribution (CGD) bidding round, here on Wednesday.

During the roadshow, the officials said the tenth round envisaged covering 70 per cent of area in the State. So far, bidding covered East and West Godavari districts, Krishna, Visakhapatnam, Vizianagaram and Srikakulam. The current round is for CGD bidding in Anantapur, Kadapa, Nellore and Chittoor.

The Government of India in consultation with the States and Union Territories concerned is keen on transporting gas – CNG and PNG through cascades for quick start of business. Gas pipeline operator will provide connectivity to CGD network within 180 to 270 days. The performance bank guarantee has been capped at Rs 50 crore.

Expressing concern over red-tapism hitting the schedules for providing piped gas to all domestic connections and CNG to all motorists within next two to three years, Rajya Sabha member T. Subbarami Reddy said once the round was completed, 3.7 crore households in the State would have piped gas. He said CGD networks by PNGRB should play a major role in providing clean, safe and environment-friendly fuel to the people of the country.

PNGRB Member (Legal) S.S. Chahar said that after the current bidding round, 10 out of 13 districts of AP would be covered with CGD network. PNGRB Deputy Advisor S.C. Gupta and Bhagyanagar Gas Ltd Managing Director S.V. Prasad also spoke..

<https://www.thehindubusinessline.com/news/national/75-of-ap-people-to-have-access-to-natural-gas-in-2-years/article26076858.ece>

INTERNATIONAL

State of Pennsylvania opens new CNG station under its P3 program

Tom Wolf's Administration announced the formal opening of service at one of the 29 CNG fueling stations planned as part of a Public Private Partnership (P3). Officials from PennDOT, Trillium CNG, and Lebanon Transit marked the start of fueling at the facility, located in Lebanon. "This innovative program is helping transit agencies save on fuel costs while allowing them to move to a cleaner burning fuel," said Governor Wolf.

Through the \$84.5 million statewide P3 project, Trillium is designing, building, financing, and will operate and maintain CNG fueling stations at 29 public transit agency sites through a 20-year P3 agreement. Other stations will be constructed over the next several years, and Trillium is also making CNG-related upgrades to existing transit maintenance facilities.

"Pennsylvania is now a leading producer of natural gas, and this initiative aims to take advantage of that new, cleaner burning fuel source," said PennDOT Deputy Secretary for Multimodal Jennie Granger. "PennDOT is excited to partner on this program that will bring benefits for the state, transit agencies, and the public for years to come."

Under the program, Lebanon Transit will convert eight buses to CNG. The authority estimates saving roughly \$50,000 annually based on current diesel costs and their diesel usage of roughly 35,000 gallons per year. When the project is completed, the fueling stations will supply CNG to more than 1,600 buses at transit agencies across the state.

PennDOT's overall P3 project also includes CNG fueling accessible to the public at six transit agency sites, with the option to add to sites in the future. PennDOT will receive a 15% royalty, excluding taxes, for each gallon of fuel sold to the public at public sites, which will be used to support the cost of the project.

<http://www.ngvjournal.com/s1-news/c4-stations/state-of-pennsylvania-opens-new-cng-station-under-its-p3-program/>

China still leading in global shipbuilding industry

China maintained its top position in the global shipbuilding industry last year, an association said.

In 2018, Chinese companies built 43.2 percent of the new ships in the world, up from 41.9 percent a year ago, cementing the country's leading role in the sector, the China Association of the National Shipbuilding Industry said in a report.

China received 43.9 percent of global new orders last year and held 42.8 percent of the existing orders.

From the 1950s to the beginning of the 21st century, the three indices were topped by Japan or the Republic of Korea. In 2010, China exceeded the ROK and ranked the first in the world.

Given a lackluster global economy, however, the shipbuilding industry still faces grim circumstances, such as fierce competition and dropping profits, and Chinese companies are no exception.

The association warned of the lingering challenges and said more efforts are needed to improve competitiveness and profitability.

Chinese shipbuilders should seize the opportunity from further opening-up of the industry and ramp up research and development investment to achieve technological breakthroughs and channel more energy into developing liquefied natural gas carriers, the association suggested.

<https://www.hellenicshippingnews.com/china-still-leading-in-global-shipbuilding-industry/>

GLOBAL LNG-Asian prices down again, China resells cargo

Asian spot prices for liquefied natural gas (LNG) fell for the fifth week in a row with no signs of demand picking up as temperatures remained above average in Asia-Pacific, allowing Europe to absorb supplies.

Spot prices for March delivery to Asia LNG-AS this week dropped to around \$8.00 per million British thermal units (mmBtu), down 20 cents from the previous week, trade sources said.

Lacklustre Chinese demand was illustrated by China National Offshore Oil Corp (CNOOC) reselling a spare cargo on board the Neo Energy tanker that had loaded in November and had been kept offshore in case of a surge in consumption.

CNOOC is offering out the Neo Energy, as well as the Hoegh Esperanza, which it used as a floating storage and regasification unit (FSRU) this winter, shipbrokers said. This is another sign of China's weak demand.

Some market players continue to reschedule deliveries to Asian buyers, with one source saying a cargo was pushed back to November from March.

Supply offers are ample.

Trading house Trafigura and energy major Shell offered March cargoes in Asia at \$8.00-8.20/MMbtu in the Platts window, but had to lower offers to \$7.75-7.85/MMbtu due to a lack of interest. No transactions took place by the time of publication.

Outages at Australia's Gorgon plant and Indonesia's Bontang did not help prices to firm. At Bontang, where a train is offline until next week, Pertamina indicated it may require a vessel to load a cargo in mid-February, signalling production is stable, shipbrokers said.

Indonesia's Donggi Senoro LNG is selling two March cargoes in a tender closing Jan. 30, according to the Platts window.

In the Atlantic basin, Angola LNG offered a February cargo in a tender, while India's Gail offered six cargoes for 2020 from its offtake from U.S. Sabine Pass and Cove Point in two tenders that closed this week.

EUROPEAN LNG PRICE FALLS TOO

Falling Asian prices coupled with robust European gas hub prices, used as benchmarks for LNG trades, have led to an influx of cargoes to Europe, now the largest buyer of U.S. LNG.

But even here, LNG prices are falling, with two traders saying spot cargoes are now heard at discounts to British and Dutch natural gas prices , against which they are normally at premium.

“Europe is at discount over indexes ... Even Spain is coming flat to TTF (the Dutch gas hub price),” one European-based trade source said.

A U.S. cargo was sold to Spain for delivery in late February below the Dutch gas benchmark, another trader said. Another U.S. cargo is on offer for March delivery to Europe.

Demand also came from Mexico’s CFE which required two cargoes for February delivery.

Charter rates for vessels with modern propulsion dropped to \$60,000s per day this week, a half of where the rates were in late December, and are expected to keep falling as more vessels becoming available, shipbrokers said.

<https://www.hellenicshippingnews.com/global-lng-asian-prices-down-again-china-resells-cargo/>

Europe tops buyers for U.S. LNG with winter cargo influx

Energy companies are flooding Europe with U.S. natural gas, establishing a foothold in a market dominated by Russia and seen as a key battleground in Washington’s efforts to curb Moscow’s energy influence.

Europe is now the top buyer of U.S. liquefied natural gas (LNG) after a near fivefold spike in U.S. LNG sales to the continent this winter, overtaking South Korea and Mexico, a Reuters analysis showed. Profit rather than politics is driving the increase, despite pressure from U.S. President Donald Trump for Europe to wean itself off Russian gas.

Energy companies have switched sales to Europe after prices in Asia fell sharply on lower-than-expected demand. Prices in Europe, traditionally seen as a market of last resort, have held firm.

“It’s all about commercial reasons,” said James Henderson, director of the natural gas research programme at the Oxford Institute for Energy Studies. “U.S. LNG will go where there is the biggest margin.”

“There is no political motive here.”

U.S. LNG shipments to Europe totalled 3.23 million tonnes, or 48 cargoes, in October to January, compared to 0.7 million tonnes, or nine cargoes, a year ago. The United States is currently second only to Qatar, the world’s largest LNG producer, as an LNG supplier to Europe, Refinitiv Eikon data showed. The figures have not previously been reported.

LNG is natural gas frozen to a liquid state so that it can be transported in tankers. The industry is burgeoning, buoyed by demand from China, where the government is pushing to cut carbon emissions, partly by swapping from coal-generated power to gas.

Traders had expected Chinese demand to soar again this winter but Beijing had bought cargoes well in advance and so far, a mild winter has kept stocks high. A 10 percent tariff imposed by Beijing on U.S. LNG imports during a trade war also hurt.

Awash in supply, sellers of U.S. LNG have pivoted to Europe, where pipeline gas from Russia dominates.

Gazprom pumps 190 billion cubic metres, or the equivalent of 145 million tonnes a year (mtpa) to Europe, four times the current capacity of all U.S. LNG export terminals. A new pipeline, Nord Stream 2, will allow Russia to export even more gas to Germany, the largest consumer, although Washington is trying to halt work on the project.

LNG offers countries an alternative to piped gas and forces Russia to compete on price.

In response, Russia has joined the European LNG market through the Arctic Yamal production plant led by Novatek and is poised to become the world's fifth largest LNG producer in 2019, according to consultancy Wood Mackenzie.

Since December, however, U.S. LNG has outgunned supply from Yamal into Europe, the Refinitiv Eikon data showed.

IT'S THE PRICE

Technological developments have enabled the United States to unlock cheap, abundant shale gas supplies and, after starting from scratch in 2016, it is expected to have enough capacity by the end of this year to make it the world's third largest LNG exporter behind Australia and Qatar.

Cheniere Energy, the top operator of U.S. terminals, added a fifth production line, or train, to its Louisiana Sabine Pass terminal in November, increasing capacity to 26 mtpa and commissioned a new 5.0 mtpa facility in Texas.

Dominion Energy's 5.8 mtpa Cove Point plant opened last March. Up to 14 new facilities are expected to start up this year at three new terminals and one existing one.

A flourishing export business helps Washington's goal of reducing Europe's dependence on Russian gas.

Last year, Trump used trade negotiations to pressure the European Union to buy more U.S. gas. But with the exception of Poland and Lithuania, which have linked their purchases of LNG explicitly to national security, market forces are the biggest factor in sales.

In December and January, the Dutch gas price, which is used as a benchmark for LNG delivered to continental Europe, had been at the highest level since the winter of 2013-2014 at around \$7.7 per million British thermal units (MmBtu), compared to previous winter seasons. Rising coal and carbon prices as well as expectations of cold weather have driven them up.

In contrast, Asian spot prices for LNG dropped in December and January to their lowest level since the winter of 2015-16, averaging \$8.8 MmBtu as the anticipated surge in demand failed to materialise. That

cut the premium on sales to Asia over Europe to just above \$1 MmBtu from close to \$4 MmBtu last winter, insufficient to cover shipping costs.

Europe may not remain the top market for U.S. LNG, particularly if gas consumption in Asia spikes over the summer due to demand for air conditioning.

In addition to Russia, Europe is also well supplied with gas from Norway, the Netherlands and Algeria and its use of coal, nuclear and wind to generate power means its demand for gas, used in some types of power stations, can be extremely flexible.

Still, many European utilities have long-term agreements with U.S. producers Cheniere, Dominion and Sempra Energy whose Cameron LNG plant is due to start this year.

Britain's Centrica will start taking LNG from Cheniere's Sabine Pass in September and the company confirmed to Reuters that it had been buying U.S. cargos this winter.

Spain's Naturgy, Iberdrola and Endesa also have contracts with Cheniere starting this year.

"Much of the American LNG is looking for alternative markets aside from the Asian continent and, thanks to lower transport costs, Europe is the market that has benefited most," said Jose Simón, senior vice president of Global Gas at Iberdrola.

A spokesman for Endesa said U.S. gas had become more competitive. Naturgy, an early buyer from Cheniere, confirmed it has been selling U.S. cargoes into Europe this winter.

France's Total and EDF and Italy's ENI have U.S. contracts too. They did not respond to requests for comment.

And if Asian demand fails to materialise this summer, Europe is always an option.

"Because of the amount of available capacity into Europe and the fact that it's a price-sensitive, demand-elastic kind of market, if you can't find a better market ... into China, Korea, the assumption is you can always push it into Europe," said Jason Freer, Global Head of Business Intelligence at Poten & Partners, an energy and shipping consultancy.

<https://www.hellenicshippingnews.com/europe-tops-buyers-for-u-s-lng-with-winter-cargo-influx/>

Foundation of rig for Leviathan gas field arrives in Israel

The foundation, known as the platform jacket, is being placed around 10 kilometers (6 miles) off Israel's Mediterranean coast.

Jerusalem: Israel's Delek Drilling and its U.S. partner, Noble Energy, said Sunday the foundation of their rig for the Leviathan gas field has arrived, in the first stage of an ambitious project they say will wean Israel off coal and revolutionize its economy by turning it into an energy exporter.

The foundation, known as the platform jacket, is being placed around 10 kilometers (6 miles) off Israel's Mediterranean coast. It arrived on a 180-meter (590-foot) long barge that sailed for a month from Texas across the Atlantic Ocean. The platform's jacket, which took 18 months to build, is nearly 100 meters (330 feet) high and weighs 15,500 tons.

The topside of the platform is expected to arrive in the coming months and natural gas from the field is supposed to pump into Israel and its neighboring countries by the end of the year. Israel already has export deals signed with Jordan and Egypt, and it aims to build a pipeline with Greece and Cyprus to carry the gas to Europe.

The Leviathan reservoir was discovered in 2010 some 125 kilometers (75 miles) off the Israeli coast and, together with the discovery of the smaller Tamar field, ushered in a wave of optimism for a country that used to take an almost perverse pride of thriving without any natural resources. But recently it has come against stiff domestic criticism from environmental and social welfare activists, who say the government has been too generous toward the gas tycoons behind the exploration and that the massive investment in the project has steered away from focusing of renewable energy sources.

Hundreds of activists from the grassroots Homeland Guards group protested the arrival of the jacket over the weekend, pledging to keep up a public campaign and legal challenge aimed at pushing the rig further away from the coast. The group says the already operational Tamar rig, which is placed twice as far away from the coast, has recorded far higher levels of pollution than promised and that placing a rig processing the far greater quantities of gas from Leviathan will spread toxic water and air pollution toward their homes. They warn that a spill on the scope of that caused by the Deepwater Horizon drilling rig in the Gulf of Mexico in 2010 would be catastrophic for Israel.

"We are determined to stop this project and the insane pollution it will create," said Moshe Barak, one of the group's leading activists. "They call Leviathan 'the national project,' but it is actually 'the national disaster.'"

Delek, Noble and the Israeli government insist the most stringent safety measures have been put in place and Leviathan will have many environmental upsides. They accuse the critics of waging an irresponsible scare campaign and have pledged to press forward with the project undeterred. But the upcoming Israeli elections have sparked renewed debate, with several major parties vowing to review the arrangements should they come to power.

Labor Party leader Avi Gabbay attended the weekend protest and pledged his support, while Yesh Atid leader Yair Lapid, a top challenger to Prime Minister Benjamin Netanyahu, said there have been "essential flaws" in the decision-making process and that he would freeze the project immediately upon taking office.

Netanyahu, a strong supporter of the project, remains far ahead in the polls ahead of the Apr. 9 vote.

<https://energy.economictimes.indiatimes.com/news/oil-and-gas/foundation-of-rig-for-leviathan-gas-field-arrives-in-israel/67712358>

Uniper agrees LNG bookings at Wilhelmshaven with ExxonMobil

The 10 billion cubic metres facility, a floating storage and regasification (FSRU) unit, could go into operation in second half of 2022

FRANKFURT: German utility Uniper on Friday said it entered into a preliminary contract for the long-term booking of a substantial share of regasification capacity at a terminal yet to be built at Wilhelmshaven for receiving liquefied natural gas (LNG).

Discussions about LNG have flared up recently as the German government wants to diversify away from pipeline gas arriving from Russia, Norway and the Netherlands. Suppliers, most notably Qatar and the United States, have expressed interest.

The 10 billion cubic metres facility, a floating storage and regasification (FSRU) unit, could go into operation in second half of 2022.

<https://energy.economictimes.indiatimes.com/news/oil-and-gas/uniper-agrees-lng-bookings-at-wilhelmshaven-with-exxonmobil/67687355>

Saudi Aramco, Air Products agree to build first hydrogen vehicle fueling station

The station is expected to be operational in the second quarter of 2019. They will also establish a fleet of fuel cell vehicles supplied by Toyota

DUBAI: Saudi Aramco and Air Products and Chemicals Inc said on Friday they agreed to jointly build the first hydrogen fuel cell vehicle fueling station in Saudi Arabia.

The station is expected to be operational in the second quarter of 2019. They will also establish a fleet of fuel cell vehicles supplied by Toyota.

<https://energy.economictimes.indiatimes.com/news/oil-and-gas/saudi-aramco-air-products-agree-to-build-first-hydrogen-vehicle-fueling-station/67685204>

Russian gas giants begin to clash in Europe

Russia's two biggest natural gas producers have previously avoided competing overseas because of Gazprom's export monopoly but this has changed as Novatek's produce is increasingly reaching non-Russian markets.

Novatek, Russia's largest non-state gas producer, is selling LNG to northern Norway, where it is sold on to the European market, which Gazprom has dominated for decades.

And the trend is set to continue.

Novatek's gas output would increase this year by 10 per cent and liquid hydrocarbons production by 2 per cent, chief executive Leonid Mikhelson said, according to Interfax.

The company is actively developing its vast resource base and expects to boost output between 2020 and 2030 as it is already working on the second and third LNG depots close to the first project.

Novatek had signed contracts for a quarter of the investment needed in its Arctic LNG-2 project, he added.

French oil and gas giant Total may take part in a proposed project to build an LNG terminal in Murmansk, he said.

"We're increasing gas production by up to 10 per cent taking into account Yamal LNG, with liquids output, including crude and condensate, to grow by around 2 per cent" Mikhelson reportedly said at the World Economic Forum in Davos.

Novatek reportedly increased its natural gas output to 68.81 billion cubic metres last year, with most of the output earmarked for export.

"Many people think there was a truce between Novatek and Gazprom to not touch the European market, to save the price for Gazprom," said Jean-Baptiste Dubreuil of the International Energy Agency. "Recently there has been a lot of reloads from Norway, which ended up in some markets in northwest Europe in direct competition with Gazprom."

Gazprom is selling record volumes of gas to offset declining domestic production in Europe, through its monopoly on Russian pipeline gas exports.

Prices for LNG in East Asia have been falling, making it more attractive for shippers to export to Europe. Most of the fuel shipped from Novatek's Yamal plant was sent west to Europe since production started more than a year ago. The giant Yamal depot was originally meant to mainly supply Asian markets.

But Gazprom's volumes were yet to be impacted by the Arctic PNG, said James Huckstepp of S&P Global Platts. Gazprom has also topped up sales under long-term contracts with volumes sold on electronic platforms.

"Those platform sales have shifted toward those northwestern European markets, which have seen also an uptick of LNG deliveries," Huckstepp told Bloomberg. "It is definitely an area where there is the most competition between the two sources."

<https://www.energy-reporters.com/industry/russian-gas-giants-begin-to-clash-in-europe/>

Korean Shipbuilders Anticipate Big LNG Tanker Orders from Qatar

Korea's three major shipbuilders are looking forward to a big order for liquefied natural gas (LNG) carriers from Qatar Petroleum (QP), a state-owned oil company in Qatar which has recently decided to mass-produce LNG.

QP officials recently visited Hyundai Heavy Industries, Daewoo Shipbuilding and Marine Engineering (DSME) and Samsung Heavy Industries to check their capacities to build super-sized LNG carriers.

TradeWinds, a global media outlet specializing in shipbuilding and shipping industries, also reported on Jan. 24 that Qatar officials visited shipbuilders in Korea, China and Japan to assess their shipbuilding capabilities.

Qatar is expected to order 30 to 40 super-sized carriers with 200,000 to 266,000 cubic meters (Q-Max, Q-Flex), TradeWinds reported.

Qatar has announced in September last year that it would scale up production of LNG 43 percent by expanding lines in North Dome, the world's largest offshore gas field.

Qatar is in need for a large number of new LNG carriers as it plans to increase LNG exports starting in 2023 and has to reorganize its current LNG carrier fleet.

Anticipation for a big order is growing among the Korean shipbuilders as they have already won massive orders for LNG carriers from Qatar. They swept the 45 LNG carriers ordered by Qatar from 2004 to 2007. Back then, DSME took 19, Samsung Heavy Industries 18 and Hyundai Heavy Industries eight.

<http://www.businesskorea.co.kr/news/articleView.html?idxno=28704>

America Needs More Oil And Natural Gas Pipelines

With Friday's headline, "Trump Eyes Action to Limit States' Powers to Block Pipelines," an oil and gas blog is due.

Despite a 140% boom in U.S. crude oil production and a 50% jump in natural gas output since shale took flight in 2008, the midstream infrastructure to pipe this new supply around the country has simply not kept up. This is a major problem for us because pipelines are easily the safest and most economical way to transport energy.

In addition, hardly "going away," oil and gas will still supply the bulk of U.S. energy through at least 2050, according to just released modeling from the U.S. Department of Energy in the Annual Energy Outlook 2019.

The Permian basin in West Texas, giving a third of all U.S. crude production, confronts a pipeline bottleneck from a surge of activity. Yet, most of this will be rectified as the build-out in our largest oilfield continues to catch up. After all, although stronger than you might think, the pipeline pushback in oily Texas from "environmental groups" is not as potent as in other states.

In contrast, New York and the six New England states are really ground zero for our pipeline problem where “environmentalists” – despite significantly relying on oil and gas themselves in their daily lives – remain steadfast against new builds.

Indeed, gas is increasingly being utilized in these anti-pipeline regions for generating both electricity and heat. In New England, for instance, gas has accounted for over half of all electricity: "New England's Known Need For More Natural Gas Pipelines."

It is no wonder then that these anti-pipeline areas have 1) the highest energy and electricity prices, 2) fleeing high paying manufacturing jobs, and 3) great concerns over electric reliability in periods of high demand: "What Happens When You Don't Build Natural Gas Pipelines?"

New York though might pose the biggest threat. Not just anti-pipeline, Governor Cuomo will not consider developing the state's portion of the giant Marcellus shale gas play that has so benefitted Pennsylvania, Ohio, and West Virginia.

The contradiction from The Empire State is again palpable: despite producing no gas itself, New York relies on gas for a leading 40% of its electricity. "Why New York's Fracking Ban For Natural Gas Is Unsustainable."

Indeed, in Appalachia, just three recently anointed gas giants, Pennsylvania, Ohio, and West Virginia, in particular requires pipeline support. Supplying 37% of all U.S. gas, Nittany Lions, Buckeyes, and Mountaineers are making the shift to natural gas in other non-producing states possible. Gas for power, gas to manufacture, gas to backup wind and solar, gas to cut greenhouse gas emissions and combat climate change, and increasingly, gas to export abroad.

That is correct, unthinkable a decade ago, the U.S. has a rapidly expanding export complex for both oil and gas. More pipelines will help us reach our coastal facilities to supply and make friends around the world while buffering the influence of riskier adversaries.

Make no mistake: OPEC and Russia are primed to pounce on a global market that continues to devour oil and is embracing cleaner natural gas as a destination fuel and globalizing commodity similar to oil itself.

On average, annual global oil demand grows ~1.5 million b/d and gas use by ~6 Bcf/d. If pipeline constraints block the U.S. from meeting those rising needs, the geopolitical consequences for us could be dire.

In fact, despite being sanctioned by the U.S. government, Russia has already taken advantage of New England's anti-pipeline stance. Russia has happily supplied Everett LNG import terminal in Boston with shipped gas this winter and last. This demonstrates just how much the anti-pipeline business in New England might be our most obvious "colluding with Russia" problem: nearby Pennsylvania, Ohio, and West Virginia now produce a staggering 32 Bcf/d, or enough to satisfy New England 7 or 8 times over even when demand peaks!

Indeed, geopolitically, more pipelines are essential because they will help us link better with allies Mexico and Canada, oil and gas giants in their own right. A stronger, more connected North American energy bloc to counter less predictable global energy alliances is mandatory.

And pipeline constraints help explain why we still import a ton of oil and gas, with too many areas not having access to our own domestic production surge. For example, we still imported an overly high average of 7.9 million b/d of crude oil in 2018, despite recently reaching a mind-blowing record of 12 million b/d of crude production. This worsens our trade deficit, hampers our goal for energy self-sufficiency, disrupts local communities thriving on shale development, and dangerously benefits riskier international suppliers.

For oil in particular, more pipelines give us an expanding ability to lower prices not just here but around the world, a critical component to growing the global economy that we must help to realize. As just stated in Davos by Patrick Pouyanne, CEO of the oil and gas giant Total:

“[Pipelines] are being constructed, and when it will be done at the end of the year, there will be an influx of U.S. crude in the market and this will drag prices lower towards the end of the year,” Pouyanne said.

This already proven domestic ability to lower crude oil prices here and abroad is something that the anti-oil crowd had long claimed was impossible, asserting that since oil is a global commodity, more U.S. production simply cannot make that much of a difference.

The American shale revolution has proven this claim to be utterly false.

"Environmental groups" must also know that gas exports reduce CO2 emissions U.S. gas exports will help the world meet climate change goals.

To conclude, I implore the South, Midwest, West, and even Appalachia itself to not follow the anti-pipeline way of New York and New England

It truly is the way of the Dodo Bird.

<https://www.forbes.com/sites/judeclemente/2019/01/27/america-needs-more-oil-and-natural-gas-pipelines/#7c04abb1452c>

Turkey's gas imports fall by 13.8 pct in November

Turkey's natural gas imports decreased by 13.8 percent in November from a year earlier, according to the Turkish energy watchdog's data.

Imports fell to 4.70 billion cubic meters from 5.45 bcm in November 2017, the Turkish Energy Market Regulatory Authority (EMRA) said in its monthly natural gas market report.

The country imported 3.63 bcm of natural gas via pipeline, while 1.06 bcm was purchased as LNG in November 2018, EMRA's data shows.

Turkey's total gas consumption decreased by almost 21.4 percent to 4.09 bcm in November 2018 from 5.21 bcm in November 2017.

The amount of natural gas in storage increased by nearly 15.7 percent to 3.36 bcm in November 2018 from 2.9 bcm in 2017.

Gas production rose to 38.7 million cubic meters over the same period, up from 28 mcm in October 2017.

<https://www.dailysabah.com/energy/2019/01/28/turkeys-gas-imports-fall-by-138-pct-in-november>