

A large offshore oil rig is shown at sunset, with its complex steel structure and cranes silhouetted against a warm, orange sky. The rig is situated in the ocean, with its reflection visible on the water's surface.

GEOPHYSICAL SURVEY ACTIVITIES OF MYANMAR

December – 2024

Insight

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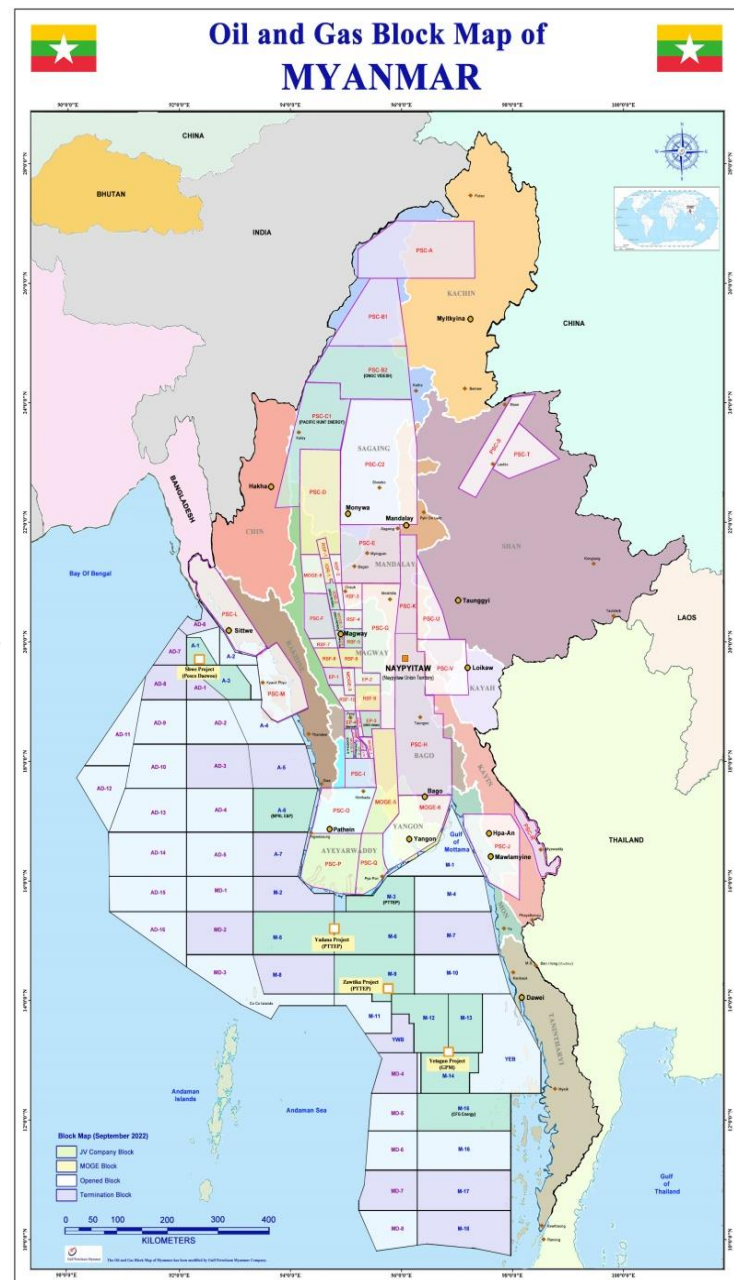
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1. Oil and Gas Block Map and Active Offshore Oil Fields in Myanmar

Amongst of Explored and yet to be explored blocks in Myanmar Offshore, the main Offshore Activities in Myanmar are divided by 5 main Oil and Gas Oil Fields along the coast of Myanmar which are

- (1) Yadana Gas Field
- (2) Zawtika Gas Field
- (3) Aung Sin Kha Gas Field
- (4) Shwe Gas Field
- (5) Yetagun Gas Field
- (6) Pyi Thar Yar Gas Field
- (7) M-15 Gas Field

The above fields are the current operating oil field in Myanmar while there are many oil blocks left to be explored in Myanmar offshore regions. The general information of the operating Oil Fields will be described in the next part.



Yadana Gas Field

General Information

- Discovered Year – 1982
- Commercial Production commencing year - 1998
- Operated by – TotalEnergies, Chevron, PTT Exploration & Production International (PTTEPI), Myanmar Oil and Gas Enterprise (MOGE) (TotalEnergies and Chevron left on July 20, 2022.)
- Current Production Rate – 454.65 MMSCFD
- Location – M-5, M-6

The Yadana Oil and Gas Field, located in Block M5 and M6 in the Andaman Sea off the coast of Myanmar, is a prolific offshore hydrocarbon reservoir. Discovered in 1982, it is operated by TotalEnergies in partnership with Chevron, PTTEP and Myanmar Oil and Gas Enterprise (MOGE). Later after 2022, TotalEnergies and Chevron left from Myanmar Oil and Gas Industry due to the political situations and thus, leaving PTTEP to be the foreign sole operator alongside with MOGE. The field primarily produces natural gas, with proven reserves estimated at approximately 6.5 trillion cubic feet (Tcf). Production at Yadana is supported by advanced offshore facilities, including two wellhead platforms (Yadana and Badamayar), a central processing platform and subsea export pipelines.



The gas produced is processed offshore before being transported via a 346 kilometer pipeline system, delivering natural gas to both Myanmar's domestic market and Thailand's PTT, contributing to energy stability in the region. The field operates at a plateau production rate of approximately 770 million standard cubic feet per day (MMSCFD) in 2022 and the current rate of approximately 454.65 MMSCFD. Advanced drilling techniques and subsea infrastructure ensure optimized recovery and high operation efficiency.

Operators



Zawtika Gas Field

General Information

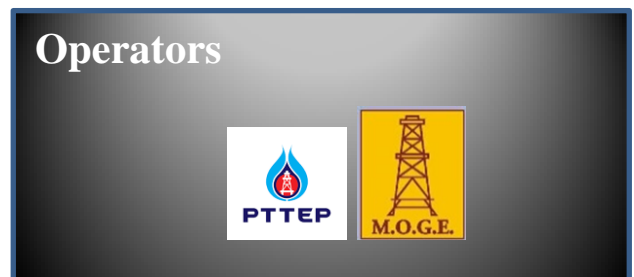
- Discovered Year – 2007
- Commercial production commencing year - 2014
- Operated by – PTT Exploration & Production International (PTTEPI) and Myanmar Oil and Gas Enterprise (MOGE)
- Current Production Rate – 326.10 MMSCFD
- Location – M-9, M-11
- Type of Rig – Jack Up Rig



The Zawtika Oil and Gas Field, located in the gulf of Martaban Offshore Myanmar, is a significant natural gas field contributing to the country's energy sector. Operated by PTTEP (PTT Exploration and Production Public Company Limited) in partnership with Myanmar Oil and Gas Enterprise (MOGE), the field lies in block M9 and M11, approximately 300 kilometers south of Yangon. The field was discovered in 2007, with commercial production commencing in 2014.

gas, which supplies both the domestic market and exports to Thailand.

Zawtika comprises an extensive subsea infrastructure, including wellhead platforms and a central processing platform (CPP), connected to onshore facilities via a 240 kilometer offshore pipeline. The field produces around 326.10 million standard cubic feet per day (MMSCFD) of natural



Aung Sin Kha Gas Field

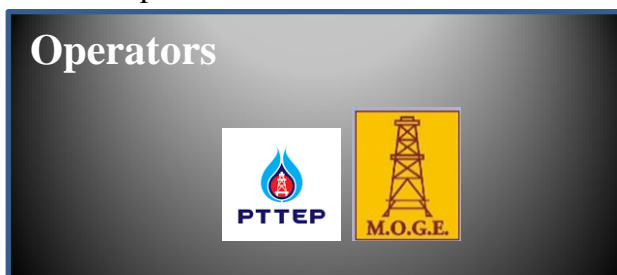
General Information

- Discovered Year – 2011
- Commercial Production Commencing Year – Appraisal Drilling Stage
- Operated by – PTT Exploration & Production International (PTTEPI) , Myanmar Oil and Gas Enterprise (MOGE)
- Current Production Rate – Development Stage
- Location – M-3
- Type of Rig – Under Development Stage

The Aung Sinkha Oil and Gas Field is situated in Block M-3 within Myanmar's Gulf of Mataban. Operated by PTTEP (PTT Exploration and Production Public Company Limited) in partnership with Myanmar Oil and Gas Enterprise (MOGE), the field has already progressed beyond the appraisal drilling stage. Discovered in 2011, the field is located in deep water, requiring advanced exploration and production technologies for resource extraction.

Notably, the Aung Sinkha-3 well achieved a flow rate of approximately 34.5 million cubic feet of gas per day and 195 barrels of condensate per day during its appraisal drilling days. Other wells which are Aung Sinkha 5 well and 6 well showed 9 MMSCFD and 14 MMSCFD respectively.

Although there has been a short period of postpone during 2023, the development has been resumed now.



Shwe Gas Field

General Information

- Discovered Year – 2004
- Commercial Production Commencing Year – 2013
- Operated by – POSCO International, Myanma Oil and Gas Enterprise (MOGE) ONGC Videsh, GAIL India and Korea Gas Corporation (KOGAS)
- Current Production Rate – 477.17 MMSCFD
- Location – A-1, A-3
- Type of Rig – Jack Up Drilling Rig



The Shwe Gas Field, located in the Bay of Bengal off the Rakhine coast of Myanmar, is one of the country's largest offshore hydrocarbon fields. Situated in Blocks A1 and A3, the field was discovered in 2004 and is operated by South Korea's POSCO International in partnership with Myanma Oil and Gas Enterprise (MOGE), ONGC Videsh, GAIL India and Korea Gas Corporation (KOGAS).

The field's initial production rate was approximately 300-500 MMSCFD.

The project comprises three major gas fields, Shwe, Shwe Phyu and Mya, spread across Block A-1 and A-3, utilizing advanced offshore platforms and subsea drilling rigs for extraction. Gas is processed and transported through pipelines to both domestic and international markets, with China being the primary export destination.



Yetagun Gas Field

General Information

- Discovered Year – 1992
- Commercial Production Commencing Year – 2000
- Operated by (1992-2022)- Petronas Carigali, PTTEP Exploration and Production International, Nippon Oil Exploration and Myanmar Oil and Gas Enterprise (MOGE)
- Operated by (2022- Until Now) – Gulf Petroleum Myanmar (GPM), Myanmar Oil and Gas Enterprise (MOGE)

- Location – M-12, M-13, M-14
- Type of Rig – Central Processing Platforms and Floating Storage Offshore Vessels



The Yetagun Gas Field, located in Block M-12, M-13 and M-14 in the Andaman Sea off the southern coast of Myanmar, is one of the country's key offshore energy projects. Discovered in 1992, the field commenced commercial production in 2000 and has since contributed to both domestic energy supply and exports to Thailand.

Production Operations utilize fixed offshore platforms and subsea pipelines, with gas processed and exported primarily through pipelines to Thailand. The estimated current production rate of Yetagun is 29.9 MMSCFD.

The development of the Yetagun field was led by a consortium headed by a consortium led by Petronas Carigali (Malaysia), alongside partners PTTEPI (Thailand), Myanmar Oil and Gas Enterprise (MOGE) and Nippon Exploration until 2022. Since 2022, Gulf Petroleum Myanmar (GPM) took over from Petronas, PTTEPI and Nippon Oil Exploration.

Operators



Pyi Thar Yar

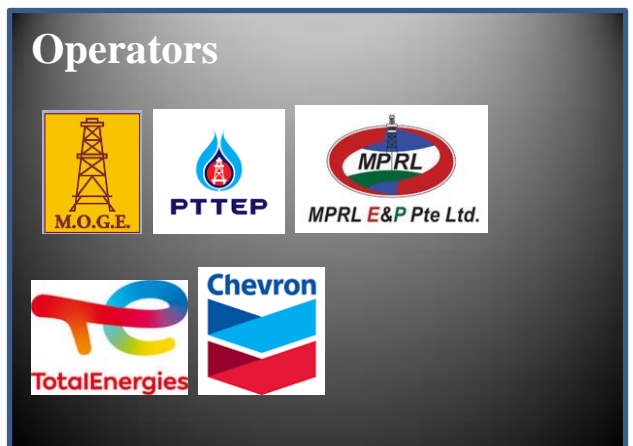
General Information

- Discovered Year – 2014
- Commercial Production
Commencing Year – Still under development stage
- Discovered by – TotalEnergies, Myanmar Oil and Gas Enterprise (MOGE), PTTEPI and Chevron
- Currently Developed by – Myanmar Petroleum Resources Limited Exploration & Production (MPRL), Myanmar Oil and Gas Enterprise (MOGE)
- Current Production Rate – Under Development Stage
- Location – A-6
- Type of Rig – Under Development Stage



The Pyi Thar yar Gas field is situated in A-6 Block, located in the Rakhine Basin in the Bay of Bangal. The project is a significant part of Myanmar's energy Strategy, aimed at tapping into the country's potential for natural gas reserves. The field was discovered by TotalEnergies, Myanmar Oil and Gas Enterprise (MOGE), PTTEPI and Myanmar Petroleum Resources Limited Exploration & Production (MPRL).

The field is currently developed by Myanmar Petroleum Resources Limited Exploration and Production (MPRL) and Myanmar Oil and Gas Enterprise (MOGE) after TotalEnergies left the Myanmar Oil and Gas Industry in 2022.

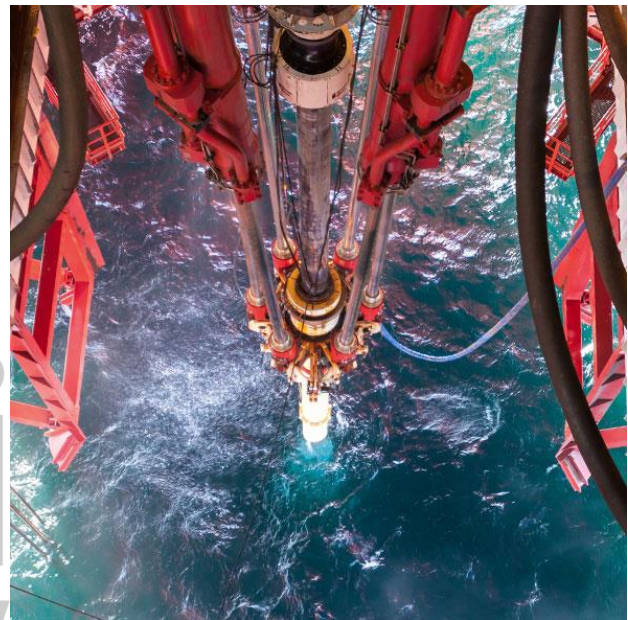


M-15

General Information

- Discovered Year – Under Exploration Stage
- Commercial Production Commencing Year – Under Exploration Stage
- Discovered by – Canadian Foresight Group, Myanma Oil and Gas Enterprise (MOGE), TRG M15 Pte., Ltd and Century Bright Gold Co., Ltd
- Current Production Rate – Under Exploration Stage
- Location – M-15
- Type of Rig – Semi-Submersible Drilling Rig

block is considered a critical part of Myanmar's long term energy strategy.



The M-15 gas field is an offshore natural gas exploration block located in the gulf of Mottama, off the southern coast of Myanmar. The block is still under exploration stage by the consortium led by Canadian Foresight Group in partnership with Myanma Oil and Gas Enterprise (MOGE), TRG M15 Pte.,Ltd which is the part of the Transcontinental Group based in Australia and Century Bright Gold Co., Ltd of which the parent company is KMA Group.

M-15 is with ongoing efforts to identify viable gas reserves and evaluate their potential for commercial production. The

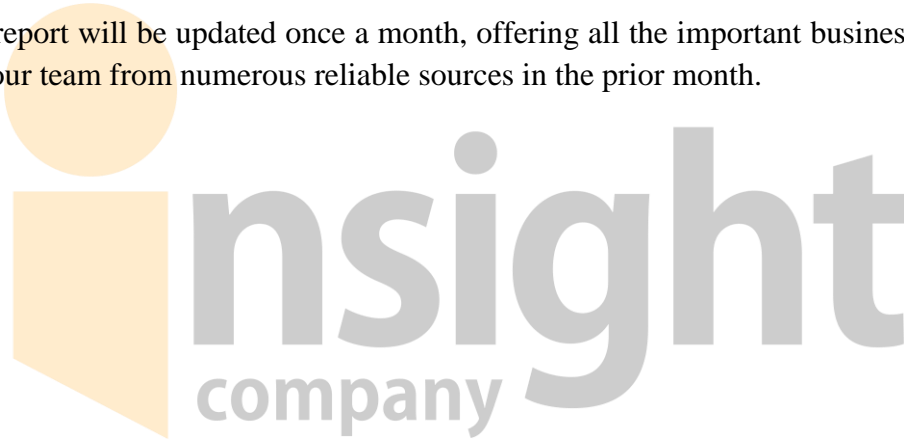


2. About this Report

This report covers the Geophysical Survey (GSI) Activities of Myanmar Oil and Gas Industry for the period of 3 years from 2022 to 2024. The details include

- ❖ Location
- ❖ Operator
- ❖ Time frame of the project
- ❖ Awarded Company
- ❖ General tender description and
- ❖ Estimated Project Value.

This report will be updated once a month, offering all the important business information gathered by our team from numerous reliable sources in the prior month.



3. Geophysical Survey (GSI) Activities of 2022

(1) PTTEPI

- Location – [REDACTED]
- Operator – [REDACTED]
- Time Frame of the project – [REDACTED]
- Awarded Company - [REDACTED]
- General tender description – [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
etc.
- Estimated Project Value- [REDACTED]

The scope of works include

- A. [REDACTED]
[REDACTED]
- B. [REDACTED]
- C. [REDACTED]

For the above tender, there were 4 bidders, namely

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]

Technical Evaluation

The technical evaluation was done according to the following criteria.

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
5. [REDACTED]
6. [REDACTED]
7. [REDACTED]
8. [REDACTED]
9. [REDACTED]
10. [REDACTED]
11. [REDACTED]

[REDACTED] didn't reply PTTEPI's inquiry for the vessel availability for the time period between [REDACTED] and thus, was rated disqualified.

Commercial Evaluation

The Commercial Evaluation was made according to the following criteria.

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
[REDACTED]
5. [REDACTED]
[REDACTED]
6. [REDACTED]
[REDACTED]
7. [REDACTED]
8. [REDACTED]

The final bidding prices of three companies are

- [REDACTED]
- [REDACTED]
- [REDACTED]



4. Geophysical Survey (GSI) Activities of 2023

(1) POSCO International

- Location – [REDACTED]
- Operator – [REDACTED]
- Time Frame of the project – [REDACTED]
- Awarded Company – [REDACTED]
- General tender description – [REDACTED]
[REDACTED]
[REDACTED]
- Estimated Project Value- [REDACTED]

POSCO International has called [REDACTED] but only one which [REDACTED] has bid. The other three companies that declined the bidding are

- (1) [REDACTED]
- (2) [REDACTED]
- (3) [REDACTED]

Technical and Commercial Evaluation

The general criteria of the technical evaluation includes but not limited to

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
5. [REDACTED]
6. [REDACTED]
7. [REDACTED]
8. [REDACTED]
9. [REDACTED]

10. [REDACTED]

11. [REDACTED]

[REDACTED] successfully passed the technical evaluation according to the above criteria and the commercial evaluation has been made according to the following criteria.

(1) [REDACTED]

(2) [REDACTED]

- [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]

(3) [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

(4) [REDACTED]

- [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]

- [REDACTED]
- [REDACTED]

(5) [REDACTED]

- [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]

- The bidding price by [REDACTED] calculated according to the above commercial criteria was [REDACTED] Million USD.

5. Geophysical Survey (GSI) Activities of 2024

(1) PTTEPI (Planning to Call Tender)

- Location – [REDACTED]
- Operator- [REDACTED]
- Time Frame of the project – [REDACTED]
- Awarded Company – [REDACTED]
- General tender description – [REDACTED]
[REDACTED]
[REDACTED]
- Estimated Project Value- [REDACTED]

The preliminary possible bidding companies for the above services are

- (1) [REDACTED]
- (2) [REDACTED]
- (3) [REDACTED]
- (4) [REDACTED]
- (5) [REDACTED]
- (6) [REDACTED]
- (7) [REDACTED]
- (8) [REDACTED]
- (9) [REDACTED]
- (10) [REDACTED]
- (11) [REDACTED]
- (12) [REDACTED]
- (13) [REDACTED]
- (14) [REDACTED]
- (15) [REDACTED]

According to our resources, [REDACTED]
[REDACTED] have already declined to EOI due to the reasons of unavailable resources or assets in the region and the international regulatory constraints. [REDACTED]

6. News & Articles

1. MoE Union Minister engages in high-level oil and gas sector discussions

Date – 09-11-2024

Reference - Global New Light of Myanmar

Union Minister for Energy U Ko Ko Lwin led a Myanmar delegation to the third Global Oil and Gas Conference held in Xi'an, China. During the visit, the Union minister held separate meetings with high-ranking officials, including Sudan's Minister of Energy and Oil, ambassadors from the League of Arab States to China, the CEO of Central Asian Oil City, the chairman of the conference organizing committee, and senior representatives from Iran's National Innovation Fund.

Discussions emphasized potential collaborations to advance Myanmar's oil and gas sector, covering areas such as enhanced technology adoption, innovations in production, and direct sourcing of oil and gas drilling equipment from manufacturers.

The meetings highlighted opportunities to apply advanced technology in oil and gas production and explore partnerships with original equipment manufacturers to enhance Myanmar's resource extraction capabilities.

Additionally, discussions involved plans for Myanmar to host the Asian Oil & Gas Equipment Exhibition and an Investment Forum in late 2025, aiming to attract new investments into Myanmar's oil and gas industry.

In a related event, U Ko Ko Lwin attended an MoU signing ceremony between the Central Asian Oil City and the China Association for Asian Economic Development's Mining Professional Committee, symbolizing deeper collaboration.

2. Myanmar, China to advance energy cooperation

Date – 14-11-2024

Reference – Global New Light of Myanmar

Union Minister for Energy U Ko Ko Lwin met the chairman of China National Petroleum Corporation (CNPC) in Beijing on 11 November.

During the meeting, the two parties discussed matters on the enhancement of cooperation in the oil and gas sector, continuous access to crude oil and gas for the upgrading and expansion of refineries, potential collaboration to share the gas by constructing an LNG Terminal in Myanmar, the operation of Myanmar-China crude oil and gas pipelines at total capacity and investment in promising crude oil and gas projects, construction and upgrade of pipelines, refineries and fertilizer plants.

Similarly, the Union minister held a meeting with the deputy head of the National Energy

Administration (NEA) in Beijing on 12 November.

They candidly discussed energy policies, strategies and energy security measures of the two countries, further assistance of China in technology and investment for green energy and new energy, potential cooperation with Myanmar by taking advantage of the strategic location, whereas China cooperates with Middle-East and African countries in the energy sector, and assistance in human resources development in the energy sector, and appreciated the topic the Union minister discussed at the third World Oil and Natural Gas Conference.

Moreover, the Union minister received the president of Sino-Pipeline International (SPI) and discussed measures to implement depending on the outcomes of the discussions with Chinese energy officials.

3. Myanmar Delegation Attends Global Oil & Gas Conference in China

Date – 07/09/2024

Reference – Ministry of Energy

A Myanmar delegation led by Union Minister for Energy, U Ko Ko Lwin, attended the 3rd Global Oil & Gas Conference in Xi'an, China. During the event, he delivered an opening speech and later visited the 9th Global Oil & Gas Trade Exhibition.

The Union Minister highlighted Myanmar's strategic geographical position as a key trade link between China, the Middle East, and Africa, proposing to create economic opportunities under the theme:

“Let's Build a Bridge Between the Middle East, Africa & China.”

He emphasized Myanmar's potential in the oil and gas sector, including existing pipelines, refineries, and LNG terminal projects. He invited international partners to invest, noting the importance of energy security and global cooperation.

The Myanmar delegation also explored investment opportunities at the trade exhibition, reinforcing the country's commitment to expanding energy partnerships.

4. Myanmar Delegation Engages in Oil & Gas Cooperation Talks in China

Date – 08/11/2024

Reference – Ministry of Energy

During the 3rd Global Oil & Gas Conference in Xi'an, China, a Myanmar delegation led by Union Minister for Energy, U Ko Ko Lwin, held separate meetings with key officials, including Sudan's Minister of Energy and Oil, the Ambassador of the Arab League to China, the CEO of Central Asian Oil City, and representatives from Iran National Innovation Fund.

Discussions focused on enhancing collaboration in oil and gas production, advanced technology adoption, innovation, and direct procurement of drilling equipment from original manufacturers.

Additionally, Myanmar explored the possibility of hosting the Asian Oil & Gas Equipment Exhibition and an Investment Forum in late 2025.

The Union Minister also attended a Memorandum of Understanding (MoU) signing ceremony between Central Asian Oil City and China Association for Asian Economic Development Mining Professional Committee, strengthening regional cooperation in the energy sector.

5. Myanmar, China Strengthen Energy Ties in Beijing

Date – 13/11/2024

Reference – Ministry of Energy

A Myanmar delegation led by Union Minister for Energy, U Ko Ko Lwin, visited Beijing from November 11-12, 2024, to enhance bilateral energy cooperation and attend the 3rd Global Oil & Gas Conference.

On November 11, the delegation met with China National Petroleum Corporation (CNPC) to discuss expanding oil and gas collaboration, ensuring a stable supply of crude oil and natural gas, and investing in Myanmar's energy infrastructure.

On November 12, they met with China's National Energy Administration (NEA) to discuss energy security, green energy investment, and Myanmar's role as a regional energy hub. Later, the Sino-Pipeline International (SPI) chairman met with the Union Minister to discuss follow-up actions.

Myanmar Embassy officials in Beijing also attended, reinforcing efforts to deepen Myanmar-China energy cooperation.

6. Myanmar Strengthens Energy Cooperation with Yunnan

Date – 18/11/2024

Reference – Ministry of Energy

A Myanmar delegation led by Union Minister for Energy, U Ko Ko Lwin, visited Yunnan Province, China, on November 13-14, 2024, to discuss energy collaboration between Myanmar and China.

On November 13, the delegation toured the PetroChina Yunnan Petrochemical Company, which refines oil and gas transported via the Myanmar-China pipeline. Officials briefed them on production processes, quality control, environmental measures, and safety protocols. The Union

Minister emphasized the importance of technical training and knowledge exchange. Later, he met with Yunnan Construction Investment Holding Group (YCIH) and Yunnan Overseas Investment Co. (YOIC) to discuss investment opportunities in Myanmar's energy sector.

On November 14, the delegation met with Yunnan's Deputy Governor to discuss the use of Myanmar's oil and gas in Yunnan, investment opportunities, and Myanmar's upcoming 2025 Asian Oil & Gas Equipment Exhibition and Investment Forum. The Yunnan government also expressed interest in providing grant aid for solar power plants in Yangon and Mandalay.

The visit reinforced Myanmar's efforts to attract investment and strengthen energy ties with China.

