

ANGVA2U Info 11/2020 16th June 2020 (for ANGVA members only)

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1.0 Selected News / Articles

1.1 Thailand

Ministry cuts oil price, continues gas subsidy

15th June 2020. Writer: Yuthana Praiwan



The Energy Ministry has cut the ex-refinery oil price by 0.5 baht and will continue to subsidise gas purchases as part of its ongoing measures to provide relief to an economy battered by Covid-19.

The Energy Policy Administrative Committee (Epac) approved today the price cut in response to a call from a non-governmental organisation, Green Butterfly Ex, in March for authorities to remove premium and insurance fees from the ex-refinery oil price structure, said Energy Minister Sontirat Sontijirawong.

He said the group's demand was approved by Epac back in March, but had not been implemented because of delays related to the outbreak.

New infection rates were not under control until May, said Mr Sontirat.

The new price will take effect tomorrow morning, applying to diesel and gasoline.

Epac also prolonged the subsidy for liquefied petroleum gas (LPG) prices for another three months to the end of September, previously set to expire next Wednesday, he said.

The committee expects to use 248 million baht monthly from the Oil Fuel Fund Administration Office to cap the price at 318 baht per standard LPG cylinder (15 kilogramme), down from 363 baht per cylinder, or a subsidy of three baht a kg.

LPG is used largely for cooking, affecting the cost of living for many households.

Epac also agreed to restructure the price benchmark of compressed natural gas (CNG) for goods transport operators, basing its calculation on diesel price rather than cost-plus method, in order to make the CNG price cheaper and fairer.

The new CNG price will be at around 75% of that for diesel. If it is based on B10 diesel, the CNG price will decrease to 12.8 baht a kg, down from 15.3 baht a kg.

The new benchmark price is expected to take effect after approval from the National Energy Policy Council in July.

As for operators of public transport — buses, taxis and passenger vans — they pay only 13.6 baht a kg because of state subsidies under the welfare card scheme. The subsidy will expire in July.

Epac is prolonging the aid by further capping the CNG price at 10 baht a kg.

Source: <https://www.bangkokpost.com/business/1935212/ministry-cuts-oil-price-continues-gas-subsidy>

1.2 Barcelona to acquire hybrid buses of new generation

6th June 2020. Aseniya Dimitrova.

The Catalan capital will be among the first European cities to have hybrid articulated buses with compressed natural gas



• Source: Miguel Ángel Cuartero / TMB

The Metropolitan transport operator of Barcelona TMB is in the process of renewing its fleet and making it more sustainable. A couple of days ago, the company opened a procedure to acquire 46 hybrids, with compressed natural gas (CNG), 16 of which articulated. Once the purchase is complete, Barcelona will join just a handful of other European cities using buses with this kind of emission reduction technology.

Public transport in Barcelona becomes more sustainable and safer

The new vehicles are meant to replace the 15-year-old ones that are soon going to reach the end of their recommended lifetime. But apart from reducing the age of the fleet, which was 8.78 years on average by the end of 2019, the purchase is expected to lead to an improvement in environmental quality and safety. The order, currently in the bidding phase, also includes standard vehicles and minibuses.

The operation marks the first time that TMB opens a tender to incorporate new buses combining electric and CNG engines. The 13 vehicles with this technology that are already part of the fleet were built from conventional compressed natural gas vehicles to which were added two electric motors, a generator and other components in 2012-2013.

The hybrid system further reduces the emissions of CNG vehicles compared to a conventional vehicle, as it is applied on an engine that is considered environmentally advanced (EEV) which emits almost no particles and 90% fewer nitrogen oxides compared to a diesel engine.

When it comes to safety, the buses will have a driving assistance system with front and blind-spot sensors. Always active, it generates audible and visual alerts when there is an imminent risk of collision.

As part of the purchase, bidders are requested to supply six minibuses to replace the oldest vehicles serving the neighbourhoods. The acquisition of the 52 new buses, with a base budget of 21.3 million euros, is in addition to the contract to buy 23 100% electric articulated buses for an amount of 20.7 million euros which is already awarded.

Thus, the active orders for the renewal of the fleet of Barcelona add up to 75 units and an investment of about 42 million euros. Whoever wins the bid, is expected to manufacture the vehicles this year and deliver them in the first quarter of 2021.

Source: <https://www.themayor.eu/ga/barcelona-to-acquire-hybrid-buses-of-new-generation>

1.3 Mongolia

Elixir Energy plans small-scale Mongolia LNG plant

12th June 2020. By Mirza Duran.

Australia-based Elixir Energy said it has recently signed a deal with Mongolia's MT Group to develop a small-scale LNG plant in the South Gobi region.



MT Group service station (Image: Elixir Energy)

The LNG facility would supply fuel to the South Gobi's large coal trucking fleet, according to a statement by Elixir Energy on Friday.

The memorandum the duo signed is non-binding and sets out the initial framework for this partnership.

The coal bed methane producer has earlier this year made Mongolia's first gas discovery at its Nomgon IX CBM PSC in the region and this would be the company's first offtake project.

Elixir says that small LNG plants are now "commonplace" just to the South of Mongolia in China, where for instance there are over six million gas-fired vehicles on the road.

The South Gobi hosts a large trucking fleet that currently burns diesel and which could be replaced by cleaner and cheaper gas-powered vehicles.

The Tavan Tolgoi mine, located inside Elixir's PSC, trucks around 15 million tonnes of coal to China per year, utilizing thousands of trucks.

Elixir's partner in the project, MT Group, is one of Mongolia's largest fuel retailing firms and its core operations comprise fuel retailing facilities across the country, including on the Tavan Tolgoi to China road.

The Mongolian company currently sources liquid products for these operations from Russia's Rosneft and Gazpromneft.

Elixir says that initial modelling indicates that a small LNG plant in the South Gobi region should be "highly profitable".

Possible funding sources for this type of project could include the various international financing institutions present in Mongolia and with whom Elixir has an ongoing relationship, it said.

Source: https://www.offshore-energy.biz/elixir-energy-plans-small-scale-mongolia-lng-plant/?utm_source=lngworldnews&utm_medium=email&utm_campaign=newsletter_2020-06-15

1.4 Nordic Countries (Finland/Sweden/Norway)

Gasum lines up four new LNG-fueling stations

15th June 2020. By Adnan Bajic

The Nordic energy company Gasum has set its sights on opening four new LNG-fueling stations during the summer of 2020.



Courtesy of Gasum

The company currently operates 22 LNG fueling stations for the heavy-duty vehicle segment across the Nordics. It will further expand its network by adding new stations in Ljungby, Helsingborg and Gothenburg in Sweden, and Lieto in Finland.

The new stations are part of Gasum's strategy to expand the liquefied gas filling station network in Finland, Sweden and Norway.

Developing the gas infrastructure is necessary to ensure that the transition to cleaner fuels is smooth and easy for the long-haul transport sector, the company said in its statement.

Gasum's growing network is a response to the increased demand for cleaner road transport. Together with other fuel retail operators, the number of LNG/LBG filling stations will total around 35 in the Nordics this summer.

Gas as a solution to decrease road transport emissions is becoming a more and more popular fuel option for HDVs in the Nordic countries. For example, already more than 1,000 LNG trucks have been approved for subsidies by the Klimatkivet initiative and Drive LBG climate investment programs in Sweden, Gasum said.

Source: https://www.offshore-energy.biz/gasum-lines-up-four-new-lng-fueling-stations/?utm_source=lngworldnews&utm_medium=email&utm_campaign=newsletter_2020-06-16

1.5 Myanmar

Myanmar's LNG-fueled power plant springs into action

16th June 2020. By: Adnan Bajic

The Hong Kong-headquartered VPower Group ventured into the LNG-to-power business through its partnership with China National Technical Import and Export Corporation.



Courtesy of VPower

The partnership fired up the LNG-fueled power plant in Thaketa Township of Yangon, Myanmar on June 14.

VPower noted it is the first time LNG has been used as fuel for power generation in Myanmar.

The power station, with an installed capacity of 477.1 MW, was built on a fast-track basis for one of the Myanmar government's shortlisted critical projects to boost power supply for summer 2020.

The project was awarded to the consortium of VPower Group and CNTIC in late 2019 through a public tender.

In addition to the engine-based power generation technology, CNTIC VPower provides LNG import, logistics, storage and regasification to the country. The LNG infrastructure is located in Thanlyin of Yangon.

Malaysian energy giant [Petronas delivered a couple of LNG cargoes](#) in May and June as part of a master sale and purchase agreement between Petronas LNG unit and CNTIC VPower that was signed earlier this year.

The cargoes, shipped from the Petronas LNG Complex in Bintulu were sold on Free-On-Board (FOB) basis, amounting to a total LNG volume of 190,000 cubic meters.

After the power purchase agreement was signed by CNTIC VPower, the LNG-fueled power station has commenced operation in phases starting from June 14, 2020.

Electricity generated by the power station will support the nationwide electricity demand, especially in Yangon Region.

Source: <https://www.offshore-energy.biz/myanmars-lng-fueled-power-plant-springs-into-action/>

1.6 USA

Ways2H Commercializes Hydrogen Fuel-From-Waste Technology

11th June 2020. By: Arlene Karidis

Engineering and production company Ways2H is commercializing a gasification technology developed by Japan Blue Energy Co. (JBEC) to process waste and extract hydrogen for transportation fuel or for electricity. One project is up and running and another is soon to launch, while the partners are simultaneously targeting multiple markets moving forward, including wastewater treatment plants, hotels and hospitals. Ways2H is also reaching out to waste haulers and waste processors who have no output for hard-to-recycle materials.

The project under development is a small, transportable system, which is a version of a larger system that now operates in Joso, Japan; the Joso system can handle 6 tons of solid waste per day and produce 300 kilograms (kg) of hydrogen.

The specific location of the upcoming project has not been announced, though it will be delivered to a plant in Tokyo in November 2020, where sludge will be converted to syngas and further refined, with the hydrogen extracted for fuel, according to Ways2H.

Ways2H is also in discussions with a potential client in California – a health care facility –to see how the company could deploy its system. Medical waste would be converted to hydrogen to partially power the facility’s operations. The California unit could handle 1 ton per day of dry waste and generate 40 to 50 kg of hydrogen over 24 hours. The system could generate 960 kilowatt-hours over 24 hours, which is enough to power an average U.S. home for a month.

Distinguishing the technology from other gasification systems, Jean-Louis Kindler, CEO of Ways2H, says with conventional gasification, a fraction of the waste is burned in a reactor to generate heat, and when the process is leveraged for municipal solid waste, due to the materials’ varying energy values, temperatures in the gasifier are inconsistent, which can cause overheating. “It’s hard to adjust in this scenario, but our system is different. We do not

burn the waste. It heats to a high temperature, and ceramic heat carriers help ensure even heating,” says Kindler.



Photo courtesy of JBEC/Tsubasa Engineering

These heat carriers are placed in a vessel where they are mixed with biomass feedstock. Heat from the carriers evaporates and turns the solid waste into 80 percent gas and 20 percent char, with the char used to generate heat in the gasification process.

“Our system is self-balancing meaning the reaction temperature and process are more stable,” says Naoki Dowaki, JBEC president. In addition, because what we burn is pure carbon our system has less emissions and less polluting compared to conventional gasification.”

Among Ways2H self-reported emissions calculations, based on measurements at four pilots are:

- 0 particulate matter (compared to U.S. EPA standard of 24 mg/m³);
- 0 dioxins/furans (compared to U.S. EPA standard of 13 ng/m³); and
- 48 ng/m³ nitrogen oxides (compared to U.S. EPA standard of 500).

Additionally, the technology reduces energy consumption by 60 percent compared to incineration, say the partners. They tout another feature: the ability to operate small systems—smaller than typical gasification projects—allowing for installations at the generator’s site such as the one they hope to launch at a California health care facility.

“This could address two issues for hospitals: the waste problem and the need for dependable, uninterrupted power generation,” says Kindler.

Ways2H plans to continue working to penetrate the medical waste market.

“Medical waste is a major issue in the U.S. and costly to handle. So, we are looking at processing red bag waste, including paper, needles and other supplies and materials that go into red bags,” says Kindler.

The plan is also to market to private waste processing companies, who as with other potential clients would be able to buy the technology and or contract to have it operated for them.

Currently, Ways2H says it is talking to a recycling company in California that had been sending plastic to China but since that country’s crackdown on exports, it has been transporting excess to a remote landfill.

“We are discussing a solution where we could mix waste paper, including with ink, and waste plastic they normally send to landfill to save costs and so they can make hydrogen on site. This is the kind of business model we will market,” says Kindler.

To date, JBEC has completed four pilots in Japan. In addition to the one at the wastewater treatment plant in Joso, the tech company did pilots in Anan and Izumo, which entailed processing construction waste that was a mix of wood and plastics with traces of metals. The other pilot was in Shibukawa, which processed biomass and other solid waste.

Source: <https://www.waste360.com/waste-energy/ways2h-commercializes-hydrogen-fuel-waste-technology> *End*