



NOVEMBER 2018, VOL 2

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Indraprastha Gas net rises 11% in Q2

Indraprastha Gas Ltd, the firm retailing CNG and piped natural gas in the national capital, reported a 11 per cent rise in its September quarter net profit on the back of increase in volumes of gas sold. Stand-alone net profit in the July-September period at Rs 187.23 crore was higher than Rs 168.61 crore recorded in the year-ago period, the company said in a statement. IGL, which supplies CNG to automobiles and PNG to households in the National Capital Territory of Delhi, Noida, Greater Noida and Ghaziabad, posted a 13 per cent increase in sales volume growth. Average daily sale rose from 5.21 mmscmd to 5.89 mmscmd. Product wise, CNG recorded sales volume growth of 13 per cent, while PNG recorded sales volume growth of 14 per cent in the quarter as compared to corresponding quarter last year. This has primarily been driven by 24 per cent increase in industrial and commercial PNG volumes driven by industry embracing clean fuels," the statement said. Total gross sales value rose 28 per cent to Rs 1,564 crore in the latest September quarter compared to Rs 1,241 crore in the year ago period. IGL sells CNG to over 10.5 lakh vehicles running in the national capital region through a network of 452 CNG stations. It also supplies PNG to nearly 10 lakh households in Delhi and NCR towns.

<http://www.millenniumpost.in/business/indraprastha-gas-net-rises-11-in-q2->

Adani gets SC nod to supply natural gas to three areas in Ahmedabad

The Supreme Court on Monday allowed Adani Gas to supply natural gas to commercial and industrial units in the areas of Sanand, Bavla and Dholka of Ahmedabad district of Gujarat till further orders. However, it refused to allow Gujarat Gas to go ahead with the work of laying pipelines for the three areas till the next date of hearing next month. A bench led by Justice Arun Mishra also issued notice to the Ministry of Petroleum & Natural Gas, the Petroleum & Natural Gas Regulatory Board (PNGRB), Gujarat Gas, and others on the Adani's appeal challenging the Gujarat High Court's September decision that upheld Gujarat Gas' right to develop infrastructure for supply of PNG, CNG and natural gas to commercial and industrial units in the three areas of the Ahmedabad district. It also issued notice on the two other appeals filed by Ahmedabad Auto Rikshaw Drivers Union and industrial consumers led by Rajeshwari Metal Printers in the case relating to unauthorised development of City Gas Distribution network. Supporting Adani's appeal, they have stated that the impugned order had virtually left in dire state as "their interests vis-à-vis uninterrupted and smooth gas supply has been jeopardised." The apex court continued the stay granted by the HC which had dismissed the petition of Adani Gas which

had lost in the bidding process and had obtained a stay. Adani Gas claimed that it has been carrying operating gas distribution network in Gujarat, particularly in the Ahmedabad District, since 2003 and has made a substantial investment to the tune of Rs 356 crore in laying down city gas distribution network. However, the PNGRB had excluded the three areas while granting authorisation to Adani in November 2013. The HC failed to understand that the arbitrary distinction between entities with authorization from the Central government and those of state governments is violative of Article 19(1)(g) as it does not provide a level playing field by adding additional eligibility criteria which has been held by numerous judgments of this court is impermissible, it said.

<https://www.financialexpress.com/economy/adani-gets-sc-nod-to-supply-natural-gas-to-three-areas-in-ahmedabad/1379891/>

Removal of marker stones by workers ruptured gas pipe

The Bangalore Metro Rail Corporation Ltd (BMRCL) had dug up all 'marker stones' laid by Gas Authority of India (GAIL) Ltd, during the ongoing Metro work on ITPL Main Road in Garudacharpalya. Marker stones indicate the presence of gas pipelines underground and caution anyone digging the road to inform the authorities before taking up work. But a senior GAIL official said BMRCL workers had removed marker stones without informing GAIL authorities, leading to the damage. The leak of inflammable gas from a GAIL pipeline that was damaged due to the ongoing Metro work led to panic earlier this week. P Murugesan, executive director, GAIL, told DH, "It is true that they removed these marker stones. This happened because there was no supervision by senior BMRCL. Had senior engineers been present at the site, this could have been avoided. But now, they (BMRCL) have agreed to deploy senior engineers and we will coordinate better." BMRCL managing director Ajay Seth said long discussions were held with officials from GAIL Gas on Wednesday and both the organisations have decided to work in coordination to prevent such accidents. "We have given details of Metro work and GAIL authorities have said they will provide details of the pipeline network. Instead of focusing on who is to blame, we have decided to take precautions," he said.

<https://www.deccanherald.com/city/removal-gail-marker-stones-700982.html>

CNG, PNG coverage set to expand to 70% population

The government is offering 50 more 'geographical areas' for setting up city gas service in 124 districts in 14 states with the aim of expanding the CNG and PNG service coverage to 70% of the country's population. Prime Minister Narendra Modi will next week launch the 10th city gas licensing round offering these fields and mark the beginning of work on city gas projects in at least 62 cities that were offered in the ninth round that concluded earlier this year. The 50 areas to be offered in upcoming round will cover 24% of the country's population and 18% of the area. In the ninth round, 86 areas spread over 174 districts in 22 states and Union Territories were offered to cover 26% of the population and 24% of area. Sectoral regulator DK Sarraf said several of the 86 areas from the ninth bid round have been excluded for the PM's function due to various reasons. Five have been excluded due to litigation and 16 others due to the poll code as they are in Rajasthan, Madhya Pradesh and Telangana where assembly elections are on. Bids for the 10th round will close on February 5 and areas will be awarded by the end of February. First CNG station or PNG service in the areas awarded in the previous round will take at least 1-2 years to become operational. The government is targeting raising share of natural gas in the primary energy basket to 15% from 6.5% in the next few years and the bid rounds are aimed at fulfilling that objective. "Future bid rounds will be slower and smaller as new areas can be offered only when gas pipeline is laid to connect them to the gas grid," Sarraf said. "Next round will happen after some gap. In the two rounds (9th and 10th), we have covered 50% of India's population and 42% of the area," he said.

<https://timesofindia.indiatimes.com/business/india-business/cng-png-coverage-set-to-expand-to-70-population/articleshow/66625022.cms>

Adani Gas lists at Rs 72 post demerger with Adani Enterprises

Adani Gas Ltd. — the gas sourcing and distribution business that was spun off from Adani Enterprises Ltd earlier this year — listed at Rs 72 per share (pre-market discovery price) on the NSE Ltd. today. This after the pre-open price of Adani Enterprises indicated Rs 60 per share for Adani Gas. The stock will in the trade-to-trade segment for 10 trading days. Intraday trades are not allowed in stocks in T2T segments. The shareholders of Adani Enterprises were allotted one equity share of Adani Gas (face value of Re 1) for each share held in the parent company. The promoters will hold 74.92 percent stake in Adani Gas with the balance held by the public. The Gautam Adani-backed company was the biggest winner in the ninth round of city gas distribution auctions, supplies gas for cooking and automobiles in Ahmedabad and Vadodara in Gujarat, Faridabad in Haryana and Khurja in Uttar Pradesh. The company's joint venture with state-owned Indian Oil Corporation Ltd.—IndianOil-Adani Gas Pvt. Ltd.—separately has rights to distribute gas in nine other cities. Adani won rights to develop the distribution infrastructure for 13 regions by itself in the recent auctions. Its joint venture with Indian Oil will develop another nine areas. Adani Gas expects all the 31 areas to be operational by the financial year ending March 2025. The auctions were part of the government's effort to increase the share of gas, a cleaner fuel, from 6 percent to 15 percent by 2030. Besides helping India reduce its carbon footprint in accordance with the COP-21 protocol, that would also reduce the oil import bill. Adani Gas will be the fourth listed city gas distribution company after Indraprastha Gas Ltd., Gujarat Gas Ltd., and Mahanagar Gas Ltd. Its operational profit grew at a faster pace than peers in the last five years. Revenue growth remained subdued due to limited growth in sales volumes.

Source: Bloomberg Quint/Indian Oil & Gas

Nashik civic body finding land for CNG facilities

Nashik Municipal Corporation is in the process of identifying land for providing compressed natural gas. Maharashtra Natural Gas Limited (MNGL) has been given the responsibility of developing a gas distribution network in Nashik and Dhule. MNGL will be setting up 50 CNG

Adani Gas plans to invest Rs.8,000 crore in next 5 years: Pranav Adani

Adani Gas aims to be the largest city gas distribution company in India in the next five years, says Adani Group managing director Pranav Adani. The country's biggest city gas distribution (CGD) bid round held by Petroleum and Natural Gas Regulatory Board recently saw billionaire Gautam Adani-promoted Adani Gas Ltd (AGL) bagging the maximum number of geographical areas (GA). While the company won 13 GAs as an individual company, its joint venture with Indian Oil Corp. (IOC) has been awarded nine GAs. AGL, the gas distribution arm of the Adani group, is to be listed as a separate entity in the first week of November, after being spun off from Adani Enterprises earlier this year. In an interview, Pranav Adani, managing director, agro, oil and gas at Adani Group, talks about how the gas sector will propel the growth of the country in the next few years and how his the company is set to become the country' largest CGD company in the next few years. AGL has plans to invest Rs.8,000 crore in the next five years. Edited excerpts:

<https://www.livemint.com/Companies/kVYkQTyBPjo6K1o6bAmFbK/Adani-Gas-plans-to-invest-8000-crore-in-next-5-years-Pran.html>

stations in the city, so eco-friendly fuel at cheaper cost will be available. NMC is keen on CNG for saving energy and money, besides greater safety. MNGL requested NMC to provide land for LNG storage and gasification. Land is needed even for amenity places to set up CNG stations. NMC has now started a survey to identify suitable sites. "This project will take three years. NMC is supporting the project because it will save energy, money and is safe," Mundhe said. Besides, MNGL has planned to reach every household in the city in the next three years with liquid natural gas (LNG). There are at present approximately 4.50 lakh households in the city. Gas will be received at mother station in Nashik in the form of LNG, it will be odorized with ethyl mercaptan and the gas will be transmitted through MDPE (medium density polyethylene pipe) pipeline network to households. The supply of natural gas will be started immediately by bringing in liquid form (LNG) through tankers by road from Dahej, Gujarat. MNGL also wants to provide natural gas to industries in the city so that industrial pollution is reduced and the present environment of the city is retained.

<https://timesofindia.indiatimes.com/city/nashik/civic-body-finding-land-for-cng-facilities/articleshow/66450642.cms> [Edited]

IGL extends gain on plan to take over the natural gas supply in Gurugram

The stock rallied 6% to Rs 297, extending its 11% rally in past two days after the company agreed to take over the supply of natural gas in Gurugram district from

Haryana City Gas Distribution. Shares of Indraprastha Gas (IGL) have rallied 6% to Rs 297 per share on the BSE in early morning trade on Friday, extending their 11% rally in the past two trading days after the company agreed to take over the supply of natural gas in Gurugram district from Haryana City Gas Distribution (HCGDL). The Supreme Court has suggested that IGL take over the natural gas supply in Gurugram from HCGDL. Meanwhile, the board of directors of IGL is scheduled to meet on Monday, November 5, to consider the financial results for the quarter and half year ended September 30, 2018. The brokerage firm Motilal Oswal Securities expects volume growth to continue for city gas distribution (CGD) players. Spot, as well as crude-linked LNG prices, are up YoY in 2QFY19; the INR has also depreciated. However, CGD players have already taken price hikes in Q2FY19, which should take care of the increased cost. IGL had hit a 52-week low of Rs 215 on October 8, corrected 38% from its 52-week high level of Rs 344 touched on January 1, 2018, in intra-day trade. Prabhudas Lilladher expects IGL margins to be maintained led by price hikes in the quarter. Volume momentum will also be maintained.

https://www.business-standard.com/article/markets/igl-extends-gain-on-plan-to-take-over-the-natural-gas-supply-in-gurugram-118110200225_1.html

Fed up of unending queues, motorists shun CNG for petrol

Despite the government's push to green fuels, Mumbaikars who own CNG vehicles have been having a tough time, what with insufficient gas stations and unending queues at pumps. As a result, some of them who have dual petrol-CNG cars have stopped using their CNG kits entirely. One such example is Commodore M Bhada (Retd), a Nepean Sea Road resident, who stopped using CNG for his sedan six months ago. And he isn't the only one. Bhada said he has written to the Ministry of Petroleum to make special queues for private CNG vehicles at fuel pumps to avoid long waiting. "If all CNG pumps could have a fixed point for private cars, this problem would be solved easily. In case there is no private car waiting, they can continue using it for taxis and commercial vehicles. Should a private car arrive, it should be taken on as soon as the taxi/commercial vehicle has vacated that point," he wrote. Chartered accountant Ajit Joshi from Vile Parle has had a similar experience. Even taxi drivers have been facing problems, but have no fallback plan like private vehicle owners. "I have been driving taxis from the 1990s, but CNG has made it worst. It takes an hour to fill gas, and we have to do this thrice in 24 hours. Also, fuel stations are so congested we have to stand on the road, and that creates traffic problems for other vehicles. Out of four filling points at every pump, only one or two work, slowing down the process further," said Suresh Pal, a taxi driver from Wadala. CNG costs about Rs 20 per kg, but the long waiting period to fill gas has become a major issue for private vehicles. "Not many people are shifting back to petrol from CNG. But there are practical difficulties. The 10 to 15-minute wait to fill gas, limited space at petrol pumps and low pressure are some of the issues. Also, south Mumbai has a very few gas stations, so CNG users are forced to go to other parts of the city to fill gas," he said.

<https://mumbaimirror.indiatimes.com/mumbai/other/fed-up-of-unending-queues-motorists-shun-cng-for-petrol/articleshow/66613141.cms>

NATIONAL: LNG DEVELOPMENT/SHIPPING

LNG-fueled ferry under construction for Tallinn-Helsinki route

Tallink Grupp and Rauma Marine Constructions (RMC) have signed a Letter of Intent for the construction of a new LNG-powered shuttle ferry for the Tallinn-Helsinki route. The estimated cost of the project is approximately 250 million euros and the new vessel will be built at the Rauma shipyard in Finland. The construction of the ship is expected to be completed by the end of 2021. The new ferry will be dual fuel operated, using LNG as its main fuel and will have capacity for 2,800 passengers. It will start operating on the Tallinn-Helsinki route, further developing this important route between the two capital cities. The ferry will be built using all the latest technologies and the most innovative solutions available and the group's aim is to build the most energy efficient and environmentally friendly vessel operating on the Baltic Sea. "Tallink Grupp has put a great deal of resources and effort into developing the Tallinn-Helsinki route for decades. With the launch of the shuttle service over ten years ago, we have built a bridge between the two capitals, offering year-round frequent departures and thus bringing the two countries closer together. The next step on our journey is the continuous development and improvement of that service," said Tallink Grupp's CEO Paavo Nõgene.

<http://www.ngvjournal.com/s1-news/c7-lng-h2-blends/new-lng-powered-shuttle-ferry-under-construction-for-tallinn-helsinki-route/>

Ennore LNG import terminal to be commissioned this month

A senior officer of IOCL's Southern Region Pipelines told Express, that, having received clearance, work on the pipeline would be completed by November 20. The ambitious imported liquefied natural gas (LNG) storage and re-gasification terminal built by Indian Oil Corporation Limited (IOCL), the nation's largest fuel retailer, at a cost of ₹5,151 cr inside Kamaraj Port Limited in Ennore, is ready for commissioning later this month. The Union Environment Ministry cleared the last bottleneck by granting Coastal Regulation Zone (CRZ) clearance to lay gas evacuation pipeline through Ennore creek wetlands. Out of a total 22.656 km of underground pipeline being laid under the common corridor pipeline project connecting the LNG terminal and Manali industrial area, 634 metres of pipeline area fall in CRZ-I (116 meters) and CRZ-III (518 meters) for which CRZ clearance was mandatory. A senior officer of IOCL's Southern Region Pipelines told Express, that, having received clearance, work on the pipeline would be completed by November 20. "The end-to-end i.e pipeline connections from terminal to anchor customers in Manali industrial area will be completed by November 15-20. We are hoping to commission the LNG terminal by the month end," the official said. The official said the company had already tied-up off-take agreements for about 2 MMT gas with about 30 consumers, which include anchor customers such as Chennai Petroleum Corporation Limited, Madras Fertilizers Limited, Manali Petrochemicals, Tamil Nadu Petroproducts Limited in Manali industrial area, to cater to gas demands of the region. The firm is also working on laying a 1,385 km natural gas pipeline originating from the Ennore terminal to Nagapattinam in Tamil Nadu via Pudukcherry. The fuel retailer is also laying branch pipelines to Madurai, Thoothukudi and Bengaluru to meet the demand from multiple LNG consumers.

<http://www.newindianexpress.com/cities/chennai/2018/nov/06/lng-import-terminal-to-be-commissioned-this-month-1894704.htm>
[[Edited]]

Higher gas volumes propel GAIL's net by 50% in second quarter

The company is benefiting from the increasing consumption of gas in the economy as the country aims to use 15% gas in its energy mix by 2030 compared with 6.5% at present. On the back of a 14% higher natural gas marketing volumes and an 11% increase in liquefied petroleum gas (LPG) transmission, state-run GAIL (India) reported a 50% jump in net profit to Rs 1,963 crore in the quarter ended September 2018 compared with Rs 1,310 crore in the corresponding quarter of the last financial year. The revenue of the gas marketer increased 55% to Rs 19,641 crore in the quarter under review compared with Rs 12,683 crore in the corresponding period a year ago. The company is benefiting from the increasing consumption of gas in the economy as the country aims to use 15% gas in its energy mix by 2030 compared with 6.5% at present. According to data by Petroleum Planning and Analysis Cell, the country consumed 15.1 BCM of gas in the second quarter of FY19 compared with 12.92 BCM in the corresponding period a year ago. Also, LPG consumption has been increasing continuously for the last 61 months up to September 2018 due to the government's flagship Pradhan Mantri Ujjwala Yojana which provides partly-free LPG connections to poor households. Apart from natural gas, the company also sells petrochemicals and liquid hydrogen. In the September quarter, the company got additional Rs 194 crore due to an upward revision of gas pipeline tariff by the Petroleum and Natural Gas Regulatory Board. GAIL shares gained Rs 2.25 apiece on Monday to close 0.61% higher at Rs 371.30 on a day benchmark Sensex lost 0.17%.

<https://www.financialexpress.com/industry/higher-gas-volumes-propel-gails-net-by-50-in-second-quarter/1374066/>

KG basin will play crucial role in India natural gas move

At a time when production at traditional offshore assets on the west coast is set to decline over the next decade, the upcoming deepwater and ultra-deepwater projects in the Krishna-Godavari (KG) basin at the Bay of Bengal will play a crucial role in India's move towards a natural gas-based economy, says GlobalData, a leading data and analytics company. The company forecasts India's domestic natural gas pro-

duction to grow by 67% to approximately 6,000 MMcfd in 2023, of which the upcoming deepwater and ultra-deepwater projects in the KG basin will account for 2,000 MMcfd. Cao Chai, oil and gas analyst at GlobalData, says, "A number of factors is driving the growth of the deepwater sector in India. The government plans to move the country towards a natural gas-based economy, therefore increasing domestic supply is crucial to meeting the rising energy demand. The government has also introduced a natural gas pricing policy to allow the marketing and pricing freedom for challenging high pressure/high temperature, deepwater and ultra-deepwater projects." The price ceiling for these projects has been raised from \$6.17/mcf in 2016, when it was introduced, to \$6.62/mcf in 2018, allowing companies to make stronger investment cases for these complex developments. Gas price for other fields rose from \$3.11/mcf to \$5.43/mcf during the same period. The commerciality of India's deepwater and ultra-deepwater developments has been positively affected by the

continuing low costs in the service sector. Cheaper drilling contracts, subsea production systems, and associated facilities saw field development costs reduced by at least 20%, compared to the initial estimation. Upcoming KG basin projects are expected to address India's rising energy demand especially the natural gas needs and reduce the country's dependency on imports by 10% in 2023."

<https://www.worldoil.com/news/2018/11/1/kg-basin-will-play-crucial-role-in-india-natural-gas-move>

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Pradhan Mantri Urja Ganga 1st phase to be complete by January: GAIL CMD Tripathi

State-owned gas utility GAIL (India) Tuesday said it will commission the first phase of the Pradhan Mantri Urja Ganga (PMUG) project before January, taking natural gas to cities in eastern Uttar Pradesh and Bihar. The 2,655-km long gas pipeline worth Rs 12,940 crore from Jagdishpur in UP to Haldia in West Bengal, with branch lines to Bokaro in Jharkhand and Dhamra in Odisha, will for the first time take clean environment-friendly gas to the east to fuel its industrial revolution. The project will not just supply CNG to automobiles and cooking gas to household kitchens in cities along the route, but also to industries to meet their feedstock or fuel requirement. "The first phase of PMUG project will be commissioned within two months," GAIL Chairman and Managing Director B C Tripathi said. "It will be before January." Phase-1 of the project involves laying the pipeline to Dobhi, Patna and Barauni in Bihar, he said adding the pipeline will be extended from Barauni to Guwahati in Assam, orders for which have been placed. As per the earlier plan, the project was targeted at meeting the energy requirements of 40 districts and 2,600 villages covering five eastern states -- UP, Bihar, Jharkhand, Odisha, and West Bengal -- by 2020. Tripathi said GAIL in the July-September quarter saw its net profit rise 50 per cent to Rs 1,963 crore on the back of higher natural gas volumes being sold. "Last year we were selling 86 MMSCMD of gas. This year we are doing 95-96 MMSCMD," he said. Also, petrochemical production rose 4%. He said the better performance of natural gas transmission segment was supported by an upward revision of tariff by Petroleum and Natural Gas Regulatory Board (PNGRB) of some of the pipeline network. GAIL earned Rs 194 crore from upward tariff revision for Dahej-Uran-Dabhol-Panvel pipeline, Dukli Maharajganj, Agartala Regional Network and Gujarat Regional Network and a one-time take or pay settlement of Rs 133 crore with one of the natural gas customers. GAIL Gas, a subsidiary of GAIL, and its joint venture partners won licence to retail CNG in 14 cities in the recently concluded bid round. On half-yearly basis, GAIL reported 38 per cent rise in net profit to Rs 3,222 crore.

<http://www.millenniumpost.in/business/pmug-1st-phase-to-be-complete-by-january-gail-cmd-tripathi-326340>

Gas allocation mechanism for power generation units in the works

In a big relief to private power companies, the government is working out a gas allocation mechanism for electricity generating units by pooling ONGC deep sea gas with LNG and subsidising the tariffs to revive about 25,000 mw projects. India has currently nearly 25,000 mw of operational gas-based capacity, all of which is stressed because of gas unavailability. The scheme, being discussed at the level of cabinet secretary-led high-level empowered committee, is proposed to be operated for next two financial years. The proposal entails price pooling of 5.45 MMSCMD of ONGC deep water gas, currently with GAIL, with imported LNG and supplying it to power plants. There are two options of allocation being mulled at this stage, which could be auction of the gas or allocation by rotation to the power projects," a senior government official said. Calculated at a cost of the present RLNG price of \$9 per MMBtu, electricity tariff at the pooled price might drop to around Rs 5.90 per unit, industry experts said. If the government subsidises electricity tariffs by Rs 1.50-2 per unit to make it affordable, the subsidy outgo would be over Rs 15,000 crore," an expert said on condition of anonymity. Association of Power Producers director-general Ashok Kumar Khurana said pooling of gas is a positive step. The government had launched an e-RLNG scheme in March 2015 for two years. The scheme was discontinued after two rounds of bidding after the power ministry received aggressive bids from companies. Against total requirement of 117 MMSCMD, total gas supply in 2017 was 30 MMSCMD. Data available with the Central Electricity Authority showed the 24,812-mw gas based power stations in the country generated higher than the target in September and in the financial year so far. The projects operated at a capacity of 23.3% between April and September. Power companies have been asking the government to restart the scheme as about 7,500-mw capacity is completely stranded while the rest is stressed.

<https://economictimes.indiatimes.com/industry/energy/power/gas-allocation-mechanism-for-power-generation-units-in-the-works/printarticle/66469819.cms>

Individual can set up charging station for commercial use: R K Singh

The power ministry would soon bring an electric vehicle (EV) charging infrastructure policy, which will also allow individuals to set up charging station for commercial use to boost e-mobility, said Power and New & Renewable Energy Minister R K Singh. "We have circulated the EV Charging Policy for comments (among other department/ministries). The second line of the policy says that everybody is free to set up EV charging station," Singh told reporters at International Symposium to Promote Innovation & Research in Energy Efficiency. When asked whether individuals would be able to use the facility on commercial basis, he replied, "Absolutely. You don't need a licence". The EV charging infrastructure is required to boost EVs in the country. India intends to have sizeable share of EVs in the vehicle strength by 2030, which is in line with its commitment to reduce emission intensity by one third from the level of 2005. About the extension of 1,200 MW hybrid auction (wind and solar), the minister said, "The tariff ceiling has been increased to Rs 2.70 per unit. We are extending it because we have increased the ceiling price". Singh also informed that his ministry is working to coordinate with oil ministry to set up EV charging station at petrol pumps. To support investments in new, innovative and scalable business models, the EESL (Energy Efficiency Services Ltd) and Asian Development Bank (ADB) also signed an agreement for a Global Environment Facility (GEF) for grant of USD 13 million to

establish an Energy Efficiency Revolving Fund (EERF) on this occasion. During Inspire 2018, the EESL and GAIL (India) Ltd signed MoU to develop natural gas based cogeneration and trigeneration projects in Commercial & Industrial Sectors. This agreement is set to benefit industries such as hotels, hospitals, airports, commercial malls, commercial/ government buildings, integrated residential complexes, educational institutions, data center, among others, with the advantages of combined heat & power technology.

[Source: ET EnergyWorld \[Edited\]](#)

Priority allocation of gas to power plants may end

The government plans to end priority allocation of natural gas to power plants, which would be a major setback to the already-stressed sector that gets 37 per cent of the total domestic supply. It could be a blow particularly to top power producer NTPC, which has seven gas-fired plants. The move, proposed by the ministry of petroleum and natural gas, seeks dismantling the existing pricing system for domestic gas and replacing it with a market-based discovery mechanism on a gas exchange by pooling the local fuel with LNG, sources said. A senior government official said the oil ministry has floated a Cabinet note proposing the new price discovery mechanism and has removed power plants from the priority allocation list. The other two sectors — city gas distribution and fertiliser — are proposed to be kept on the list. "The power ministry has vehemently opposed the proposal, saying power is a regulated sector and needs domestic gas allocation more

than any other sector," said the official. Another official said the price increase is still manageable, as NTPC can pass on the costs to consumers, but taking away the basket of gas allocation from the power sector will be a greater setback. NTPC has seven gas-based power plants with a capacity of over 4,000 MW, which require up to 7 MMSCMD. The power sector gets 39 per cent of the total domestic gas distributed, and NTPC consumes a large part of it. An NTPC official said the move will be a major setback for the company. Data available with the Central Electricity Authority (CEA) showed the 24,812 MW gas-based power stations in the country generated higher than the target in September and in the financial year so far. The projects operated at a capacity of 23.3 per cent between April and September.

[Source: ET Energyworld](#)

All news and features carried in this NGS NG/LNG Update are compiled from various sources - print and web editions, and have been duly acknowledged.

Egypt to increase natural gas exports to Jordan to 150m scfd by December

The Ministry of Petroleum aims to increase natural gas exports to 150m standard cubic feet per day (scfd) for Jordanian power plants by the end of the year, up from 100m scfd currently, and gradually increase to 250m scfd by January 2019. An official at the Ministry of Petroleum and Mineral Resources told Daily News Egypt that the export capacity of the Jordan gas pipeline is estimated at 1bn scfd. He pointed out that the ministry finalised the agreement with the Jordanian side to supply 250m scfd, at different prices than the previous agreement. The official added that Egypt has resumed natural gas exports to Jordan since July, through the pipeline connecting Egypt and Jordan, in quantities estimated at 50m scfd, paving the way towards the transformation of Egypt to become a regional gas hub, after achieving self-sufficiency from natural gas. The Jordanian Energy Ministry said in a statement earlier that the agreement is to import 10% of the country's needs of natural gas for electricity generation from Egypt, after the visit of the Jordanian Minister of Energy and Mineral Resources Hala Zawati, to Egypt, last month. The Egyptian government signed a 15-year agreement with Jordan in 2004 to supply 250m scfd, at a price of \$2.5 per MMBtu,

but the government raised gas prices in April 2012 to \$5 per MMBtu. The gas pipeline between the two countries was targeted by various bombings, and sabotage attempts, since the January 25 revolution by unknown assailants, causing supplies to be briefly disrupted.

<https://www.hellenicshippingnews.com/egypt-to-increase-natural-gas-exports-to-jordan-to-150m-scfd-by-december/>

ADNOC to extend long-term Gas Supply Agreement for LNG production

The Abu Dhabi National Oil Company (ADNOC), has agreed, in principle, to extend to 2040 its gas supply agreement with ADNOC LNG, in coordination with ADNOC LNG's joint venture partners, Mitsui, BP and Total. The new gas supply agreement is scheduled to take effect from April 1, 2019, replacing an existing agreement, due to expire on March 31, 2019. The extension announcement follows the Abu Dhabi's Supreme Petroleum Council (SPC) approval of ADNOC's new integrated gas strategy that will sustain LNG production to 2040 and allow ADNOC to seize incremental LNG and gas-to-chemicals growth opportunities where they arise from the UAE's dynamic demand/supply position and evolving energy mix. As it moves to diversify its customer portfolio, ADNOC LNG has signed seven term contracts for the supply of more than 4.2 MMTPA

of liquefied natural gas (LNG). The contracts, that cover the supply of LNG on a mid-term basis starting April 2019, have been signed with various international well-established LNG buyers, including Japan's JERA Co. that announced, in August, it plans to purchase up to 8 cargoes per annum of LNG from ADNOC LNG, for a period of three years starting April 2019. Meanwhile, discussions continue with other potential customers as ADNOC seeks to capitalize on the forecast mid to long-term demand for energy, particularly in the growth markets of Asia. ADNOC was the first LNG exporter in the Middle East and has been a reliable supplier of gas to global markets for over 40 years. Abu Dhabi's strategic geographical location gives ADNOC advantaged access to growth markets in the Middle East and Asia, which are expected to drive significant gas demand in the near and long-term future. Historically, ADNOC has sold the majority of its LNG to Japanese customers, through ADNOC LNG. LNG is the fastest-growing hydrocarbon with a growth rate of 4% per annum, twice that of natural gas. Global LNG demand is expected to exceed 500 million tonnes per annum by 2035, up from nearly 300 million tonnes per annum in 2017.

<https://www.hellenicshippingnews.com/adnoc-to-extend-long-term-gas-supply-agreement-for-lng-production/>

Natural gas soars 20 percent on concerns about winter supplies in the USA

Natural gas prices are soaring as forecasts for lingering U.S. cold spurred concern that supplies may not be adequate to meet demand over the winter. Gas for December delivery rose as much as 20% to \$4.929 per million British thermal units, the highest since February 2014, when a "polar vortex" brought an arctic chill to the Midwest and East. The volume of trading on the New York Mercantile Exchange was more than three times the 100-day average. Prices have been driven by "a sharp cold revision in the winter weather outlook," said Devin McDermott, a commodities strategist at Morgan Stanley. "We see modest downside from here assuming current weather forecasts, but a very wide range of potential short-term prices." It was only on Tuesday that gas exceeded the \$4 mark for the first time in four years. It has surged this month amid concern that stockpiles, at a 15-year seasonal low, won't be enough to meet winter heating needs, even as production hovers near a record. Domestic demand from power plants and industrial users has climbed to an all-time high while the United States is exporting unprecedented volumes of the fuel to Mexico and overseas. Cheniere Energy Inc. said Wednesday it started producing liquefied natural gas at its new \$15 billion Corpus Christi export terminal in Texas, the third such plant to begin operating in the continental United States. Gas is also climbing amid turmoil in international crude markets, with U.S. benchmark prices gaining Wednesday after falling 7.1% a day earlier. Despite the autumn chill, the magnitude of the latest rally suggests traders aren't just reacting to weather forecasts and supply estimates, according to Mizuho Securities USA LLC. While money managers are net-long in gas contracts, short positions rose as recently as last week, government data show. Wednesday's jump "has no basis in market fundamentals," said Bob Yawger, director of the futures division at Mizuho. "It is getting cold, it might snow" and storage is lower than normal, "but that is not why we are 12% to 15% higher on the day."

<https://triblive.com/business/headlines/14293498-74/natural-gas-soars-20-percent-on-concerns-about-winter-supplies>

China's CNPC to take oil from Iranian fields it owns as normal

China National Petroleum Corp (CNPC) is continuing to take oil from Iranian oilfields where it has ownership stakes, even after the United States re-imposed sanctions on the country's oil sector, a company executive said. The state-owned oil giant entered Iran in 2004 when it acquired the MIS oilfield, in which it now holds a 75 percent stake. CNPC did not give an output figure for the field on its website. It has also spent billions of dollars on developing the North Azadegan oilfield, which began production in 2016 of about 80,000 barrels per day of crude along with natural gas, according to the company's website. "Our main cooperation with Iran is upstream investment. Lifting equity oil is recouping our investment there," Hou Qijun, deputy general manager for CNPC, said on the sidelines of an industry event. The United States re-imposed on Monday sanctions targeting Iran's oil, banking and transport sectors, but offered waivers to some countries to still buy Iranian crude. Under the waiver, China is allowed to buy 360,000 barrels per day (bpd) of oil from the Islamic Republic for 180 days, two sources familiar with the matter told

Reuters this week. The volume does not include oil Sinopec and CNPC are entitled to under investment deals, the sources said. China, Iran's top oil customer, has purchased an average of 655,000 barrels a day of crude oil from Tehran during the January-September period, according to customs data.

<https://www.hellenicshippingnews.com/chinas-cnpc-to-take-oil-from-iranian-fields-it-owns-as-normal/>

China sees cleaner and more diversified energy production structure

China has sped up efforts to transform from a coal-oriented structure to a cleaner and more diversified energy-production structure over the past 40 years, according to a report released by the National Bureau of Statistics. Natural gas reached 148 BCM, and primary electricity came to 1.8 trillion kilowatt hours in 2017, data showed. The share of clean energy production saw continuous growth. Natural gas made up 5.4 percent of the total energy production, while electricity and other clean energy jumped to 17.4 percent last year, the highest since 1978, said the report. China's net energy import also followed an optimized trend last year with the import

of raw coal down 1.2 percent and natural gas up 18.4 percent compared with that of five years ago.

<https://www.hellenicshippingnews.com/china-sees-cleaner-and-more-diversified-energy-production-structure/>

Malta 3 steps closer to European gas pipeline

Energy Minister Joe Mizzi announced three new contracts for the development and actuation of the gas pipeline connecting Malta to the Trans-European Gas Network. During a press conference at Kalanka in Delimara, around a kilometre away from one of the sites to be studied, the Minister said that the project has already benefited from €4 million in funding. Mizzi said that the plan is that by 2020, Malta will have applied for co-financing by the EU for the pipeline's construction, which will cost an estimated €350 million. He also said that, once commissioned, the pipeline will substitute the temporary LNG tanker in Delimara. Minister Mizzi also said that a public entity has been established in order to lead the implementation and operation of the project.

<https://www.newsbook.com.mt/artikli/2018/11/09/malta-3-steps-closer-to-european-gas-pipeline-225889/?lang=en>

NATIONAL: POLICY MATTERS/GAS PRICING/OTHERS

New Delhi: Government unsure if CNG-only plan will work in the city

Delhi's air quality over the past week has oscillated between the severe and very poor categories. A day after the Environment Pollution (Protection and Control) Authority (EPCA) wrote to the Delhi government chief secretary, suggesting that only CNG cars be allowed to ply on Delhi-NCR roads on severely polluted days, officials in the Delhi government said the idea was not viable with the current state of public transport in the capital. Environment Minister Imran Hussain, meanwhile, said on Tuesday that he was studying EPCA's suggestion and checking how viable it is. While the air quality was very poor on Monday, November 12, it slipped to severe on Tuesday. "EPCA believes that in the scenario that weather remains adverse and that the current situation of air quality remains in the same category or deteriorates, there is no other option but to direct for a complete stop on the use of private and commercial vehicles other than those plying on CNG, so that pollution levels can be contained," the EPCA chairperson wrote in the letter. There are close to 8,00,000 CNG vehicles registered in the capital. The total number of registered vehicles in Delhi is around 10 million. According to several estimates, Delhi needs close to 11,000 buses. At the moment, only about 5,500 ply on the capital's roads.

<https://indianexpress.com/article/cities/delhi/new-delhi-govt-unsure-if-cng-only-plan-will-work-in-the-city-5445080/>

NATIONAL: NATURAL GAS/PIPELINES/COMPANY IN THE NEWS

GAIL contracts Rs.1,100-cr worth pipes for Barauni-Guwahati gas pipeline

GAIL (India) Limited has awarded contracts for the purchase of 616 km of line pipe worth Rs.1,100 crore for the Barauni-Guwahati pipeline. A company statement said that this fast tracks the project execution of the 729 km feeder line linking the entire North-East region with the Pradhan Mantri Urja Ganga pipeline network. The award of the contract will ensure commencement of spurline laying activities of the Barauni-Guwahati pipeline from December 2018. The under construction pipeline will connect the upcoming 'Indradhanush' gas grid network which is being developed by GAIL along with joint venture partners Indian Oil Corp (IOC), Oil India Ltd, Numaligarh Refineries Ltd (NRL) and Oil and Natural Gas Corp (ONGC) to provide uninterrupted supply of natural gas across all the North Eastern States, the statement added. Work across India's single largest pipeline spanning 3,400 km under Jagdishpur-Haldia-Bokaro-Dhamra project is progressing as per schedule. Physical progress under phase-1 of the flagship project is 92 per cent complete and is expected to be completed within next two months, whereas the rest including the additional section under Barauni-Guwahati spurline are lined up for sequential completion by December 2021.

<https://www.thehindubusinessline.com/companies/barauni-guwahati-gas-pipeline-project-to-commence-in-dec-gail/article25443272.ece>

Houston transit operator achieves 10 million miles with CNG buses

Since 2016, Houston METRO has traveled 10 million miles with their NGV fleet (it currently has 50 buses and will have 20 more by the end of 2018), and has used more than 3 million gallons of CNG, reducing more than 3,000 tons of NOx from entering the air. By adopting clean burning fuels, like CNG, METRO has greatly reduced the amount of harmful pollutants in Houston's air. METRO's 10 million mile achievement was announced during the NGV America Road Rally by Jim Robinson, First Vice-Chair of the METRO Board at the North Houston Freedom CNG station on October 30. The rally made 15 stops across the country promoting the use of natural gas as transportation fuel and educating the public about clean burning alternative fuels. Freedom CNG is helping to improve Houston's air quality by reducing NOx emissions through the promotion of alternative fuels. Freedom encourages the adoption of clean and affordable CNG through education, training, workshops and grant writing support for those willing to choose natural gas as a cleaner fuel choice. It is worth mentioning that Houston is ranked 11th on the American Lung Association's list of worst polluted cities by ozone. The high road traffic in Houston contributes to the high concentration of NOx, the harmful pollutant that creates ozone above the metro area. The Texas Commission on Environmental Quality (TCEQ) reported that 67% of all NOx emissions come from a mobile source. In this regard, natural gas buses are leading the alternative fuels charge against outdated diesel and gasoline fuels. Replacing dirty fuels with CNG is the safest and most affordable method for improving air quality.

<http://www.ngvjournals.com/s1-news/c3-vehicles/houston-transit-operator-achieves-10-million-miles-with-cng-buses/>

Argentina: new campaign promotes 2019 CNG-powered Ford Ranger

Naturgy (formerly Gas Natural Fenosa) launched a campaign in Argentina to invite drivers to know the 2019 Ford Ranger pickup truck that runs on natural gas. The new high-end truck offers excellent performance and allows significant economic savings thanks to the low cost of CNG compared to gasoline and diesel. In addition, if the natural gas conversion of the new 2019 Ford Ranger is performed with 5th generation equipment and in-

BRT system serving Bogotá goes green: it will add over 460 CNG buses

A bidding process was completed with the aim of guaranteeing the renewal of Bogotá's massive public transportation system, Transmilenio. The tender 01 involves the arrival of 1,383 new buses, including 461 powered by natural gas (289 articulated and 172 articulated). The CNG buses, manufactured by Scania, will meet Euro VI standards and will operate on the Suba, 80th Street and North routes. Mayor Enrique Peñalosa reiterated that the bus tender for Transmilenio is a huge advance for the city, since they will reduce polluting emissions by up to 86% compared to the old buses that will be replaced. "There is a huge improvement for Bogotá's air quality. Today, we have buses with Euro II technology and now we are going to switch to Euro V and VI buses, with 41% of the new fleet running on natural gas," said Peñalosa. "Bogotá is going to have a massive public transport system with modern technologies that will reduce pollution in the city for the benefit of the citizens' health," added the general manager of TRANSMILENIO S.A. María Consuelo Araújo, who also informed that the first vehicles will begin arriving gradually in mid-2019. For his part, the president of the Colombian Natural Gas Association (Naturgas) Orlando Cabrales Segovia expressed his satisfaction for the addition of new CNG buses: "It is demonstrated that natural gas can compete with any other fuel due to its cost, availability and the articulation of the entire sector chain." Cabrales Segovia also stressed that cities such as Medellín, Cartagena, Manizales and Palmira have also recognized the benefits of natural gas for public transport. "There are already around 700 natural gas dedicated buses in operation in the country, and with this initiative the clean bus fleet will continue to grow," he added.

<http://www.ngvjournals.com/s1-news/c3-vehicles/bogotas-public-transport-system-will-add-more-than-460-cng-vehicles/>

stalled in authorized workshops, the automaker will keep Ford Argentina's original warranty. Under this campaign, Naturgy is bringing the Ford Ranger to different parts of the country to promote the benefits both of the new model and natural gas as vehicle fuel. During November, the CNG-powered pickup truck will be exhibited at several Naturgy service stations in the province of Buenos Aires, in cities such as Luján, Pilar, San Antonio de Areco, Capitán Sarmiento, Carmen de Areco, Escobar and Los Cardales. The Ford Ranger 2.5 XLT displayed was converted with the help of Metrogas and Tomasetto Achille.

<http://www.ngvjournals.com/s1-news/c3-vehicles/argentina-new-campaign-promotes-the-2019-ford-ranger-powered-by-cng/>

Barcelona's Port first in Spain to supply CNG/LNG vehicle fuel

Barcelona-based HAM Group, the Port of Barcelona and retail fuel supplier GALP have collaborated to open the first gas filling station of Spain's state port system. The station is set up to supply vehicles with LNG and CNG. The new infrastructure is described by HAM as a key facility to promote the use of natural gas as an alternative fuel for land transport of goods. The official opening was attended by the Marketing and Strategy manager of HAM Group, Antoni Murugó Solé; the president of the Port of Barcelona, Mercè

Conesa; the Environmental manager of the Port, Jordi Vila; the commercial manager of Gas & Power of GALP, Fernando Martín-Nieto Vaquero. The gas station is the result of an agreement between HAM, in charge of the construction and operation of the LNG station, and GALP, which has carried out the improvement of the facilities. In addition, its construction has been financed by European funds, through the CHAMEleon project, aimed at developing the gas supply infrastructure for vehicular fuel in the Barcelona-Slovenia land corridor. The new facility has two CNG pumps for trucks and vehicles, two LNG pumps for trucks and a cryogenic LNG tank of 60 m3 capacity. The commissioning of this infrastructure is part of the Port of Barcelona's Air Quality Improvement Plan, which aims to effectively reduce emissions from port activity. In the port area it is estimated that around 2,200 trucks transport goods to and from various destinations in and through the Port's catchment. Currently, more than 60 trucks are powered by natural gas, either with dedicated engines (that work exclusively with gas) or with dual-fuel engines (which combine the use of diesel and natural gas). Of these, 26 trucks were transformed into the dual-fuel system thanks to the RePort project, led and coordinated by the Port of Barcelona with the support of ACCIÓ.

<http://www.ngvglobal.com/blog/barcelonas-port-first-in-spain-to-supply-cng-lng-vehicle-fuel-1109>

Peruvian government announces program to finance CNG conversions

The Ministry of Energy and Mining of Peru is inviting citizens to participate in the financing program of vehicle conversions to natural gas with resources from the Social Energy Inclusion Fund (FISE). The program is expected to initially encourage the conversion of 15,000 vehicles per year in the regions of Lima, Callao, Ica, Lambayeque, Piura, Ancash, La Libertad, Junin, Cajamarca, Arequipa, Moquegua and Tacna. With this, the ministry seeks the progressive massification of natural gas at a national level, in a way that is accessible to the population and promotes clean energy. Owners of vehicles belonging to M1 category (four wheels), which are less than or equal to 10 years old and have approved the technical pre-inspection in a vehicle conversion workshop authorized by the Ministry of Transport and Communications, will be eligible for the program. To access the FISE NGV financing, the owners must choose a conversion workshop and request the technical pre-inspection of the vehicle. Then go to the financial institution that has an agreement in force with the Supervisory Body of Investment in Energy and Mining (Osinermin) to be evaluated. The fees will be established according to the payment schedule issued by the financial institution with a maximum term of up to 5 years, applying an interest rate of

3%, a percentage lower than those of the market that range from 14% to 40%. To date, an agreement has been signed with the financial institution Edpyme Acceso Crediticio S.A., which runs the program at its offices in Lima, Ica, Chiclayo, Trujillo and Piura. Other cities will gradually be added as more agreements with financial entities are signed. On September 13, the program's first CNG conversion was carried out and to date 40 conversions have been made.

<http://www.ngvjournals.com/s1-news/c1-markets/peruvian-government-offers-financing-for-vehicle-conversions-to-natural-gas/>

New truck loan program offers easy transition to natural gas - California

Southern California Gas Co. (SoCalGas) announced the launch of the new Truck Loan Program, which allows qualified fleet owners the opportunity to try out the latest in heavy-duty natural gas truck technology by test driving a 12-liter near-zero truck. This “try before you buy” program provides fleet owners with the opportunity to haul loads with the new truck for up to two weeks. Operators will experience the similarities between natural gas trucks and diesel trucks with respect to power, drivability, fuel range and fuel availability. Additionally, fleet owners will see the advantages natural gas trucks have over diesel, including lower

fuel costs. SoCalGas is working in partnership with Rush Truck Centers, the only company with a 12-liter near-zero natural gas truck equipped with a Cummins Westport ISX12N engine and Momentum Fuel system available for rent in Southern California. As part of the rental program, customers will participate in a “pre-rental” and “post-rental” survey of their natural gas vehicle driving experience. The survey will include topics such as truck performance, fueling availability, grants and incentives and purchase decision. “More fleet owners have switched to natural gas trucks over the last few years, due in part to available incentive funding,” said Sharon Tomkins, vice president of customer solutions and strategy for SoCalGas. “However, some are unfamiliar with the technology and are hesitant to make the switch. The SoCalGas Truck Loan Program is the perfect way to put natural gas trucks to the test on routes driven every day.” Moreover, SoCalGas has assisted dozens of fleet owners with incentive funding applications to purchase more than 350 near-zero natural gas trucks and build five new CNG fueling stations since the beginning of the year. Replacing 350 diesel trucks with near-zero natural gas trucks is the equivalent of taking more than 20,000 passenger cars off the road.

<http://www.ngvjournals.com/s1-news/c3-vehicles/new-truck-loan-program-offer-easy-transition-to-natural-gas/>

TECHNOLOGICAL DEVELOPMENT FOR CLEANER ENVIRONMENT/BIO-METHANE

Toyota displays making-pizza pickup truck that runs on hydrogen

Appearing at Toyota's 2018 Specialty Equipment Market Association (SEMA) Show display in Las Vegas, the zero-emission Tundra PIE Pro is a mobile pizza factory powered by a hydrogen fuel cell powertrain from a Toyota Mirai. The full-size pickup truck was built by Toyota's Motorsports Technical Center (MTCI). The overall project included cooperation from Pizza Hut, along with engineering from Nachi Robotic Systems. “As the flagship Toyota truck, the Tundra is a workhorse in the truest sense,” said Ed Laukes, Group Vice President – Toyota Division Marketing. “Its great strengths are its extreme capability and eminent versatility, and what better way to illustrate that than by turning it into something completely unique—a hydrogen fuel cell, pizza-making robotic vehicle!” The Tundra's bed has been converted into a virtual pizza factory on wheels—what MTCI calls The Kitchen. Totally self-contained, The Kitchen comprises a refrigerator, a pair of computer-guided articulating robotic arms, and a portable, high-efficiency conveyor oven. Like the truck itself, all Kitchen components can be powered by hydrogen fuel cell powertrain. The Tundra PIE Pro's environmental impact is virtually nil—the only by-products being water vapor emissions and delicious Pizza Hut pizza.

<http://www.ngvjournals.com/s1-news/c7-Ing-h2-blends/toyota-hydrogen-powered-pickup-truck-makes-and-delivers-pizza-in-las-vegas/>

First U.S. LNG cargo since 10 pct tariff enacted arrives in China -data

A liquefied natural gas (LNG) cargo from the United States has arrived in China, the first such cargo since Beijing imposed a tariff on U.S. imports, shipping data from Refinitiv Eikon showed on Monday, November 12. China, the second-biggest importer of LNG globally after Japan, announced in September a 10% tariff on U.S. LNG imports as part of an escalating trade war between the world's two biggest economies. Since the tariffs were announced, Chinese companies have largely been diverting U.S. shipments to other countries, trade sources said. This is the first U.S. LNG cargo to be shipped to China since Sept. 10, the Eikon shipping data showed. The cargo was shipped on tanker Ribera Duero Knutsen from the Sabine Pass terminal operated by Cheniere Energy. It arrived at the Zhejiang Ningbo LNG terminal in China on Nov. 11 and is now discharging, the data showed. The terminal on China's east coast is majority owned state-owned China National Offshore Oil Corp (CNOOC). "There are too many cargoes from U.S., you can divert maybe 3 or 4 (but not all)," said a trader

familiar with the Chinese market. Total U.S. LNG export capacity is expected to jump to 5.2 BCFD by the end of 2018, 8.9 BCFD by the end of 2019 and 10.3 BCFD by the end of 2020, from about 3.8 BCFD now. This would make the United States the world's third-biggest LNG exporter by capacity in 2019. Another factor making it more difficult to divert cargoes is that rising gas storage levels in North Asia are denting demand for LNG ahead of a warmer than expected winter. "Japan and Korea's (natural gas) tanks are full," the trader said. The buyer likely had no choice but to import the cargo into China despite the tariff, he said. China bought 15% of all U.S. LNG shipped in 2017, but its U.S. volumes have dropped from the first half of the year.

<https://www.hellenicshippingnews.com/first-u-s-lng-cargo-since-10-pct-tariff-enacted-arrives-in-china-data/>

Ghana LNG project finally under construction with FSU/FSRU concept

Ghana's LNG import project is finally under construction, years after its original inception, with two vessels contracted to store and regasify the fuel by the second

quarter of 2020, a project partner said on Wednesday, October 31. China Harbour Engineering Company has already begun construction work on a marina with a Floating Regasification unit (FRU) to be provided by the CSSC Jiangnan shipyard and a Floating Storage Unit by Gasfin, Gasfin's chief executive Roland Fisher said. Ghana has been trying to get an LNG import project off the ground for years, with two leading LNG vessel operators, Golar and Hoegh, earmarking their ships for the Tema port only to withdraw due to delays over contracts. However, this time round, contracts have been finalised, Fisher told delegates at an LNG conference. "The project is under construction. It's not subject to finance. It's not subject to any other permitting," he said. LNG is expected to be sourced by Russian oil giant Rosneft, which has a 12-year deal to supply 1.7 MMTPA with Ghana National Petroleum Corporation, although the project has had previous LNG suppliers lined up. The terminal will be able to import 2 MMTPA, leaving 0.3 MMTPA of supplies either yet to be negotiated or free for spot deliveries.

[Source: LNG Global/Reuters](#)

Saudi Aramco 'on way to becoming gas powerhouse'

Saudi Aramco has outlined to Arab News how it plans to massively ramp up its multibillion-dollar natural gas business, both in the Kingdom and overseas, as gas gradually replaces coal and oil in global power generation.

Gas is viewed as a cleaner energy source than coal or oil in power stations, and there is soaring demand in Asia. "Gas is already a large global business and is expected to be among the fastest-growing fuels (60 percent growth) over the next quarter-century. And LNG (liquefied natural gas) is expected to make up almost half of global gas trade over the same period," Aramco said in a statement. "We already produce about 14 BSCFD of gas, which is on the road to being expanded to 23 BSCFD, which will increase our share of cleaner gas in domestic utilities from the current 55% to 75%, the highest in G-20. "When combined with our move toward international gas business, Saudi Aramco is on the way to becoming a gas powerhouse in addition to its huge strength in oil." Aramco said that bolstering its position in the global gas and LNG business would "strengthen our competitive advantage, and diversify operations." Aramco this year signed a memorandum of understanding with Royal Dutch Shell to jointly pursue global gas business opportunities, including upstream development, liquefaction projects and other aspects of the gas value chain. According to classification society DNV GL's latest Energy Transition Outlook, by 2025 expenditure on upstream gas will grow to \$1.13 trillion.

Saudi Arabia's gas expansion is set to free up more oil for export, boosting national revenue and potentially opening up new areas for employment, said Iman Nasser, a managing director at London-based consultancy FGE. Aramco's gas exploration efforts have resulted in finding big volumes of shale gas in the Jafurah Basin in southeastern Saudi Arabia. "They are highly promising quantities and economically feasible as they contain a high rate of liquids; activities to evaluate the reserves are ongoing," said Aramco. "Unconventional gas contribution will reach to 15% of the total gas production of 23 BSCFD per day in the gas program over the next 10 years." Aramco views shale as a "strategic investment" that would help to further supplement "our vast conventional gas resources." It would be used for domestic utilities and fuel, as well as feedstock "for our industries, including petrochemicals. The Kingdom's LNG story has highlighted the evolving Saudi-Russia energy alliance. Speaking on the sidelines of a recent investment summit in Riyadh, Energy Minister Khalid Al-Falih said the Kingdom aimed to acquire 30 percent of Russian gas producer Novatek's \$21 billion liquefied natural gas project in the Arctic. In 2016, OPEC and Russia struck an agreement to cut crude production following a build-up in inventories that led to a price slump. Geraldine Duffour, of France-based energy research firm Enerdata, said: "Since 2000, Saudi Arabia's energy demand has more than doubled." She added: "As Saudi Arabia is keeping its domestic oil production for exports, gas has been increasingly used in the power sector (from 46 percent of power generation in 2000 to 59 percent in 2017) and total gas consumption has been rising by around 6 percent per year since 2000."

Poland's PGNiG signs long-term LNG deal with Cheniere

Polish state-run gas firm PGNiG has signed a long-term deal with Cheniere Marketing International to secure LNG supplies from the United States, as Poland seeks to cut dependence on Russian fuel. Poland consumes around 17 BCM of gas annually, more than half of which comes from Russia's Gazprom under a long-term deal that expires in 2022. PGNiG has previously said it does not intend to extend the agreement, and has taken steps to secure supplies elsewhere after that date. Under the terms of the new deal PGNiG will receive a total of 0.52 MMT of LNG in the period 2019-2022 and 29 MMT in 2023-2042, to be delivered to an LNG terminal in the Baltic Sea, the company said. After regasification, this corresponds to 0.7 BCM of gas by 2022 and 39 BCM in 2023-2042. Starting from 2023 PGNiG will be receiving 1.45 MMT of LNG, or 1.95 BCM of gas, annually under the deal. "The price is much lower than the one we have in the contract with Gazprom," PGNiG Chief Executive Piotr Wozniak told a press conference. The price Poland pays for U.S. gas is 20-30% lower than for Russian supply, he reiterated. "This is a signal across Europe that this is how your energy security can be developed, the security of your country, the diversity of supply," U.S. Energy Secretary Rick Perry, who is visiting Poland, said at a joint press conference with PGNiG. In October PGNiG finalised the terms of a deal to buy LNG from U.S. company Venture Global LNG, and a year ago it signed an agreement with UK firm Centrica LNG Co Ltd for nine LNG shipments in 2018-2022. Poland also plans to build a gas pipeline to Norway via the Baltic Sea and Denmark to allow it to receive up to 10 BCM of gas annually from deposits under the North Sea.

Polish officials have repeatedly said that Warsaw pays too much for Gazprom's gas and have opposed a Russian plan to build a new gas pipeline across the Baltic Sea, saying it is aimed at strengthening its dominant market position in the region.

[Source: LNG Global](#)

France's Total and Sempra Energy sign north America LNG deal

French energy group Total and Sempra Energy have signed a memorandum of understanding on the north American liquefied natural gas (LNG) market, which

Global LNG: Asian prices reverse declining trend on Japanese demand

Asian spot prices for LNG edged higher this week, reversing the declining trend of recent weeks due to renewed appetite for spot cargoes, but unsold cargoes capped gains, traders said. Spot prices for December delivery LNG-AS into North Asia were estimated at \$10.30 per MMBtu, up 10 cents from a more than two-month low struck over the past two weeks. Japanese power utility Kansai Electric Power Co. was seeking two cargoes for delivery in December, while Japan's Tohoku Electric Power Co was seeking a cargo for delivery over Dec. 25 to Dec. 30, traders said. Kansai could have purchased at least one cargo at \$10 to \$10.30 per MMBtu, while Tohoku may have received lowest offers for its cargo requirement in the range of \$10.60 to \$10.70 per MMBtu, they added. Japan's Nippon Steel & Sumitomo Metal had been sounding out the market about a potential spot purchase for delivery in the second half of December to January, one trader said. Demand from South Asia was also seen with tenders emerging from India and Pakistan. Essar Steel India sought an LNG cargo on a delivered ex-ship (DES) basis for delivery into Dahej over Dec. 28-29 on LNG trading marketplace Global LNG Exchange (GLX) this week but failed to attract sellers. Pakistan State Oil returned to the spot market after several months hiatus, seeking three cargoes for delivery in January and February. Still, high freight rates for LNG tankers are curbing demand, after hitting \$200,000 a day, exceeding a 2012 peak of \$180,000 a day. Alibaba hits record sales on Singles' Day. There were still several unsold cargoes in the spot market, which kept a lid on prices, traders said. Australia's Ichthys LNG project has shipped its second and third LNG cargoes, Refinitiv Eikon shiptracking data showed. LNG tanker Gaslog Skagen loaded from the Ichthys LNG plant on Oct. 28 and discharged the cargo into the Guangxi LNG terminal in China on Nov. 7, the data showed. The tanker Marvel Eagle loaded LNG from the plant on Nov. 3 and is due to arrive in Yeosu, South Korea on Nov. 16, according to the data.

[Source: Reuters/LNG Global](#)

could see Total acquire a further stake in the sector. The deal could see Total take a contract for approximately up to 9 MMT-PA of LNG offtake across Sempra Energy's LNG export development projects on the U.S. Gulf Coast and West Coast of North America, specifically the Cameron LNG Phase 2 and Energia Costa Azul (ECA) LNG projects. Total, the second-largest player in the global LNG market, said the relationship with Sempra Energy, will boost its goal to build a diverse portfolio of LNG supply options. Total, which is already a partner of Cameron LNG joint venture with a 16.6% stake, also may acquire an equity interest in the Energia Costa Azul LNG project. "We are pleased to collaborate with Sempra Energy and the other Cameron LNG co-owners to extend the Cameron LNG project and to further enhance its competitiveness," said Total's CEO Patrick Pouyanne in a statement. The \$10 billion phase 1 of the Cameron LNG joint-venture liquefaction-export project, which includes three liquefaction trains with approximately 14 Mtpa of export capacity, is under construction in Louisiana. All three trains are expected to be producing LNG in 2019, added Total. The second phase will add two additional li-

quefaction trains and up to two LNG storage tanks with approximately 9 MMTPA of capacity, the company also said.

[Source: LNG Global](#)

Indonesia's 2018 LNG output from Bontang, Tangguh forecast at 274 cargoes -regulator

Indonesia's liquefied natural gas (LNG) output from the country's Tangguh and Bontang LNG plants is expected to reach 274 cargoes in 2018, according to data from the country's upstream oil and gas regulator, SKKMigas. Of that amount, 229 will be exported, SKKMigas spokesman Wisnu Prabawa Taher told Reuters by text message. From January to September this year, the two plants produced 205 cargoes of LNG, of which 169 were exported, he said. SKKMigas data does not cover output from Indonesia's third LNG plant, Donggi Senoro.

<https://www.hellenicshippingnews.com/indonesias-2018-lng-output-from-bontang-tangguh-forecast-at-274-cargoes-regulator/>

Bulgaria to take stake in Greek LNG terminal by year-end minister

Bulgaria plans to become a shareholder in a liquefied natural gas terminal off the coast of northern Greece by the end of the year as the Balkan country tries to diversify its energy supplies, Energy Minister Temenuzhka Petkova said. The government has been considering a stake of about 25% in the development of a floating facility off the Greek city of Alexandroupolis for over two years and will most likely participate with state gas company Bulgartransgaz. "Bulgaria is considering to become a shareholder in the project. Thus we can ensure natural gas supplies from different sources, including from the United States," Petkova said in a statement after meeting the U.S. ambassador to Bulgaria. At present, over 95% of Bulgaria's gas needs are met by supplies from Russia's Gazprom. Gastrade, part of Greek energy group Copelouzos, is developing the project to build the terminal off the coast near the northern Greek city of Alexandroupolis and on Tuesday launched a market test for the facility. The LNG terminal, with an estimated annual capacity of 6.1 BCM, will aim to supply gas to southeastern Europe via a natural gas pipeline that will cross through Greece, the Interconnector Greece-Bulgaria (IGB). Petkova said the

IGB pipeline is expected to become operational in the second half of 2020. Last October Greek state energy company DEPA agreed to participate in the project. A source familiar with the project said then that Gastrade planned to hold at least a 20% stake in the project, with LNG carrier operator GasLog another 20%.

<https://www.hellenicshippingnews.com/bulgaria-to-take-stake-in-greek-lng-terminal-by-year-end-minister/>

EU approves state aid for Lithuanian LNG terminal

The European Commission approved the new government support terms to the liquefied natural gas (LNG) terminal at the Klaipeda seaport, after the Lithuanian authorities changed some of the conditions it got approval for already in 2013. The new terms include the imposition of a public service obligation on gas company Litgas to supply a mandatory quantity of liquefied natural gas to the LNG terminal in Klaipeda in exchange for compensation from the government. The second change is the scrapping of an obligation for Lithuanian heat and electricity generating companies to buy a certain quantity of gas from Litgas, which will now sell its gas on the market. "The Commission found that the modifications to the initial scheme, in particular the removal of the purchase obligation, will

contribute to enhancing competition on the Lithuanian gas market," the EU executive said in a statement.

<https://www.hellenicshippingnews.com/eu-approves-state-aid-for-lithuanian-lng-terminal/>

France's Engie rebuilds global LNG trade team in Singapore post-divestment

The global LNG trading team will be headed by Gordon Water in Singapore to service both internal and external clients, Engie said in a statement. French energy group Engie said it is in the process of building a new liquefied natural gas (LNG) team after it completed the sale of its LNG assets to Total in July. * The global LNG trading team will be headed by Gordon Water in Singapore to service both internal and external clients, Engie said in a statement. * The team will help "manage the company strategic repositioning towards a leaner LNG business", it added. * Engie is close to completing a two-year plan to sell off some 15 billion euros (\$17.09 billion) of non-core assets and re-invest those proceeds away from coal and into areas such as renewable energy, power grids and energy services (\$1 = 0.8777 euros)

<https://energy.economictimes.indiatimes.com/news/oil-and-gas/frances-engie-rebuilds-global-lng-trade-team-in-singapore-post-divestment/66470996>

TECHNOLOGICAL DEVELOPMENT FOR CLEANER ENVIRONMENT/BIO-METHANE

German process allows production of green H-CNG from wastewater

The Berlin-based tech company Graforce has introduced a unique technology: Plasmalysis saves resources in its highly efficient generation of hydrogen from industrial waste water. Mixing in biogas produces hydrogen-enriched compressed natural gas (HCNG) – a cost-effective, environmentally friendly fuel for vehicles that also generates electricity and heat. The technology not only converts wastewater pollutants into valuable energy, but also reduces emissions (CO₂, CO, HC) by 30 to 60%. NO_x emissions are also reduced by up to 60%. Graforce's partners include carmaker Audi and Berliner Wasserbetriebe. "The technology we've developed is capable of cleaning wastewater and producing a low-cost, low-emission fuel from it," said Graforce founder Dr. Jens Hanke at today's launch of a demonstration plant in Berlin. "This lets us contribute to solving two pressing problems at once: air pollution and wastewater treatment." Graforce produces hydrogen using the plasmalysis process in its demonstration plant in Berlin. The process uses electricity to split wastewater obtained from biogas, sewage treatment and industrial plants into oxygen and hydrogen. Mixing hydrogen with biogas produces HCNG, which can be used as fuel in natural gas vehicles and in block heating and gas power plants. Only purified water and oxygen remain as waste products. Hydrogen production using plasmalysis is 50-60% cheaper than with conventional processes. German carmaker Audi has also committed its reliance for many years to alternative, synthetic fuels.

<http://www.ngvjournals.com/s1-news/c1-markets/new-german-technology-allows-production-of-green-h-cng-from-wastewater/> [Edited]

Hexagon Tank Assembly selected for first full-size H2 refueling station in Netherlands

Hexagon Composites has been selected by Resato International BV, based in Assen, Netherlands, to supply high-pressure hydrogen tanks assembly for the first Dutch full-sized hydrogen refueling station in The Hague. Resato, a leading manufacturer in high pressure technologies, is working with Shell Kerkhof & Zn to set up the new refueling station serving three users per 15 minutes. The Resato Hydrogen Refueling Station will be one of the largest refueling stations in the Netherlands and will highlight the advantages of compressed hydrogen for the mobility sector. "This is the first tank assembly storage installation we deliver to hydrogen refueling stations," said Trond Seth, Vice President Hydrogen Business Unit. "We're really pleased to have been chosen by Resato to work on the full-sized hydrogen refueling station. We are seeing an increased interest for our ground

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LNG-fueled ferry under construction for Tallinn-Helsinki route

Tallink Grupp and Rauma Marine Constructions (RMC) have signed a Letter of Intent for the construction of a new LNG-powered shuttle ferry for the Tallinn-Helsinki route. The estimated cost of the project is approximately 250 million euros and the new vessel will be built at the Rauma shipyard in Finland. The construction of the ship is expected to be completed by the end of 2021. The new ferry will be dual fuel operated, using LNG as its main fuel and will have capacity for 2,800 passengers. It will start operating on the Tallinn-Helsinki route, further developing this important route between the two capital cities. The ferry will be built using all the latest technologies and the most innovative solutions available and the group's aim is to build the most energy efficient and environmentally friendly vessel operating on the Baltic Sea. "Tallink Grupp has put a great deal of resources and effort into developing the Tallinn-Helsinki route for decades. With the launch of the shuttle service over ten years ago, we have built a bridge between the two capitals, offering year-round frequent departures and thus bringing the two countries closer together. The next step on our journey is the continuous development and improvement of that service," said Tallink Grupp's CEO Paavo Nõgene.

<http://www.ngvjournal.com/s1-news/c7-lng-h2-blends/new-lng-powered-shuttle-ferry-under-construction-for-tallinn-helsinki-route/>

Armed pirates attack LNG tanker off Nigerian coast, IMB says

Armed pirates chased and shot at a liquefied-natural gas tanker off Nigeria's coast, the second time in as many weeks a vessel has been attacked in the area. At least nine assailants made an unsuccessful attempt to board the vessel on Nov. 6, the International Maritime Bureau said in a report on its website. "The pirates approached the vessel several times but due to the increased speed and evasive maneuvers, the pirates were unsuccessful and later aborted the attack," it said. "Vessel and crew reported safe." The incident followed an assault on the German-flagged MV Pomerania Sky on Oct. 27, when 11 foreign crew members were taken hostage. The Nigerian navy said it was working to rescue them. Piracy is

common in the Gulf of Guinea, including along Nigeria's coastline where several attacks have been reported in the past.

<https://www.hellenicshippingnews.com/armed-pirates-attack-lng-tanker-off-nigerian-coast-imb-says/>

World's largest LNG bunkering vessel delivered

The world's largest LNG bunker supply vessel, M.V. Kairos, has been delivered to Babcock Schulte Energy, a 50:50 joint venture between Babcock and Bernhard Schulte Shipmanagement. The 7,500 cubic meter vessel features Wärtsilä four-stroke dual-fuel engines and was built by Hyundai Mipo Dockyard in South Korea. She will be deployed to the Baltic region servicing a number of clients including the Linde/AGA terminal in Nynäshamn and the Klaipeda LNG fueling station in Lithuania. Capable of performing both ship-to-ship bunkering and trans-shipment operations, she will be used for the LNG fueling of ships including ferries, containers, cruise vessels as well as shore-based gas consumers. She will have a fuel transfer rate ranging from 60 m³/hour up to 1,250 m³/hour. In addition to its size, the vessel is also notable for its ballast-free design. Equipped with Babcock's Fuel Gas Supply Vessel Zero technology – a scalable cargo handling and fueling solution – Kairos will eliminate the release of boil-off and flash gas to the atmosphere during normal operations. The number of LNG bunkering vessels has grown from one at the beginning of 2017 to six in early 2018, with these numbers expected at least to double by 2020, multi-sector industry coalition SEA\LNG said. Furthermore, it is forecast that in the next five years 30 LNG bunker vessels could be operating worldwide.

<https://maritime-executive.com/article/world-s-largest-lng-bunkering-vessel-delivered>

Shipping industry welcomes EU support to green fuel

The shipping industry and the European Independent fuel suppliers welcome the European Parliament's support to incentivize the uptake of low-carbon and carbon-free alternative fuels and to remove disparities in energy taxation. On 25 October the European Parliament adopted its report on The deployment of infrastructure for alternative fuels in the EU which pointed out that taxation has a major impact on the price competitiveness of alternative fuels and underlined that

a technology neutral approach should be adopted to create a level playing field. In view of the global nature of the industry and the importance of moving to greener shipping through the use of cleaner technologies in order to ensure that environmental objectives are met, a revised EU Energy Taxation Directive should provide for a mandatory EU wide taxation exemption for all energy carriers (i.e. fuels and electricity, including shore-side). Such level playing field would help close the cost gap between Heavy Fuel Oil and alternative fuels and electricity. Theo therefore welcome the initiative taken by the European Parliament calling the EU Member States to incentivize the uptake of low-carbon and carbon-free alternative fuels and to remove disparities in energy taxation. They also support the call to the EU to increase and facilitate the use of Liquefied Natural Gas and shore-power electricity by further investment in port infrastructure.

<https://www.marinelink.com/news/shipping-industry-welcomes-eu-support-443326>[Edited]

Hexagon Tank . . .

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storage solutions and with this delivery we are demonstrating that Hexagon is moving from being a product supplier to a systems supplier." "The deployment of the large hydrogen refueling station in The Hague is a big step taken towards a greener future," said Francois Hemmerlin, Business Development Manager Hydrogen at Resato. "We are committed to developing a hydrogen economy towards an emission-free country. A vital advantage of the large hydrogen refueling station is that the filling time as well as the range is equal to petrol or diesel."

<http://www.ngvglobal.com/blog/hexagon-tank-assembly-selected-for-first-full-size-h2-refueling-station-in-netherlands-1102>