

AGH Bulletin

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WORLD NEWS

U.S To Remain Dominant In Global LNG Markets

1. The United States will remain the dominant player in the global LNG market in terms of capacity additions over the next 4 years, accounting the bulk of 60% of new capacity additions for North America as a whole.
2. Latest forecast by GlobalData that North America will in 2027 have some 284.1 million tons of annual LNG liquefaction capacity. The United States will account for close to 76% of that total.
3. Europe remains one of the big drivers for new U.S capacity additions in the LNG area. The continent has become perhaps the biggest clients of U.S LNG traders over the past 18 months and it is virtually certain to remain in this position because Russian pipeline gas supply is quite unlikely to return anytime soon due to conflict with Ukraine.
4. Despite sanctions, Russia will be the country to record the second-largest in LNG capacity over the next four years after the United States, boosting its total by 67.6 mtpa, ahead of Qatar's 48 mtpa.

Source: OILPRICE.com, 21 August 2023

AGH Commentary

U.S gas producers are offering flexible term sales which is favourable to buyers, particularly in Europe.

Asian Buyers May Seek U.S LNG If Australia Worker Disputes Worsen

1. Major Asian buyers of LNG could seek U.S cargoes in the coming weeks if worker-related disputes at key LNG facilities in Australia escalates, as electricity demand continues to surge due to warm weather. Some LNG cargoes scheduled for Europe could likely be diverted to Asia, mainly from U.S and Qatar.
2. 700 workers from the western Australian facilities ran by Woodside Energy Group and U.S major Chevron could potentially down tools over-pay and job security, the first of them as early as Sept 2, and stall output at four facilities that produce more than a tenth of the world's LNG.
3. Prolonged strikes at all three plants could push Asian buyers, Chevron and Woodside to look for alternatives to meet their commitments, resulting in more competition for spot LNG cargoes.
4. Top importer Japan is most vulnerable to any near-term strike-related disruptions as supplies from the strife-hit facilities to account for more than a quarter of its annual LNG

AGH Commentary

5. Both Asian and European buyers are keeping high inventories of LNG in their storage at least until next winter as such cargo diversion is still unlikely to happen.

Reuters, 29 August 2023

WORLD NEWS (cont'd)

Qatar Sees Slow Start To Sale Of New LNG Supply

1. Qatar is expecting to lock in all long-term LNG contracts from the two phases of the North Field expansion by the end of this year, however only 11.8 mtpa of those contracts have been signed.
2. Several European countries were courting Qatar in 2022 in a bid to lock in future LNG supplies following Russia's invasion of Ukraine and subsequently supply cuts. However, only Germany has a deal with Qatar Energy to a long-term supply deal for up to 2 mtpa. China National Petroleum Corp (CNPC), China's Sinopec and Petrobangla have also signed contracts.
3. European buyers are hesitant to contract with Qatar Energy because Qatari volumes are generally offered with Brent indexation. Buyers can accept risk exposure to Henry Hub prices but not to Brent. Apart from that, buyers prefer shorter and Free-On-Board (FOB) contracts to have flexibility for cargo diversion. Another reason is due to excessive volume that buyers may end up as countries seek to lower their gas usage to meet climate goals.
4. FOB contracts offered by many U.S projects tend to allow the buyers to resell these volumes, lowering risk where Qatar typically prefers destination restrictions.

AGH Commentary

Augu:

Qatar needs to contemplate on more flexible terms and conditions to sell its remaining supplies from new projects.

Chevron LNG Workers In Australia Plan Industrial Action From September 7

1. Union representing workers at Chevron's two major Australian LNG complexes have said they will take industrial action from September 7, in an ongoing dispute over pay and conditions. Chevron workers are backed by the Offshore Alliance (OA) - which combines the Maritime Union of Australia and Australia Workers' union.
2. Industrial action could range from short work stoppages, banks on specific tasks and even full-on strikes. Sources from the union said workers intend to strike for 3 hours on Sept 7 and progressively increase the number of hours they will cease work.
3. Chevron's facilities account for more than 5% of global LNG production capacity and news of the potential notice of industrial action sent European natural gas prices surging and has caused extreme price volatility in global LNG markets in recent weeks.

Source: Reuters, 28 August 2023

AGH Commentary

So far, there is no indication that Asian buyers are competing for spot cargoes with European buyers. Asian buyers are still able to manage high inventories until winter.

HOME

PETRONAS Aims To Establish A Notable Presence In The Carbon Capture, Utilization And Storage (CCUS) Market

1. PETRONAS has announced ambitious plans to build the world's largest dedicated facility on carbon capture, utilization and storage (CCUS) market by 2025, with estimated cost reaching USD260 Million (RM1.21 Billion)
2. The company is actively pursuing partnerships with international entities to unlock regional project potential.
3. Once operational, the initiative will have the capacity to capture 3.3 mtpa of carbon dioxide (CO₂) and securely store the collected CO₂ within the reservoirs of the Sarawak region over its 25 years operational lifespan.
4. It is believed that the company will spend USD450 million on CCUS projects and US330 million on hydrogen developments.

Source: The Edge, 22

August 2023

AGH Commentary

PETRONAS is progressively focusing on cleaner and more environmentally friendly energy initiatives, emphasizing their commitment to diverse portfolios and low-carbon development in the region.

Malaysia To Set Up the National Energy Council, Renewable Energy Exchange

1. The Malaysian government will proceed with the establishment of the National Energy Council, to facilitate the implementation of the National Energy Transition Roadmap (NETR). The council will be chaired by the Prime Minister of Malaysia, with the Ministry of Economy as the secretariat.
2. As energy transition emerges as a key economic pillar for Malaysia, the council would set forth high-level strategic directions and policies, allowing for the working committees to coordinate and report the progress in turn.
3. The exchange will act as a market aggregator that will enable price discovery and monetize excess power since there is requirement that Malaysia needs to command the price premium of Renewable Energy (RE) that comes from cross-border trading. At the same time, a single market aggregator will play a role in ensuring that the exchange is trusted by market participants.
4. The exchange could also facilitate close interconnectedness of Southeast Asia, which

AGH Commentary

To be a leading renewable energy producer in the region, the formation of EC and RE is crucial to facilitate the implementation of the Energy Transition plan.

HOME (cont'd)

Malaysia's PM Launches Energy Transition Roadmap, Including RM2 Billion Facility

1. The National Energy Transition Roadmap (NETR) will drive the creation of high-paying job opportunities and boost domestic and foreign investment participation while ensuring the continuity of Malaysia's foreign energy supply. Malaysia must ensure energy is affordable and secure as the country has been gaining momentum and move to embrace sustainability. Ultimately, this will make Malaysia a regional leader in the clean energy industry.
2. The NETR facility will ensure a seamless flow of financial resources towards energy transition that are "marginally bankable and yielding below- market returns".
3. This includes investment in electric vehicle (EV) value chain, hydrogen and carbon capture usage storage (CCUS) technologies.
4. The roadmap identifies six energy transition levers, along with 10 flagship projects and 50 initiatives. The champion of the projects and initiatives are among the public sector, government-linked companies (GLCs) and industry players, signifying a whole-of-Malaysia approach.

AGH Commentary

20. The establishment of NETR would enable Malaysia to balance the "energy trilemma" of sustainability, security and affordability in the energy sector.

Ireka Partners E & H Energy To Supply LNG Across Malaysia

1. Ireka Corp Bhd.'s wholly owned subsidiary Shoraka Power Sdn Bhd (SPSB) has entered into an unincorporated joint venture agreement with Endress & Hauser (E&H) Energy Sdn Bhd to supply LNG to potential buyers and users across Malaysia.
2. The partnership comes at a time when the Energy Commission of Malaysia has signaled the liberalization of the domestic energy sector.
3. E & H and SPSB are actively pursuing LNG supply contracts from prominent industry players, including Petronas, independent power producers and other key industrial players.
4. The proposed joint venture was in line with the company's strategy to diversify into the ever-growing energy industry and the company looks to explore various opportunities, especially with the liberalization of the domestic energy sector.
5. E&H Energy made a strategic shift from its legacy in audio system and audio electronics equipment to the energy sector in 2021, and the company concentrated on LNG trading, infrastructure, virtual pipelines with potential supplies from renowned LNG producers.

AGH Commentary

The proposed JV creates dynamic competition amongst players in the domestic gas market reshaping Malaysia's energy landscape.

GLOBAL HIGHLIGHTS – LNG & Natural Gas

Snapshot as of 18 August 2023

ASIA PACIFIC/INDIA

1. LNG spot price to North Asia eased a bit to USD13.51/MMBtu this week for front month – October delivery compared to last week's offer of USD14.01/MMBtu.
2. It was reported that dispute between Woodside and the Union over work condition at Gorgon LNG Terminal have shown some positive outcome even though the talk is still on going.
3. However, Monday's announcement by the Union over the talk with Chevron that the strike will happen on the 7th September has stopped the price from further decreased.
4. Market are observing closely on the situation in Australia.

AGH Commentary

As there is no news on cargo diversion, cargoes on delivery as per scheduled.

Sources: Industry and Reuters,
31 August 2023

EUROPE

1. Same like in Asia, gas price at Europe's benchmark Dutch TTF has eased at Euro35.03/MWh or USD10.27/MMBtu or RM51.67/MMBtu for front month's October supply.
2. Last week, the benchmark was traded higher at Euro40.11/MWh or USD11.76 or RM59.17/MMBtu
3. The ongoing talks between Unions and owners of 3 LNG facilities in Australia that representing 10% of LNG world's supplies are still the major concerns for market.

AGH Commentary

Concern over supply disruption due to cargo diversion to Asia from Europe is still a major factor that caused market volatility in Europe.

Sources: Industries & Reuters, 31 August 2023

Freight Charges Selected Regions as of 31 August 2023 (RM/MMBtu)

| Export Regions | Japan/Korea | Taiwan/China | Malacca |
|----------------|-------------|--------------|---------|
| Bintulu | 3.70 | 3.47 | 1.85 |
| Singapore | 4.17 | 3.24 | 0.93 |
| M'cca | 4.17 | 3.70 | - |

Charter Hire Rate as of 31 August 2023; USD50,000-55,000/Day

Source : Industry, 2023

GLOBAL HIGHLIGHTS – LNG & Natural Gas Outlook as of 1 September 2023

Global Gas Future Index

| Month 2023 | JKM Platts Future | | TTF Natural Gas Future | | CME HH Future | |
|------------|-------------------|-----------|------------------------|-----------|---------------|-----------|
| | USD/ MMBtu | RM/ MMBtu | USD/ MMBtu | RM/ MMBtu | USD/ MMBtu | RM/ MMBtu |
| Oct | ▼ 13.51 | 62.55 | ▼ 11.09 | 51.37 | ▼ 2.75 | 12.73 |
| Nov | ▼ 15.60 | 72.25 | ▼ 14.42 | 66.76 | ▼ 3.13 | 14.49 |
| Dec | ▼ 17.45 | 80.77 | ▼ 16.14 | 74.72 | ▼ 3.59 | 16.63 |
| Jan 24 | ▼ 18.43 | 85.32 | ▼ 16.67 | 77.20 | ▼ 3.84 | 17.76 |
| Feb 24 | ▼ 18.75 | 86.79 | ▼ 16.80 | 77.80 | ▼ 3.75 | 17.37 |
| Mar 24 | ▼ 17.44 | 80.75 | ▼ 16.62 | 76.94 | ▼ 3.43 | 15.87 |
| Apr 24 | ▲ 17.60 | 81.49 | ▼ 16.20 | 74.99 | ▼ 3.12 | 14.45 |
| May 24 | ▲ 17.11 | 79.21 | ▼ 16.11 | 74.59 | ▼ 3.11 | 14.40 |
| June 24 | ▲ 17.43 | 80.69 | ▼ 16.17 | 74.85 | ▼ 3.21 | 14.88 |
| July 24 | ▲ 17.78 | 82.33 | ▼ 16.20 | 75.03 | ▼ 3.33 | 15.40 |

Sources: ICE Energy Report , CME Group Market Data

Global Crude Future Benchmark Snapshots in RM per MMBtu

| Month 2023 | Brent (ICE) | WTI (NYMEX) | JCC (ICE) |
|------------|-------------|-------------|-----------|
| Sept | ▲ 72.44 | - | - |
| Oct | ▲ 71.71 | ▲ 69.24 | ▲ 75.94 |
| November | ▲ 71.22 | ▲ 68.66 | ▲ 75.76 |
| December | ▲ 70.72 | ▲ 68.08 | ▲ 74.99 |
| Jan24 | ▲ 70.71 | ▲ 67.52 | ▲ 74.25 |
| Feb24 | ▲ 69.78 | ▲ 66.75 | ▲ 73.60 |
| Mar24 | ▲ 69.36 | ▲ 66.51 | ▲ 73.03 |
| Apr 24 | ▲ 68.99 | ▲ 66.04 | ▲ 72.51 |
| May 24 | ▲ 68.62 | ▲ 65.52 | ▲ 72.03 |
| June 24 | ▲ 68.25 | ▲ 65.23 | ▲ 71.59 |
| Jul 24 | ▲ 67.87 | ▲ 64.78 | ▲ 71.15 |
| Aug 24 | ▲ 67.25 | ▲ 64.38 | ▲ 70.73 |

Sources: CME Group Market Data, ICE Energy Report

GLOBAL HIGHLIGHTS – LNG & Natural Gas

Outlook as of 1 September 2023 (cont'd)

Regional Coal Future Index

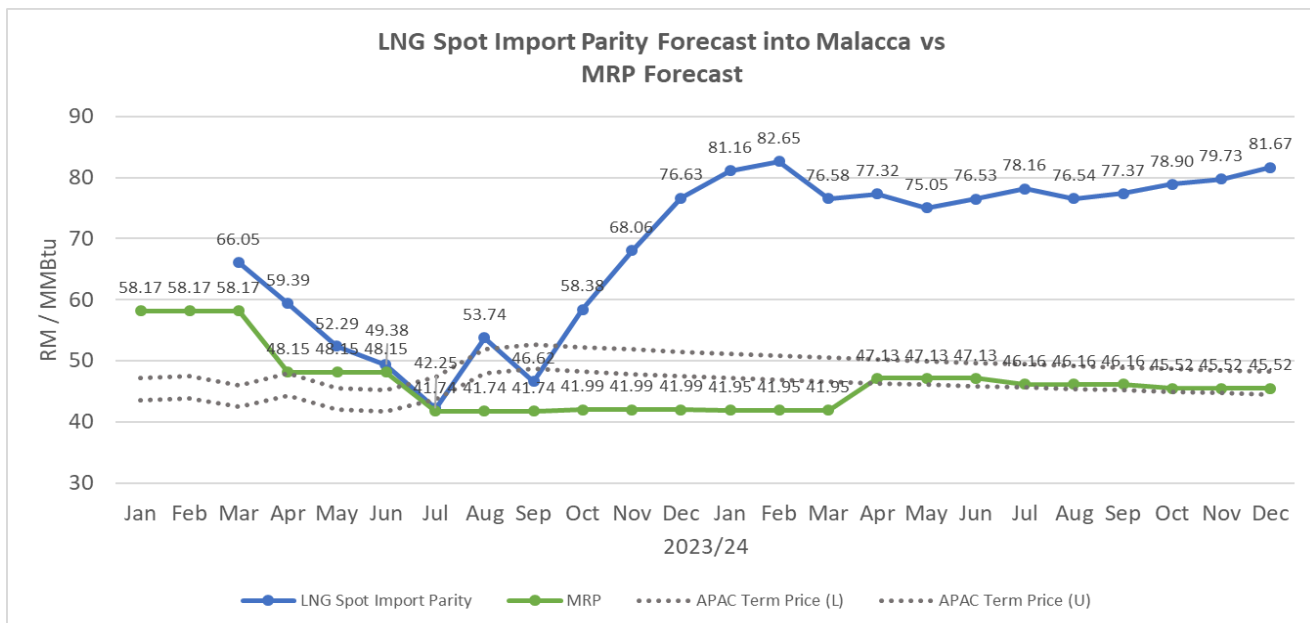
| Month 2023 | ICE Newcastle Coal Index | |
|------------|--------------------------|--------------|
| | USD/ MMBtu | RM/ MMBtu |
| Sep | ▲ 5.62 | 26.02 |
| Oct | ▲ 5.71 | 26.44 |
| Nov | ▲ 5.85 | 27.10 |
| Dec | ▲ 5.94 | 27.52 |
| Jan 24 | ▲ 6.00 | 27.77 |
| Feb 24 | ▲ 6.00 | 27.80 |
| Mar 24 | ▲ 5.98 | 27.68 |
| Apr 24 | ▲ 5.93 | 27.44 |
| May 24 | ▲ 5.91 | 27.35 |
| June 24 | ▲ 5.93 | 27.45 |
| July 24 | ▲ 6.00 | 27.76 |
| Aug 24 | 6.03 | 27.93 |

Sources: ICI, www.cmegroup.com; ICE Newcastle Coal index, www.barchart.com

Liquid Petroleum Gas (LPG) Future Index (Saudi Aramco)

| Month 2023 | Argus Propane Future Index | | Mini Argus Butane Future Index | |
|------------|----------------------------|--------------|--------------------------------|--------------|
| | USD/ MMBtu | RM/ MMBtu | USD/ MMBtu | RM/ MMBtu |
| Oct | 8.90 | 41.21 | ▲ 8.42 | 39.01 |
| Nov | ▲ 9.08 | 42.02 | ▲ 8.60 | 39.83 |
| Dec | ▲ 9.24 | 42.76 | ▲ 8.77 | 40.60 |
| Jan 24 | ▲ 9.24 | 42.80 | ▲ 8.86 | 41.04 |
| Feb 24 | ▲ 9.16 | 42.39 | ▲ 8.80 | 40.75 |
| Mar 24 | ▲ 8.85 | 40.97 | ▲ 8.49 | 39.33 |
| Apr 24 | ▲ 8.49 | 39.29 | ▲ 8.15 | 37.72 |
| May 24 | ▲ 8.15 | 37.73 | ▲ 7.86 | 36.39 |
| June 24 | ▲ 7.95 | 36.79 | ▲ 7.62 | 35.30 |
| July 24 | ▲ 7.90 | 36.59 | ▲ 7.59 | 35.14 |
| August 24 | ▲ 7.97 | 36.89 | ▲ 7.66 | 35.46 |
| Sept 24 | ▲ 8.07 | 37.35 | 0 | 0 |

LOCAL HIGHLIGHTS – Domestic Forecast for MRP & LNG Import Parity as of 1 September 2023



Source: AGH Market Analysis

| Month | Import Parity - MRP Spread | Change | APAC Term Ave - MRP Spread | Change |
|--------|----------------------------|---------|----------------------------|---------|
| 23-Aug | 12.00 | 0.00 | 8.16 | ▼ -0.05 |
| 23-Sep | 4.89 | ▼ -0.19 | 8.97 | ▲ 1.90 |
| 23-Oct | 16.40 | ▼ -2.27 | 8.21 | ▲ 2.16 |
| 23-Nov | 26.07 | ▼ -4.54 | 7.87 | ▲ 2.02 |
| 23-Dec | 34.64 | ▼ -3.05 | 7.52 | ▲ 1.90 |
| 24-Jan | 39.21 | ▼ -2.94 | 7.19 | ▲ 1.30 |
| 24-Feb | 40.69 | ▼ -2.85 | 6.89 | ▲ 1.22 |
| 24-Mar | 34.63 | ▼ -0.69 | 6.60 | ▲ 1.13 |
| 24-Apr | 30.19 | ▲ 0.43 | 1.16 | ▲ 1.07 |
| 24-May | 27.93 | ▼ -0.08 | 0.91 | ▲ 1.02 |
| 24-Jun | 29.41 | ▲ 0.99 | 0.65 | ▲ 0.96 |
| 24-Jul | 32.01 | ▲ 0.85 | 1.35 | ▲ 0.90 |
| 24-Aug | 30.38 | ▼ -0.82 | 1.11 | ▲ 0.84 |
| 24-Sep | 31.21 | ▼ -0.22 | 0.87 | ▲ 0.79 |
| 24-Oct | 33.37 | ▼ -0.32 | 1.27 | ▲ 0.74 |
| 24-Nov | 34.20 | ▼ -0.33 | 1.05 | ▲ 1.85 |
| 24-Dec | 36.15 | ▲ 1.41 | 0.83 | ▲ 0.64 |

Source: AGH Market Analysis

AGH Commentary

This is the right time for LNG importers to negotiate term price of 11% Brent Indexation or below from suppliers, if they wish to bring in LNG cargoes to Malaysia.

MRP = Malaysia Reference Price used for domestic market

LOCAL HIGHLIGHTS – Peninsular Gas Utilities (PGU) Gas Volume Updates as of 1 September 2023

There is no change in available capacity from last week

| Northern Region | | | |
|-----------------|---|--------------------|-----------|
| State | Exit CITY GATE (CG)/Metering Station (MS) | Available Capacity | |
| | | MMscf/d | MMBtu/d |
| Perlis | Tambun Tulang CG | 10.97 | 11375.89 |
| | Ayer Puteh CG | 30.92 | 32064.04 |
| | TTPC MS | 55.86 | 57926.82 |
| Kedah | Pondok Labu CG | 19.21 | 19920.77 |
| | Kulim Hi Tech CG | 75.18 | 77961.66 |
| | Sungai Petani CG | 20.44 | 21196.28 |
| | Pokok Sena CG | 20.86 | 21631.82 |
| | PFK MS | 16.25 | 16851.25 |
| | NUR MS | 200.97 | 208405.89 |
| | Prai CG | 24.97 | 25893.89 |
| Penang | TNB Prai MS | 98.28 | 101916.36 |
| | TNB Gelugor MS | 23.35 | 24213.95 |
| | Prai Power MS | 110.22 | 114298.14 |

| Eastern Region | | | |
|------------------|---|--------------------|-----------|
| State | Exit CITY GATE (CG)/Metering Station (MS) | Available Capacity | |
| | | MMscf/d | MMBtu/d |
| T'gaganu | Kerteh CG | 0.89 | 922.93 |
| | Teluk Kalong CG | 8.68 | 9001.16 |
| | Kerteh 3 CG | 96.3 | 99863.1 |
| | Kerteh 2 CG | 3.79 | 3930.23 |
| | TNB Paka MS | 208 | 215696 |
| | YTL Paka MS | 139.16 | 144308.92 |
| | CUF Kerteh MS | 105.52 | 109424.24 |
| Pahang | CUF Gebeng MS | 125.84 | 130496.08 |
| | Gambang CG | 0.49 | 508.13 |
| | Gebeng CG | 29.51 | 30601.87 |
| | Gebeng 2 CG | 68.6 | 71138.2 |
| | PCMSB MS | 8.46 | 8773.02 |
| | PCASB MS | 7 | 7259 |
| | Aromatic KR2 MS | 3.3 | 3422.1 |
| | PCOGD MS | 50.51 | 52378.87 |
| | PERWAJA MS | 50.88 | 52762.56 |
| | MTBE NG MS | 11.6 | 12029.2 |
| | PDH MS | 8.4 | 8710.8 |
| | BASF Fuel | 8.29 | 8596.73 |
| | BASF Feedstock | 2.1 | 2177.7 |
| | Idemitsu MS | 9.83 | 10193.71 |
| | Titan MS | 37.78 | 39177.86 |
| Genting Sayen MS | 47.95 | 49724.15 | |

Source: PETRONAS Gas Berhad



IBR Base Average Tariff of GMD Natural Gas Distribution System

| Year | 2023 | 2024 | 2025 |
|------------------|-------|-------|-------|
| Rebate RM/GJ/Day | 0.038 | N/A | N/A |
| RM/GJ/Day | 1.535 | 1,573 | 1.573 |

IBR : Incentives Based Regulation

GMD : Gas Malaysia Distribution (owner & operator of gas distribution line)

GJ : Gigajoules

RM : Ringgit Malaysia

LOCAL HIGHLIGHTS – Peninsular Gas Utilities (PGU) Gas Volume Updates as of 1 September 2023 (cont'd)

There is no change in available capacity from last week

| Central Region | | | | |
|-----------------------------|---|--------------------|------------|----------|
| State | Exit CITY GATE (CG)/Metering Station (MS) | Available Capacity | | |
| | | MMscf/d | MMBtu/d | |
| Klang Valley | KLIA CG | 0.06 | 62.22 | |
| | Dengkil CG | 71.6666 | 74318.2642 | |
| | Puchong CG | 14.64 | 15181.68 | |
| | Batu Tiga CG | 37.76 | 39157.12 | |
| | GB3 MS | 93.48 | 96938.76 | |
| | Connaught Bridge MS | 186.77 | 193680.49 | |
| | GDC KLIA MS | 1.9 | 1970.3 | |
| | PNGV KLIA 1 | 0.47 | 487.39 | |
| | PNGV KLIA 2 | 0.7 | 725.9 | |
| | PNGV KLIA 3 | 0.41 | 425.17 | |
| | Venator MS | 7.6 | 7881.2 | |
| | S'gor | Serdang CG | 76.4 | 79226.8 |
| | | Shah Alam CG | 80.37 | 83343.69 |
| Kapar CG | | 9.07 | 9405.59 | |
| Meru CG | | 95.42 | 98950.54 | |
| Bestari Jaya CG | | 8.74 | 9063.38 | |
| Kuala Langat Power Plant MS | | 50.35 | 52212.95 | |
| Serdang MS | | 174.67 | 181132.79 | |
| N.Sembilan | Kapar MS | 268.04 | 277957.48 | |
| | Seremban CG | 15.91 | 16498.67 | |
| | Seremban 2 CG | 10.29 | 10670.73 | |
| | Bandar Baru Nilai CG | 10.66 | 11054.42 | |
| | Tebong CG | 25.23 | 26163.51 | |
| Port Dickson MS | 230 | 238510 | | |

| Western Region | | | |
|----------------|---|--------------------|-----------|
| State | Exit CITY GATE (CG)/Metering Station (MS) | Available Capacity | |
| | | MMscf/d | MMBtu/d |
| Perak | Kamunting CG | 20.96 | 21735.52 |
| | Parit Buntar CG | 18.47 | 19153.39 |
| | Ayer Tawar CG | 16.19 | 16789.03 |
| | Hutan Melintang CG | 47.86 | 49630.82 |
| | Merbau CG | 78.5 | 81404.5 |
| | Tronoh CG | 4 | 4148 |
| | SEV Lumut MS | 180.42 | 187095.54 |

| Southern Region | | | |
|-------------------------|---|--------------------|-----------|
| State | Exit CITY GATE (CG)/Metering Station (MS) | Available Capacity | |
| | | MMscf/d | MMBtu/d |
| Johor | Kluang CG | 39.24 | 40691.88 |
| | Kulai CG | 18.2 | 18873.4 |
| | Senai CG | 114.96 | 119213.52 |
| | Pasir Gudang CG | 237 | 245769 |
| | Plentong CG | 74.2 | 76945.4 |
| | Tg Langsat CG | 17.66 | 18313.42 |
| | Paya Rumput CG | 14.11 | 14632.07 |
| | TNB Pasir Gudang MS | 279.57 | 289914.09 |
| | Pengerang COGEN Power MS | 111.61 | 115739.57 |
| | Southern Power Generation MS | 20 | 20740 |
| | Plentong (Senoko) MS | 145 | 150365 |
| | Plentong 2 (Keppel) MS | 118 | 122366 |
| | M'cca | Alor Gajah CG | 9.25 |
| Tanjung Kling MS | | 50.01 | 51860.37 |
| Tanjung Gemok MS | | 38.93 | 40370.41 |
| Teluk Gong MS | | 111 | 115107 |
| Panglima MS | | 25.31 | 26246.47 |
| EDRA Energy Sdn Bhd | | 210.21 | 217987.77 |
| Tangga Batu Refinery MS | | 32.66 | 33868.42 |
| Tangga Baru Cogen MS | 12.34 | 12796.58 | |

IBR Tariff for Peninsular Gas Utilization

| Year | 2023 | 2024 | 2025 |
|-----------|-------|-------|-------|
| RM/GJ/Day | 1.061 | 1.063 | 1.063 |

IBR Tariff for Regassification Facilities

| Facilities | RGTSU | RGTP |
|------------|-------|-------|
| RM/GJ/Day | 3.455 | 3.165 |

Source: PETRONAS Gas Berhad

IBR : Incentives Based Regulation

GJ : Gigajoules

RM : Ringgit Malaysia

RGTSU : Regas Terminal Sungai Udang, Malacca

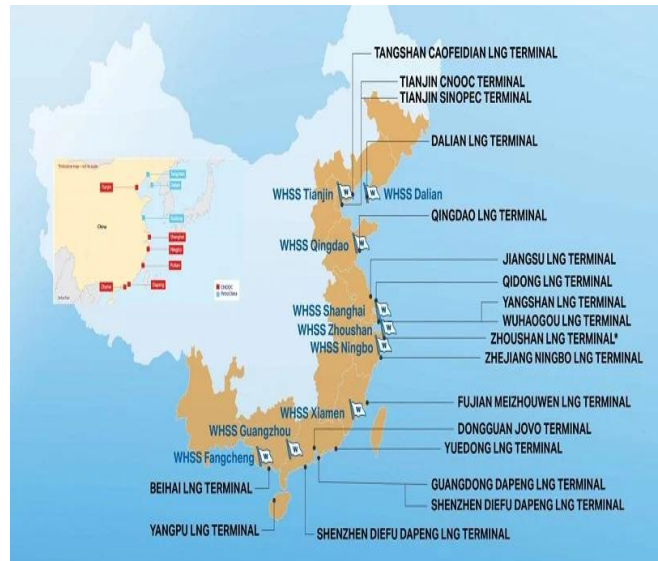
RGTP : Regas Terminal Pengerang

FUN FACTS

1 Malaysia's LNG Export to China

Malaysia is the third-largest LNG supplier to China after Australia and Qatar. The country's energy group, PETRONAS started to ship the fuel to China in 2009. It had delivered over 1,100 LNG shipments to the country by the end of 2022, serving more than 20 receiving terminals across China.

Source: Xinhua News 02 August 2023



2 ChatGPT Let's ask...

How Many Floating Storage & Regasification Units For LNG?

As of September 2021, there are several types of Floating Storage and Regasification Units (FSRUs) used for liquefied natural gas (LNG) operations. FSRUs are designed to receive LNG from carriers, store it temporarily, and then regasify it for distribution through pipelines or other means. The specific types of FSRUs can vary based on design, technology, and capacity. Some common types include:

- **Converted LNG Carriers:** These are LNG carriers that have been converted into FSRUs. They have storage tanks for LNG and regasification equipment added to them.
- **Newbuild FSRUs:** These are purpose-built FSRUs designed from the ground up to serve as both storage and regasification facilities.
- **Barge-Mounted FSRUs:** These FSRUs are mounted on a barge or floating platform. They can be positioned close to shore or in shallow waters where it might not be feasible for larger vessels.
- **FSRU with LNG Lifting System:** Some FSRUs are equipped with an LNG lifting system that allows them to offload LNG from standard LNG carriers without the need for a dedicated jetty or terminal.
- **FSRU with Dual Fuel Engines:** Some FSRUs are designed to run on natural gas, and they can use their own regasified LNG as fuel for their engines, reducing emissions and operating costs.

Source: Chat
GPT

- **Small-Scale FSRUs:** These FSRUs are designed for smaller LNG import terminals or for providing LNG to areas with lower demand. They typically have a lower regasification



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