

AGH Bulletin

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WORLD NEWS

India Nears Finalizing 20 Year LNG Deal With Qatar

1. The Indian Government-backed gas supplier, Gas Authority of India Ltd. (GAIL) is in the final stages of closing a LNG supply deal with Qatar Energy, according to industry insiders cited by Reuters.
2. This agreement will involve India purchasing at least 1 mtpa of LNG and could extend for more than 20 years.
3. India's pursuit of energy agreements is part of a broader strategy to ensure energy security as the nation strives for a high growth rate, eyeing its ambitious goal of becoming a developed economy in the coming decades.
4. The deal with Qatar would align with GAIL's plans to diversify its gas imports and hedge against potential supply disruptions, as witnessed after Russia's invasion of Ukraine last year when LNG prices reached an all-time high.
5. Last year GAIL had to curtail gas sales to local industries following disruptions in its long-term agreement with the German unit of Russia's Gazprom, as Berlin diverted volumes to its domestic sales.

AGH Commentary

India is to strategically position itself in the global gas markets by establishing long-term LNG agreements with various LNG producers. This is to ensure supply security and stable price purchased.

Vietnam Pushes For Carbon Market Development And Also Focusing On The Mandatory Trading Greenhouse Gas

1. The project development is for the industries and businesses at local market, while considering international market integration.
2. With this project, the country would need thorough preparation in terms of infrastructure, techniques, inventory capacity, and corporate reporting.
3. The Ministry of Natural Resources and Environment has been tasked to develop a mechanism for carbon credit management and soon set up a national registration system, on which businesses and organization generating carbon credits in Vietnam will be required to register their credits.
4. Any transactions with foreign partners must be reported to the ministry, as such activities impact the national emissions reduction targets.

AGH Commentary

Vietnam is taking proactive action towards implementation of carbon market development.

WORLD NEWS (cont'd)

Chevron, Woodside In Talks To Avert Australian LNG Strikes

1. Concerns over industrial action over employees' pay and conditions at Woodside's North-West Shelf (NWS) offshore gas platforms and Chevron's Gorgon and Wheatstone LNG plants had sent European gas prices to a nearly two-month high last week (week 10th August).
2. Any industrial action would disrupt Australia's LNG exports and increase competition for the super-chilled fuel between Asian and European buyers as both export facilities are supplying about 10% of the LNG global market. If strike action at the all facilities lasts one month, 3 million tons of supply could be affected, removing about 44 cargoes of LNG from the market.
3. About 99% of workers at offshore platforms that supply gas to the Woodside-operated NWS LNG plant, backed industrial action in a vote whose results were made public on last Wednesday, 8th August 2023. The unions have not yet called for action, and workers at Chevron's Gorgon and Wheatstone plants have yet to vote on industrial action.
4. Woodside said it had engaged "actively and constructively" in the bargaining process with unions and at the same time, Unions have applied to the Fair Work Commission of Australia for Chevron's worker to vote on potential strike. Chevron is reported to continue staff engagement to seek mutual interest outcome for the company.
5. **AGH Commentary**
There is no doubt that LNG spot prices will rise if there is supply disruption should the talks between both Woodside and Chevron with union fail to reach the resolution, hence the union to proceed with the industrial action.

Adnoc Gas Signs LNG Supply Agreement With Japan Petroleum Exploration

1. Adnoc Gas has signed a five-year LNG supply agreement to Japan Petroleum Exploration Co (Japex) with estimated value between USD450-USD550 million.
2. Adnoc Gas has access to 95% of the UAE's natural gas reserves, supplies more than 60% of the country's gas needs.
3. Japan is one of the UAE's largest and most important energy partners. This supply agreement will strengthen relationship between both countries and reinforces Adnoc Gas' position as a global LNG export partner of choice. Source: The National News, 17 August 2023

AGH Commentary

The supply agreement highlights Adnoc Gas's growing global presence particularly in the Asian LNG market.

WORLD NEWS (cont'd)

Temporary Shutdown of Several LNG Plant Operations Around The World Could Disrupt Gas Supplies In The Global Market

1. Apart from potential strikes by major LNG producer in Australia, the prospect of prolonged closures at some LNG export facilities in some part of the world has sent wholesale gas prices soaring as well as setbacks among other LNG large producers.
2. Russian LNG exports have been cut to 11% at 2.1 million tons in recent weeks due to maintenance at its biggest facilities, Sakhalin-2 Plant, Trinidad & Tobago has one plant down for planned work through most of August, and Egypt has stopped almost all exports starting June until October due to domestic consumption.
3. Nigerian supply has been underperforming amid long-lasting feed gas and security issues. More scheduled maintenance is planned in the 3rd quarter, including at Prelude, another LNG producing facility in Australia.
4. The US LNG producers will likely receive a lot of attention from buyers looking for alternatives but the ongoing Atlantic hurricane season, which so far has spared the US Gulf Coast, where US LNG export are concentrated may hamper the supply operation.
5. If the Australian supply outage extends into September, that would affect global supplies and prices in the run-up heating season.

Source: The Star 15 August

2023. Reuters 20th July 2023 & 06th June 2023

AGH Commentary

LNG prices in Asia and Europe would need to rise to attract available LNG and keep homes warm, but it will be too expensive for South Asian buyers.

[HOME](#)

Energy Commission Reopens Green Energy Tariff Program

1. The Green Energy Tariff (GET) program has been reopened from 11 August 2023 with an available green energy quota of 1,899 gigawatt hours for the first five months contract period from Aug1, 2023 to Dec 31, 2023.
2. The GET program would enable renewable energy 100 (RE100)-focused and environmental, social and governance-conscious companies and industries to immediately obtain certified green energy up to 100% of their monthly electricity consumption.
3. Any companies or industries can immediately achieve the RE100 goal with the international acclaimed and recognized Malaysia Renewable Energy Certificate (mREC).
4. The mREC certify that every kilowatt-hour of green energy purchased by the GET subscriber is uniquely identified to the particular RE generation source, which in turn is connected to the National Grid Infrastructure and thus dispatchable to the GET subscriber.
5. The program also provides the successful GET subscribers with full exemption from the imbalance cost pass-through charges on their green energy utilized, in their electricity bill.

AGH Commentary

This is part of incentives by Malaysia government to push the expansion of green energy program in the country.

Malaysia Is On Track To Achieve Zero-Net Goals Carbon Emissions By 2050

1. Malaysia is on track to achieve Zero-Net goals carbon emissions by 2050, however it needs to keep attracting investor funding to keep up with its momentum of the energy transition. External funding is crucial to develop the project, hence for the infrastructure development.
2. The Zero-Net Carbon Emissions in Malaysia can be achieved by 2050, subject on the various programs to be implemented by the responsible government agency, Energy Industries Council (EIC). EIC will detail out action plans through the National Energy Transition Roadmap which to be presented soon.

AGH Commentary

Potential funders and investors' interests in the project depends on the action plan to be detailed out by EIC.

[HOME \(cont'd\)](#)

Oil And Gas Asia 2023 (OGA) Expects To Rake In RM200m Trade

1. The event is set to welcome 25,000 attendees from 52 countries from September 13 to 15 at the Kuala Lumpur Convention Centre (KLCC) and is expected to rake in close to RM200m worth of trade compared to RM170m recorded in 2022.
2. Organized by Informa Markets Malaysia, OGA 2023 is set to drive business growth and opportunities from energy transition in the Asia Pacific region, with 2,000 exhibitors and brands with international pavilions from China, German, Italy, Singapore, South Korea, the United Kingdom and the United States.
3. As the conference partner, the Energy Industries Council (EIC) is also co-locating its EIC-Asia Pacific Energy Conversations with OGA for the first time.
4. The three-day conference will also hold a Leadership Roundtable to discuss actionable measures to make energy transition more realistic in the region.
5. The conference discussion led by 28 local and international speakers will address the future of the oil and gas sector as well as the energy industry in Asia, in particular, the decarbonization pathways on how to mitigate and adapt to the impacts of climate change.

Source: Malay Mail, 14 August

2023

AGH Commentary

Energy Transition is the hot topic nowadays for the global sustainability issues.

GLOBAL HIGHLIGHTS – LNG & Natural Gas

Snapshot as of 18 August 2023

ASIA PACIFIC/INDIA

1. LNG spot price to North Asia climbed to USD14.05/MMBtu this week for front month – October delivery. This is the highest in a month and up 18.14% from the prior week USD11.50/MMBtu.
2. The current dispute about pay and conditions at Australia plants belonging to Chevron Corp and Woodside Energy Group Ltd, which account for over 10% of global liquefied natural gas (LNG) supplies has sparked fears over supply disruption. Sources: Industry and Reuters, 17 August 2023
3. Concerns arose from importers like China, Japan, South Korea, Taiwan, Thailand and Singapore since they are the major buyers from these three plants.
4. It is unclear what form any strike action would take, assuming no agreement can be reached between labor unions and plant owners. **AGH Commentary**
Asian buyers has no issue to pay higher price of spot LNG should the union decide to launch a strike.

EUROPE

1. Europe's natural gas prices benchmark, Dutch TTF front-month's October contract ended yesterday – 17th August at Euro43.04/MWh or equivalent to about USD13.76/MMBtu or RM63.96/MMBtu.
2. The prices jumped from last week ended on August 10 at Euro39.85/MWh, equivalent to about USD11.82/MMBtu or RM59.22/MMBtu. Sources: Industries & Reuters, 17 August 2023
3. There is concern from buyers in Europe that Asian importers would be able to buy spot LNG in the market at higher price should supply disruption due to the strike in Australia, hence limited supply to Europe. **AGH Commentary**
Impact of the strike threat in Australia is more keenly felt in Europe due to the concern of limited supply and spot cargo diversion to Asia due to Asian buyers' ability to pay higher prices.

Freight Charges Selected Regions as of 18 August 2023 (RM/MMBtu)

Export Regions	Japan/Korea	Taiwan/China	Malacca
Bintulu	3.64	3.41	1.82
Singapore	4.10	3.19	0.91
M'cca	4.10	3.64	-

Charter Hire Rate as of 17 August 2023; USD50,000/Day

GLOBAL HIGHLIGHTS – LNG & Natural Gas Outlook as of 18 August 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
Sept	-	-	-	-	▲ 2.63	12.22
Oct	▲ 14.05	65.30	13.76	63.96	▲ 2.77	12.85
Nov	▲ 16.62	77.27	▲ 16.51	76.75	▲ 3.25	15.09
Dec	▲ 18.14	84.32	▲ 17.65	82.04	▲ 3.75	17.43
Jan 24	▲ 18.99	88.30	▲ 17.92	83.30	▲ 3.96	18.42
Feb 24	▲ 19.29	89.68	▲ 17.94	83.39	▲ 3.88	18.04
Mar 24	▲ 17.52	81.46	▲ 17.69	82.22	▲ 3.55	16.50
Apr 24	▲ 17.44	81.08	▲ 17.05	79.28	▲ 3.22	14.97
May 24	▲ 17.06	79.33	▲ 17.18	79.87	▲ 3.21	14.92
June 24	▲ 17.15	79.71	▲ 17.45	81.12	▲ 3.30	15.34

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)
Aug	▲ 69.65	-	-
Sept	▲ 69.09	▲ 66.98	▲ 73.50
Oct	▲ 69.31	▲ 66.51	▲ 73.65
November	▲ 69.01	▲ 66.10	▲ 72.80
December	▲ 68.70	▲ 65.77	▲ 72.17
Jan24	▲ 68.35	▲ 65.40	▲ 71.64
Feb24	▲ 68.04	▲ 65.12	▲ 71.17
Mar24	▲ 67.75	▲ 64.73	▲ 70.76
Apr 24	▲ 67.46	▲ 63.36	▲ 70.38
May 24	▲ 67.17	▲ 63.86	▲ 70.03
June 24	▲ 66.88	▲ 63.79	▲ 69.70

Sources: CME Group Market Data, ICE Energy Report

GLOBAL HIGHLIGHTS – LNG & Natural Gas

Outlook as of 18 August 2023 (cont'd)

Regional Coal Future Index

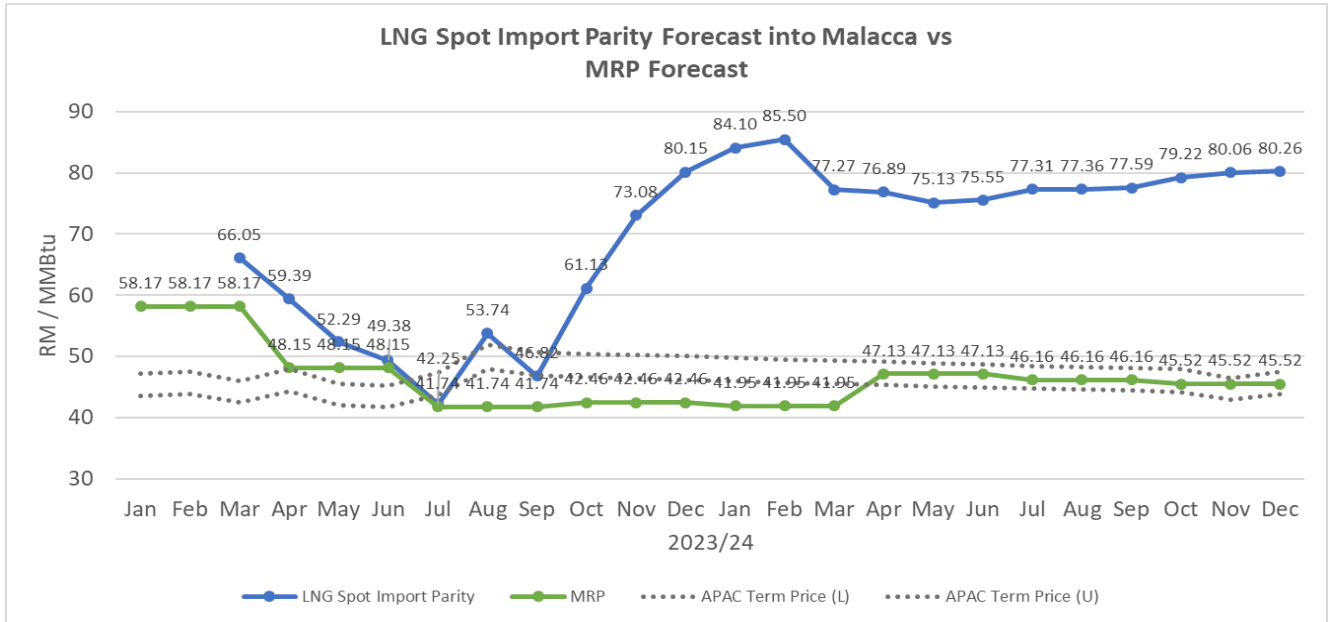
Month 2023	ICE Newcastle Coal Index	
	USD/ MMBtu	RM/ MMBtu
Aug	▲ 5.30	24.62
Sep	▲ 5.62	26.13
Oct	▲ 5.69	26.46
Nov	▲ 5.78	26.88
Dec	▲ 5.87	27.30
Jan 24	▲ 5.95	27.68
Feb 24	▲ 5.97	27.76
Mar 24	▲ 5.93	27.58
Apr 24	▲ 5.85	27.18
May 24	▲ 5.81	27.02
June 24	▲ 5.82	27.06

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
Sep	▼ 7.84	36.43	▲ 7.99	37.16
Oct	▼ 8.05	37.42	▲ 8.12	37.75
Nov	▼ 8.24	38.31	▲ 8.37	38.91
Dec	▼ 8.44	39.23	▲ 8.55	39.75
Jan 24	▼ 8.51	39.55	▲ 8.63	40.12
Feb 24	▼ 8.48	39.43	▲ 8.58	39.89
Mar 24	▼ 8.23	38.24	▲ 8.32	38.67
Apr 24	▼ 7.94	36.92	▲ 8.04	37.38
May 24	▼ 7.71	35.84	▼ 7.80	36.27
June 24	▼ 7.53	35.02	▼ 7.59	35.28
July 24	▼ 7.51	34.90	▲ 7.55	35.12
August 24	▼ 7.58	35.22	▼ 7.62	35.45

LOCAL HIGHLIGHTS – Domestic Forecast for MRP & LNG Import Parity as of 18 August 2023



Source: AGH Market Analysis

Month	Import Parity - MRP Spread	Change	APAC Term Ave - MRP Spread	Change
Aug-23	12.00	0.00	8.21	1.70
Sep-23	5.08	2.43	7.07	0.88
Oct-23	18.67	9.24	6.05	0.85
Nov-23	30.62	9.63	5.85	0.90
Dec-23	37.69	5.47	5.63	0.95
Jan-24	42.15	4.40	5.89	0.97
Feb-24	43.54	5.69	5.67	0.99
Mar-24	35.31	7.27	5.47	1.01
Apr-24	29.77	3.78	0.09	-2.76
May-24	28.00	2.73	-0.11	-2.74
Jun-24	28.42	3.28	-0.31	-2.94
Jul-24	31.16	5.58	0.46	-2.19
Aug-24	31.20	5.63	0.27	-2.18
Sep-24	31.43	5.86	0.08	-2.17
Oct-24	33.69	7.63	0.53	-2.01
Nov-24	34.53	8.47	-0.80	-3.17
Dec-24	34.74	8.67	0.19	-0.22

Source: AGH Market Analysis

AGH Commentary

LNG term import price of 13%-14% Brent is likely parallel with MRP; however, LNG importers could re-assess price position at below 13% Brent to bring the cargo into Malaysia on term basis to be competitive with MRP.

MRP = Malaysia Reference Price used for domestic market

LOCAL HIGHLIGHTS – Peninsular Gas Utilities (PGU) Gas Volume Updates as of 18 August 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'gganu	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 18 August 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 About Malaysia International Shipping Corporation (MISC) Berhad

MISC Berhad (MISC or the Group) one of the largest single owner-operator of liquefied natural gas (LNG) carriers in the world, currently owns up to thirty-three LNG carriers for MISC's gas business, in addition to six very large ethane carriers (VLECs) and two LNG floating storage units (FSUs), which have a combined deadweight tonnage (dwt) capacity of over two million tonnes.



2 ChatGPT Let's ask...

How many sizes of LNG Carrier are there?

LNG carriers (LNGC) come in various sizes, typically categorized based on their cargo-carrying capacity measured in cubic meters (m³) or cubic feet (ft³) of liquefied natural gas (LNG). The sizes can vary over time due to advancements in technology and changes in industry standards, but as of my last knowledge update in September 2021, the most common categories for LNG carrier sizes include:

- Small-Scale LNG Carriers: These are typically smaller vessels used for transporting LNG to smaller ports or regions with limited infrastructure. Their capacity can range from around 1,000 m³ to 20,000 m³.
- Small-Midsize LNG Carriers: These vessels are larger than small-scale carriers and are used for transporting LNG to various destinations. They typically have a capacity of around 20,000 m³ to 40,000 m³.
- Midsize LNG Carriers: This category includes vessels with capacities ranging from around 40,000 m³ to 80,000 m³. These carriers are commonly used for transporting LNG on established trade routes.
- Large LNG Carriers: Large LNG carriers are often referred to as "Q-Max" and "Q-Flex" vessels. Q-Max vessels are among the largest LNG carriers in operation, with capacities up to around 266,000 m³. Q-Flex vessels have capacities up to approximately 210,000 m³.
- Very Large LNG Carriers (VLCC): These carriers are capable of transporting very large quantities of LNG and can have capacities ranging from around 125,000 m³ to over 266,000 m³.
- Floating Storage and Regasification Units (FSRUs): While not traditional LNG carriers, FSRUs are converted or purpose-built vessels that serve as floating LNG import terminals. They have storage capacities similar to those of larger LNG carriers.

Source: Chat

It's important to note that these categories are based on capacities, and the actual number of sizes can be more nuanced due to continuous advancements in shipbuilding technology



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