

Business Overview

The PTTEP Group's core business is the exploration and production of petroleum in Thailand and foreign countries. As of December 31, 2022, the PTTEP Group had petroleum exploration and production projects in 15 countries with the details as follows:

No.	Project Name	Phase	Location	Participation Interest	Operator
Thailand					
1	Bongkot Project	Production	Gulf of Thailand	66.6667%	PTTEP Group
2	S1 Project	Production	Upper Central	100%	PTTEP Group
3	PTTEP 1 Project	Production	Central	100%	PTTEP Group
4	B6/27 Project	Production	Gulf of Thailand	100%	PTTEP Group
5	Arthit Project	Production	Gulf of Thailand	80%	PTTEP Group
6	L22/43 Project	Production	Upper Central	100%	PTTEP Group
7	L53/43 & L54/43 Project	Production	Central	100%	PTTEP Group
8	E5 Project	Production	North East	20%	ExxonMobil
9	Contract 3 Project ¹	Production	Gulf of Thailand	5%	Chevron
10	Contract 4 Project	Production	Gulf of Thailand	60%	Chevron
11	G4/43 Project	Production	Gulf of Thailand	21.375%	Chevron
12	Sinphuhorm Project	Production	North East	80.48%	PTTEP Group
13	B8/32 & 9A Project	Production	Gulf of Thailand	25.001%	Chevron
14	G4/48 Project	Production	Gulf of Thailand	5%	Chevron
15	G1/61 Project	Production	Gulf of Thailand	60%	PTTEP Group
16	G2/61 Project	Production	Gulf of Thailand	100%	PTTEP Group
Overlapping Area					
1	MTJDA Project	Production	Thailand-Malaysia	50%	CPOC
2	G9/43 Project	Exploration	Thailand-Cambodia	100%	PTTEP Group
Overseas					
Republic of the Union of Myanmar (Myanmar)^{2,3}					
1	Zawtika Project	Production	Gulf of Moattama	80%	PTTEP Group

¹ The concession of Contract 3 Project ended on April 23, 2022, with the PTTEP Group's participating interest at 5 percent. The operator had submitted the block relinquishment. However, all partners in the project remain obliged to decommissioning as prescribed by laws.

² The PTTEP Group has notified their decisions to withdraw from Yetagun Project and gas transportation company, Taninthayi Pipeline Company LLC (TPC), to all partners of the project, with effect from May 31, 2022.

³ The PTTEP Group submitted relinquishment of exploration blocks of Myanmar MD-7 Project after fulfilling the obligations under the Product Sharing Contract. The relinquishment was effective from October 25, 2022.

No.	Project Name	Phase	Location	Participation Interest	Operator
2	Yadana Project ⁴	Production	Gulf of Moattama	37.1%	PTTEP Group
3	Myanmar M3 Project	Exploration	Gulf of Moattama	100%	PTTEP Group
Malaysia					
1	Malaysia Project ^{5, 6}	Exploration/ Development/ Production	Offshore	7.2-80%	PTTEP Group
Socialist Republic of Vietnam (Vietnam)					
1	Vietnam 9-2 Project	Production	Offshore	25%	HV JOC
2	Vietnam 16-1 Project	Production	Offshore	28.5%	HL JOC
3	Vietnam B & 48/95 Project	Exploration	Offshore	8.5%	Vietnam Oil and Gas Group
4	Vietnam 52/97 Project	Exploration	Offshore	7%	Vietnam Oil and Gas Group
Republic of Indonesia (Indonesia)					
1	Natuna Sea A Project	Production	Offshore	11.5%	Harbour Energy
Republic of Kazakhstan (Kazakhstan)					
1	Dunga Project	Production	Onshore	20%	TotalEnergies
Sultanate of Oman (Oman)					
1	Oman Block 61 Project	Production	Onshore	20%	BP
2	Oman Block 6 Project (PDO)	Production	Onshore	2%	Petroleum Development Oman
3	Oman Block 53 Project	Production	Onshore	1%	Occidental
4	Oman Onshore Block 12 Project	Exploration	Onshore	20%	TotalEnergies
United Arab Emirates (UAE)					
1	Abu Dhabi Offshore 1 Project	Exploration	Offshore	30%	Eni
2	Abu Dhabi Offshore 2 Project	Exploration	Offshore	30%	Eni
3	Abu Dhabi Offshore 3 Project	Exploration	Offshore	30%	Eni

⁴ On March 14, 2022, PTTEP International Limited (PTTEPI), a wholly-owned subsidiary of PTTEP Group and a partner in the project, has assumed the operatorship of Yadana Project and Moattama Gas Transportation Company (MGTC), with effect from July 20, 2022.

⁵ The PTTEP Group has named investments of all projects in Malaysia under "Malaysia Project", which comprises several petroleum blocks where the PTTEP Group is the Operator. The participating interests vary from 42-80 percent, except for one area named Gumusut-Kakap (GK) in Block K where PTTEP is a joint venture partner with participating interest of 7.2 percent, and Shell is the Operator.

⁶ In March 2022, PTTEP Group and SapuraOMV Upstream (Sarawak) Inc. were awarded the exploration Block SB412, which is located offshore northwest of Sabah, Malaysia.

No.	Project Name	Phase	Location	Participation Interest	Operator
4	Sharjah Onshore Area C Project ⁷	Exploration	Onshore	25%	Eni
5	Sharjah Onshore Area A Project ⁸	Exploration	Onshore	25%	Eni
People's Democratic Republic of Algeria (Algeria)					
1	Algeria 433a & 416b Project	Production	Onshore	35%	GBRS
2	Algeria Hassi Bir Rekaiz Project	Production	Onshore	49%	GHRB
Republic of Mozambique (Mozambique)					
1	Mozambique Area 1 Project	Development	Offshore	8.5%	TotalEnergies
Republic of Angola (Angola)					
1	Block 17/06 Project ⁹	Development	Offshore	2.5%	TotalEnergies
Commonwealth of Australia (Australia)					
1	PTTEP Australasia Project ¹⁰	Exploration	Offshore	90-100%	PTTEP Group
Canada					
1	Mariana Oil Sands Project	Exploration	Onshore	100%	PTTEP Group
Federative Republic of Brazil (Brazil)¹¹					
1	Barreirinhas AP1 Project	Exploration	Offshore	25%	Shell
2	Brazil BM-ES-23 Project	Exploration	Offshore	20%	Petrobras
United Mexican States (Mexico)					
1	Mexico Block 12 (2.4) Project	Exploration	Offshore	20%	Petronas
2	Mexico Block 29 (2.4) Project	Exploration	Offshore	16.67%	Repsol

⁷ On March 1, 2022, the acquisition of 25 percent stake in the Sharjah Onshore Area C Project in United Arab Emirates from Eni Sharjah B.V. has been completed.

⁸ On October 26, 2022, the PTTEP Group signed Farm-in/Farm-out Agreement to acquire 25 percent stake in the Sharjah Onshore Area A Project from Eni Sharjah B.V. (Eni) The acquisition was completed on December 23, 2022.

⁹ On December 16, 2022, the PTTEP Group has entered into a Sale and Purchase Agreement (SPA) to sell its entire 2.5 percent participati interest in Block 17/06 Project in Angola

¹⁰ PTTEP Australasia Project consists of several concession blocks in Australia, with participating interests of 90-100 percent. On November 19, 2021, the PTTEP Group submitted a request to return the exploration block of AC/L3 and received the approval from the Government of Australia on August 2, 2022. The PTTEP Group also submitted a request to return the exploration license of AC/P54 on December 19, 2022, and decided not to submit a renewal application of Audacious Field (AC/RL6) on December 20, 2022. All of which will be effective after the Government of Australia's approval.

¹¹ On August 31, 2022, the PTTEP Group has entered into a Sale and Purchase Agreement (SPA) to sell PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada, which holds 25 percent interest in the Barreirinhas AP1 Project and 20 percent interest in the Brazil BM-ES-23 Project. The completion will be subject to conditions as prescribed in the SPA.

Principal Projects in Operation

The following is a summary of project activities undertaken during 2022. Production and sales figures described hereunder are total production and sales figures for the respective projects.

1) **Project Activity Highlights in Thailand** : Most PTTEP Group's projects in Thailand are in the Production Phase, located both in the Gulf of Thailand and onshore. The following are the highlights of key project activities in Thailand during 2022.

Bongkot Project

The Bongkot Project is located in the southern part of the Gulf of Thailand, consisting of Bongkot North and Bongkot South fields (Blocks B15, B16, and B17). The PTTEP Group held 66.6667 percent interest after the completion of the additional stake of 22.2222 percent in Blocks B15, B16, and B17 from Shell and Block G12/48 from a subsidiary of Shell since June 2018 and was the operator. The project has been produced since 1993. All of natural gas and condensate produced from the Bongkot Project is sold to PTT, under a Take-or-Pay basis pursuant to long-term Gas Sales Agreements (GSA).

On April 23, 2022, Bongkot Block B15 concession expired and the operatorship has been transferred to PTTEP Energy Development Company Limited (PTTEP ED), under G2/61 Production Sharing Contract (PSC). For Bongkot Block B16 and Block B17, production will be continued until the end of concessions on March 7, 2023, and will transfer to PTTEP ED, under G2/61 Project.

In 2022, the infill wells were drilled to maintain production volume, which the PTTEP Group will be a sole operator, where the Company shall recognize all revenues and costs from the produced petroleum. The average sales volume in 2022 was 676 million standard cubic feet per day (MMSCFD) for natural gas [equivalent to approximately 108,700 barrels of oil equivalent per day (BOED)] and approximately 18,500 barrels per day (BPD) of condensates. The decreasing in sales volume is in line with what has been agreed upon Bongkot gas sale agreement after Bongkot Block B15 concession ended on April 23, 2022.

The Block G12/48, located adjacent to the east of Bongkot South Field, is held and operated by the PTTEP Group with 66.6667 percent working interest. The production area and development plan were approved by the Department of Mineral Fuels in March 2015, with production commencing on October 20, 2018, through Bongkot South Field's Central Processing platform. The natural gas sales volume of Block G12/48 is under Bongkot South gas sale agreement.

S1 Project

The S1 Project is the largest onshore oil field in Thailand, with the production area covering parts of Kamphaeng Phet, Sukhothai, and Phitsanulok provinces. The PTTEP Group is the operator with 100 percent interest. The project was officially approved the extension of petroleum production period for another 10 years, from March 15, 2021, to March 14, 2031.

The product from the S1 Project consists of crude oil, natural gas, and liquefied petroleum gas (LPG). Crude oil produced at S1 is sold to PTT and is transported via truck and rail to the refineries of Thai Oil Public Company Limited, Bangchak Corporation Public Company Limited (Bangchak) refineries, PTT Global Chemical Public Company Limited, and

IRPC Public Company Limited. The produced gas from the project is sold to PTT, UAC Global Public Company Limited, and Thai Housewives Product for Climate Change Protection Cooperative Limited (TCCT), and the other part that undergoes LPG separation will be sold to PTT.

During 2022, the project continuously drilled exploration and production wells to maintain its production level. Environmental impact assessments were also undertaken in both existing and new production areas. The project's average sales volume of crude oil was approximately 25,800 BPD, while the natural gas sales averaged at 8 MMSCFD (approximately 1,500 BOED), and the average LPG sales volume was 180 metric tons per day (approximately 1,500 BOED).

PTTEP 1 Project

The PTTEP 1 Project is located in Suphan Buri and Nakhon Pathom provinces. The PTTEP Group is the sole owner and operator. Crude oil produced at the project is sold to PTT and is transported via truck to the Bangchak refinery. In 2022, the project's average sales volume of crude oil was approximately 215 BPD.

B6/27 Project

The B6/27 Project is located in the Gulf of Thailand, off the coast of Chumphon Province. The PTTEP Group is the sole owner and operator. The concession contract will end in February 2023. Currently, the project is waiting for approval, from Department of Mineral Fuels, on the Final Decommissioning Plan (FDP).

Arthit Project

The Arthit Project is located in the southern part of the Gulf of Thailand. The PTTEP Group has 80 percent participating interest in the project and is the operator. The project entered into long-term natural gas and condensate agreement with PTT on a take-or-pay basis.

During 2022, the project has successfully increased gas sales volume under the new GSA at CDC 294 MMSCFD. In addition, the project has successfully started first gas from its main wellhead platform at Arthit South area, alongside with production wells drilling in order to maintain production levels. The average natural gas sales volume for the project was approximately 294 MMSCFD (approximately 48,000 BOED), and the average condensate sales volume was approximately 16,000 BPD.

Block G8/50, located adjacent to the north of Arthit Project and held and operated by the PTTEP Group with 80 percent working interest, produced through Arthit Project's central processing platform with the natural gas being sold to PTT under Arthit Project's sales contract. Since March 2019, G8/50 has ceased its production. However, this does not affect the total sales volume of the Arthit Project.

L22/43 Project

The L22/43 Project is located in Phitsanulok and Phichit provinces. The PTTEP Group is the sole owner and operator. The project has been under production suspension since 2018 and completely revisited the field potential.

In 2022, the project drilled 2 development wells. However, the preliminary result shows sub-commercial hydrocarbon potential. Further studies on the field potential is ongoing, in order to consider potential resumption in the future.

L53/43 and L54/43 projects

The L53/43 and L54/43 projects are located in Suphan Buri, Kanchanaburi, Phra Nakhon Si Ayutthaya, and Ang Thong provinces. The PTTEP Group is the sole owner and operator. Crude oil produced from the project is sold to PTT and is transported via truck to the Bangchak refinery.

In 2022, the L54/43 Project drilled development wells to maximize petroleum potential and production capacity. The average crude oil sales volume was approximately 780 BPD. Meanwhile, the L53/43 Project has ceased production since 2019.

E5 Project

The E5 Project is located in Khon Kaen Province. The PTTEP Group holds 20 percent participating interest in the project with ExxonMobil as the operator with 80 percent participating interest. All of the natural gas produced by the E5 Project is sold to PTT as per a long-term GSA until the end of concession. The natural gas is supplied through pipelines to EGAT's Nam Phong Power Plant.

In 2022, the project's average sales volume of natural gas sales was 7.1 MMSCFD (approximately 1,100 BOED).

Contract 4 Project

The Contract 4 Project and Block G7/50 are located in the Gulf of Thailand. The PTTEP Group holds a 60 percent interest in the project, with Chevron as the operator. All of the natural gas and condensate produced from the project is sold to PTT under long-term gas and condensate sales agreements.

In 2022, the project sold natural gas at an average rate of approximately 400 MMSCFD (approximately 65,700 BOED) and condensates at an average rate of approximately 15,700 BPD. The project continued to drill additional development wells aiming to maintain the production plateau.

G4/43 Project

The G4/43 Project is located in the Gulf of Thailand. The PTTEP Group holds a 21.375 percent interest in the project with Chevron as the operator. The project has mutual long-term GSA and crude oil sale agreements with the B8/32 & 9A Project.

In 2022, the project's sales volume of crude oil and natural gas averaged approximately 2,150 BPD and 1.6 MMSCFD (equivalent to approximately 260 BOED), respectively.

Sinphuhorm Project

The Sinphuhorm Project is located in Udon Thani and Khon Kaen provinces. The PTTEP Group is the operator with 80.48 percent direct and indirect participating interests, after the acquisition in APICO. The natural gas is supplied through the pipeline to EGAT's Nam Phong Power Plant. The investment plan fulfilled the development and work plan's activities to maintain the sales volume as per the new GSA's commitment and obligation.

In 2022, the project's average sales volume of natural gas sales was 97 MMSCFD (approximately 15,900 BOED) and approximately 262 BPD for condensates.

B8/32 & 9A Project

The B8/32 & 9A Project is located in the Gulf of Thailand, off the coast of Chumphon Province. The PTTEP Group holds a 25.001 percent interest in the project with Chevron as the operator. The project currently has long-term GSAs with PTT and annual crude sales agreement with other purchasers for spot cargos.

During 2022, the project continued to carry out development drilling and waterflood operations in order to maintain the crude oil production levels. Sales volume averaged at approximately 10,600 BPD for crude oil and approximately 48 MMSCFD for natural gas (approximately 8,200 BOED).

G4/48 Project

The G4/48 Project is located in the Gulf of Thailand, off the coast of Surat Thani Province. The PTTEP Group holds a 5 percent interest in the project with Chevron as the operator. The project has mutual long-term gas sales agreements and crude oil sale agreements for spot cargo with the Contract 3 Project.

In 2022, sales volume from the project averaged 1 MMSCFD for natural gas (equivalent to approximately 130 BOED) and approximately 45 BPD for crude oil.

G1/61 Project

The G1/61 Project is natural gas, condensate, and crude oil producing project located in the Gulf of Thailand. PTTEP ED has become an operator for the project under Production Sharing Contract (PSC) since April 24, 2022.

In 2022, gas producing gas rate was at 210 MMSCFD to meet pre-committed volume. In addition, 8 new wellhead platforms have been completely installed as planned. The project is continuously drilling additional infill wells, in order to ramp up gas production according to work plan.

G2/61 Project

The G2/61 Project is natural gas and condensate producing project located in the Gulf of Thailand. PTTEP ED has become an operator in Block G2/61 under Production Sharing Contract (PSC) since April 24, 2022.

In 2022, the project has been producing natural gas and condensate with the minimum volume stated in the PSC of 200 MMSCFD. The project continued transition work plan, including construction and installation of new platforms, and drilling development wells to prepare for the transition from existing concession Block B16 and B17 (Bongkot Project) and ensure gas production at 700 MMSCFD in 2023.

Projects Located in Overlapping Areas

MTJDA Project

The PTTEP Group has a 50 percent participating interest in the MTJDA Project with CPOC as the operator. The PTTEP Group, Petronas (Malaysia's natural oil company) and the Malaysia-Thailand Joint Authority (MTJA) executed a GSA for the sales of the natural gas from the MTJDA Project to PTT and Petronas, whilst crude oil and condensates produced from the project were sold through auction.

During 2022, the project was granted a 10-year extension of the production period until 2039, as well as securing gas supply to Thailand at least 30 MMSCFD until 2025 to support domestic gas demand. In addition, the project continuously drilled production and infill wells to maintain the production level, and exploration and development wells to develop new phases. The project has an average sales volume of approximately 285 MMSCFD (approximately 46,100 BOED) for natural gas and approximately 9,000 BPD for condensates.

G9/43 Project

The G9/43 Project is located in the Gulf of Thailand with the PTTEP Group as the sole owner and operator. At present, all activities for this project were suspended, pending the resolution of the boundary dispute between the governments of Thailand and Cambodia.

2) **International Projects:** The PTTEP Group has overseas projects separated into the following regions.

2.1) **Project Activity Highlights in Other Southeast Asia Countries**

The PTTEP Group has projects in this region which are located in Myanmar, Malaysia, Vietnam, and Indonesia. The following section highlights the project activities.

Zawtika Project

The Zawtika Project is a gas project located in the Gulf of Moattama, Myanmar. The PTTEP Group holds 80 percent participating interest and is the operator, with Myanmar Oil and Gas Enterprise (MOGE) holding the remaining 20 percent interest. The gas produced from this project is sold to PTT, supplying Thai market under long-term GSA on a take-or-pay basis and partially sold to MOGE for domestic consumption in Myanmar under the long-term sales contract. To transport natural gas from Zawtika Project to Thailand, the PTTEP Group and the joint venture partners established a gas transportation company called Andaman Transportation Limited (ATL) to construct and operate an offshore and onshore pipeline from the project to the Thai border.

In 2022, despite the COVID-19 situation and local unrest in Myanmar, the project could still deliver gas as per commitment and obligation under GSAs and monitor the situation closely, identify potential risk, and prepare asset readiness following the Business Continuity Management (BCM) plan to ensure uninterrupted supply of petroleum, including close coordination with PTT, the Department of Mineral Fuels, the Ministry of Energy, and Ministry of Foreign Affairs, on a regular basis.

Moreover, to maintain gas production in accordance with existing obligations, the project has been developing Phase 1D as per the Field Development Plan. Currently, the production platform construction work is as planned. In addition, the project has a drilling campaign for 13 appraisal wells, of which, 4 wells were completed in 2022. The average sales volume of natural gas for the project in 2022 was 320 MMSCFD (approximately 50,100 BOED).

Yadana Project

The Yadana Project is a large gas project located in the Gulf of Moattama, Myanmar. After the withdrawal of TotalEnergies, as the operator and the partner of the project and Moattama Gas Transportation Company (MGTC), PTTEP International Limited (PTTEPI), a wholly-owned subsidiary of PTTEP, has been appointed to be an operator, with approval

from partners, in order to ensure gas supply continuity to support energy consumption and long-term energy security for Thailand and Myanmar.

Following the withdrawal of TotalEnergies, participating interest of the PTTEP Group in Yadana Project and MGTC changed from 25.50 percent to 37.0842 percent starting from July 20, 2022. The transition works were completed, and operations were continued smoothly. This change has no impact to buyers. Natural gas produced from the project is continuously sold to PTT on a take-or-pay basis pursuant to long-term GSA, and a certain portion is sold to MOGE for domestic use in Myanmar.

In 2022, major activities per work program completed as planned. The average gas sales volume was 720 MMSCFD (approximately 89,300 BOED).

Myanmar M3 Project

The Myanmar M3 Project is located offshore, in the Gulf of Moattama, Myanmar. The PTTEP Group is the operator. The Field Development Plan was approved in April 2021. The PTTEP Group is now waiting for the approval of PSC Supplementary from the Government of Myanmar to proceed with the next development stage.

As for the withdrawal of Mitsui Oil Exploration Company Limited (MOECO), a joint partner of Myanmar M3 Project with its shareholding interest at 20 percent, the Myanmar Government had already approved the withdrawal in November 2022, resulting in PTTEP Group holding 100 percent shareholding interest in this project.

The Domestic Gas to Power project is an integrated energy project covering the entire supply chain from exploration and production, gas transportation, and a gas-fired power plant in Myanmar. At the initial stage, the PTTEP Group plans to feed natural gas from Zawtika and Myanmar M3 Projects to supply a new power plant with a capacity of 600 megawatts for domestic consumption. After the approval of Notice to Proceed from the Government of Myanmar back in December 2020, the project has been facing delay including the Final Investment Decision (FID) as a result of the local political situation and COVID-19. The PTTEP Group is still closely monitoring the situations to assess risks as well as to prepare for an appropriate action plan.

The Malaysia Project

On March 21, 2019, the PTTEP Group acquired 100 percent of Murphy Oil Corporation's (Murphy) business in Malaysia. The agreement was completed in July 2019. Subsequently, the PTTEP Group has named investments of all projects in Malaysia under the Malaysia Project. The details are as follows:

Malaysia Block K Project consists of Kikeh, Siakap North-Petai (SNP), and Gumusut-Kakap (GK) fields which are producing oil fields located offshore Sabah, Malaysia. The PTTEP Group holds participating interest of 56 percent and 22.4 percent in the Kikeh and SNP fields respectively and is the operator. Shell is the operator of GK, with PTTEP's participating interest at 7.2 percent

In 2022, the project had an average production volume for crude oil of approximately 26,100 BPD and 30 MMSCFD for natural gas. In addition, during the year, the project continued to drill in GK field for increased production as per the work plan.

Malaysia SK309 and SK311 Project are oil and gas producing fields in the shallow water offshore Sarawak, Malaysia. The PTTEP Group holds a participating interest of 59.5 percent in all fields except the East Patricia oil field, where the Company has a 42 percent participating interest and operates all fields in the blocks.

In 2022, the projects had a total average crude and condensate production rate of approximately 17,300 BPD and an average gas rate of approximately 210 MMSCFD the production contributed from infill wells drilling.

Malaysia Block H Project is a natural gas field located in the deep water offshore Sabah, Malaysia. The PTTEP Group holds 56 percent interest in Rotan Field and 42 percent interest in the remaining areas.

The project had started the natural gas production since early February 2021 and was able to reach full production capacity of 270 MMSCFD. In 2022, the average production is 270 MMSCFD and plan for drilling the exploration wells expected to drill in 2023.

Malaysia SK410B Project is located offshore Sarawak, Malaysia. The PTTEP Group holds participating interest of 42.5 percent in the project and is the operator. In 2022, the development project was approved by Petronas Milestone Review Gate 4 in March 2022, consequently the Front-End Engineering Design (FEED) started in July 2022 with the target to complete by Q3/2023. In parallel to the commercial negotiation with all necessary government had been started to support the upcoming Final Investment Decision.

Moreover, the project successfully made new gas discovery at the Paprika-1 which is the 2nd exploration well of the project where it encountered reasonable gas pay in clastic reservoir. The project will conduct further studies in order to evaluate future development plan.

Malaysia SK314A Project is located in the shallow water offshore Sarawak, Malaysia. The PTTEP Group holds participating interest of 59.5 percent in the project and is the operator. In 2022, 2 exploration wells have been drilled according to a commitment under the PSC.

Malaysia SK417 Project is located in the shallow water offshore Sarawak, Malaysia. The PTTEP Group holds participating interest of 80 percent in the project and is the operator. The project has completed exploration wells, Dokong-1 and Nangka-1, in 2021. In addition, the remaining 1 appraisal well is planned as per exploration commitment. The exploration well preparation is ongoing, with focus on surface location verification to be ready to drill in 2023.

Malaysia SK438 Project is located in the shallow water offshore Sarawak, Malaysia. The PTTEP Group holds participating interest of 80 percent in the project and is the operator. The project is preparing for the drilling of an exploration well as per 2023 plan.

Malaysia SK405B Project is located in the shallow water offshore Sarawak, Malaysia. The PTTEP Group holds participating interest of 59.5 percent in the project and is the operator. After the discovery of crude oil and natural gas reservoir by Sirung-1 well in March 2021, the project is currently studying on upside petroleum potential in this area for future exploration campaigns. The project's development plan was approved by Petronas in December 2022. Currently, the project is preparing for the drilling campaign in 2023.

Malaysia PM407 Project is located in the shallow water offshore Peninsular, Malaysia. The PTTEP Group holds participating interest of 55 percent and is the operator. In 2022, the project has completed geological and geophysical studies to evaluate petroleum potential. Currently, the project is preparing to drill an exploration well in Q1/2023.

Malaysia PM415 Project is located in the shallow water offshore Peninsular, Malaysia. The PTTEP Group holds participating interest of 70 percent and is the operator. In 2022, the project was in the process of post-drilling evaluation, after drilling 2 exploration wells in 2020, together with the remaining petroleum potential evaluation, which will result in the upcoming exploration strategy of the block in the near future.

Malaysia SB412 Project is located in the shallow-deep water offshore Sabah. The PTTEP Group holds participating interest of 60 percent and is the operator. In 2022, the project has performed geological and geophysical studies to evaluate petroleum potential of the block.

Vietnam 9-2 Project

The Vietnam 9-2 Project is producing natural gas and crude oil located offshore southeast of Vietnam. The PTTEP Group has a 25 percent interest in the project with HV JOC as the operator. The crude oil produced from the project is sold to domestic refineries while the produced natural gas is sold to Vietnam Oil and Gas Group, a state-owned enterprise, for domestic consumption.

In 2022, the project drilled 1 development well and is expected to complete by Q1/2023. The project had an average sales volume for natural gas of 12 MMSCFD (approximately 2,500 BOED) and for crude oil of approximately 3,200 BPD.

Vietnam 16-1 Project

The Vietnam 16-1 Project is producing natural gas and crude oil located offshore southeast Vietnam. The PTTEP Group has a 28.5 percent interest in the project, with HL JOC as the operator. The crude oil production of the project is sold to domestic refineries and exported to international market through an auction. Natural gas is sold to the Vietnam Oil and Gas Group, a state-owned enterprise, for domestic consumption.

In 2022, the project completed drilling campaign of 2 development wells in Q4/2022. The average sales volume was approximately 4 MMSCFD of natural gas (approximately 970 BOED) and 11,900 BPD of crude oil.

Vietnam B & 48/95 Project

The Vietnam B & 48/95 Project is located offshore Vietnam. The PTTEP Group holds 8.5 percent of participating interest in the project with Vietnam Oil and Gas Group as the operator. The project was granted approval for the Field Development Plan and is currently in the negotiation process on commercial terms in order to push forward with the Final Investment Decision (FID) with targeted first production by the end of 2026, and gradual ramp up to 490 MMSCFD, including the production from Vietnam 52/97 Project.

Vietnam 52/97 Project

The Vietnam 52/97 Project is located offshore Vietnam. The PTTEP Group holds 7 percent of participating interest in the project with Vietnam Oil and Gas Group as the operator. The project was granted approval for the Field Development Plan and is currently in the negotiation process on commercial terms in order to push forward with the Final Investment Decision (FID) with targeted first production by the end of 2026 and gradual ramp up to 490 MMSCFD, including the production from Vietnam B & 48/95 Project.

Natuna Sea A Project

The Natuna Sea A Project is located to the west of the Natuna Sea in Indonesia. In 2013, the PTTEP Group jointly signed a share purchase agreement with Pertamina, on a 50:50 basis, to acquire subsidiaries of Hess Corporation holding 23 percent interest in the Natuna Sea A Project. As a result, PTTEP holds an 11.5 percent interest in the project, with Premier Oil (which later on changed the name to Harbour Energy) as the operator. The crude oil and condensate produced are sold through the National Oil Company (Pertamina), while natural gas produced is sold in Singapore for domestic consumption.

In 2022, the project had an average sales volume for natural gas and oil at approximately 170 MMSCFD and 1,300 BPD respectively and drilled 2 development wells, in order to maintain gas potential and gas production rate.

2.2) Project Activity Highlights in Central Asia

The PTTEP Group's project in this region is located in Kazakhstan, with the key project highlights as follows:

Dunga Project

The Dunga Project is a producing oil field located onshore in the west of Kazakhstan. The PTTEP Group holds a 20 percent interest, with TotalEnergies as the operator. In 2022, the project had an average sales volume for crude oil of approximately 12,000 BPD and natural gas of 2 MMSCFD (approximately 360 BOED). The project is conducting the development of Dunga Phase 3 which will increase the production capacity to 18,000 BPD in 2024.

2.3) Project Activity Highlights in the Middle East

The PTTEP Group's projects in this region are located in Oman and UAE, with the key project highlights as follows:

Oman Block 61 Project

The Oman Block 61 Project is a producing onshore gas block situated in the central part of Oman. The PTTEP Group has signed a Sale and Purchase Agreement (SPA) to acquire 20 percent of interest from BP, who is the operator, and the acquisition was effective from March 23, 2021. The project currently has a full production capacity of natural gas and condensate according to the Sales and Purchase Agreement at 1,500 MMSCFD and 59,000 barrels per day (BPD), respectively.

Oman Block 6 Project (PDO)

The Oman Block 6 Project (PDO) is the largest producing oil asset in central Oman, covering an area of approximately one-third of the country. The PTTEP Group holds a 2 percent participating interest in this project, with Petroleum

Development Oman (PDO) as the operator (Operating Consortium). In 2022, the project had an average sales volume of approximately 650,000 BPD.

Oman Block 53 Project

The Oman Block 53 Project is a large producing onshore oil field located in Southern Oman. The PTTEP Group holds a 1 percent participating interest in this project, with Occidental as the operator. In 2022, the project had an average sales volume for crude oil of approximately 94,000 BPD.

Oman Onshore Block 12 Project

The Oman Onshore Block 12 Project is a large onshore exploration block with an acreage of around 10,000 square kilometers, located in central Oman. The PTTEP Group holds a 20 percent participating interest in the project, with TotalEnergies as the operator. The project will continue geological and geophysical studies throughout the year 2023 and plan to drill 2 exploration wells in 2023-2024.

Abu Dhabi Offshore 1 Project

The Abu Dhabi Offshore 1 Project is located in the offshore northwest of UAE. The PTTEP Group holds a 30 percent participating interest in the project, with Eni as the operator. Currently, the project is in the subsurface evaluation of the petroleum potential for future exploration, including the preparation of geological and geophysical study reports.

Abu Dhabi Offshore 2 Project

The Abu Dhabi Offshore 2 Project is located in the offshore northwest of UAE. The PTTEP Group holds a 30 percent participating interest in the project, with Eni as the operator.

The project successfully drilled XF-002 exploration well and discovered significant raw gas in place for both shallow and deep targets, total approximately 2.5-3.5 trillion cubic feet (TCF) in August 2022. Currently, the project is in progress of an appraisal well drilling, including further evaluation of petroleum potential for drilling another exploration well.

Abu Dhabi Offshore 3 Project

The Abu Dhabi Offshore 3 Project is located in the offshore northwest of UAE. The PTTEP Group holds a 30 percent participating interest in the project, with Eni as the operator. Currently, the project is in progress of petroleum potential evaluation for the preparation of appraisal well and exploration well which is to be drilled in 2024-2026.

Sharjah Onshore Area C Project

The Sharjah Onshore Area C Project is located in the central part of Sharjah, UAE. The PTTEP Group has signed a Farm-in/Farm-out Agreement, which was completed on March 1, 2022. The PTTEP Group holds a 25 percent participating interest of the project, Eni as the operator holds 50 percent, and SNOC, which is the state energy company of Sharjah, holds 25 percent. The 3D seismic survey has been carried out in 2022 and is currently in progress of 3D seismic processing in order to evaluate petroleum potential.

Sharjah Onshore Area A Project

The Sharjah Onshore Area A Project is located in the central part of Sharjah, UAE. The PTTEP Group has signed a Farm-in/Farm-out Agreement, which was completed on December 23, 2022. The PTTEP Group holds a 25 percent participating interest of the project, Eni as the operator holds 50 percent, and SNOC, which is the state-owned energy company of Sharjah, holds 25 percent. The project is in the progress of 3D seismic processing.

2.4) Project Activity Highlights in Africa

The PTTEP Group's projects in this region are located in Algeria, Mozambique, and Angola, with the key project highlights as follows:

Algeria 433a & 416b Project

The Algeria 433a & 416b Project is producing crude oil located in onshore eastern part of Algeria. The PTTEP Group holds a 35 percent participating interest in the project, with Groupement Bir Seba (GBRS – Joint Operating Company) as the operator. In 2022, OPEC+ continued partial production quota cut in some months due to world economic volatility. Consequently, the project's average production for crude oil in 2022 was at approximately 16,300 BPD.

Algeria Hassi Bir Rekaiz Project

The Algeria Hassi Bir Rekaiz Project is located in onshore eastern part of Algeria. The operator is Groupement Hassi Bir Rekaiz (GHBR – Joint Operating Company), which was effective on October 1, 2022. The PTTEP Group holds a 49 percent participating interest and SONATRACH, Algeria's national oil company, holds a 51 percent participating interest. In 2022, the project has commenced first crude oil production on June 1, 2022, with production capacity of approximately 13,000 BPD. The project has also planned to ramp up its production capacity to around 50,000-60,000 BPD in late 2027.

Mozambique Area 1 Project

The Mozambique Area 1 Project, which is a large LNG project located in offshore Mozambique, is currently in the Development Phase. The PTTEP Group holds a 8.5 percent participating interest in the project, with TotalEnergies as the operator.

In 2021, the project commenced foundation work for onshore LNG facilities, temporary Beach Landing, subsea pipeline dredging, and construction of security infrastructures. The project finance had closed, and the first debt drawdown was achieved. However, due to the Palma security situation since March 2021, which is close to the project construction site, in April 2021, force majeure was then declared, to suspend all construction works at the site, for the safety reason of all employees and stakeholders. After which South African Development Committee (SADC) and the Rwanda Defense Force (RDF) has deployed military to support Mozambique to deal with the situation. The troops can secure the area in the vicinity of LNG site.

In 2022, the operator was closely monitoring the situation with the government and is studying the resumption plan in detail.

2.5) Project Activity Highlights in Australasia

The PTTEP Group has a project in this region which is located in the Timor Sea, Australia comprising 6 concession permits with the following as key highlights:

PTTEP Australasia Project

The PTTEP Australasia Project is located in Australia and has 6 concession permits, which are Cash-Maple Field (AC/RL7), Oliver Field (AC/RL12), Tenacious Field (AC/RL4) and Katandra Field (AC/RL10), currently in progress to define the proper direction of the project. In 2022, the project received the approval for Challis Field (AC/L3) relinquishment, submitted a request to return Orchid Field (AC/P54), and decided not to submit a renewal application of Audacious Field (AC/RL6).

With regards to a class action lawsuit made against PTTEP Group in the Federal Court of Australia, by a group of Indonesian seaweed farmers for compensation relating to the Montara oil spill incident in 2009, on November 21, 2022, PTTEP group participated in mediation process and reached an in-principle agreement with the group of Indonesian seaweed farmers, that PTTEP Group will pay 192.5 Million Australian Dollars (equivalent to 129 Million US Dollars) in full and final settlement of the class action (including the appeal).

2.6) Project Activity Highlights in North and South America

The PTTEP Group's projects in this region are located in Canada and Mexico. The following are significant activities in this region:

Mariana Oil Sands Project

The Mariana Oil Sands Project is located in Alberta, Canada. The PTTEP Group holds a 100 percent participating interest and is the operator of the Thornbury, Hangingstone, and South Leismer fields. Since 2021, well abandonment campaign and reclamation activities has been conducted, prior to the surrender of all leases according to the relevant regulations.

Mexico Block 12 (2.4) Project

Mexico Block 12 (2.4) Project is located in the Mexican Ridges, the western part of Gulf of Mexico. The PTTEP Group holds a 20 percent participating interest in the project with Petronas as the operator. The exploration well drilling was completed according to work commitment under the concession, with no petroleum potential confirmed.

Mexico Block 29 (2.4) Project

The Mexico Block 29 (2.4) Project is located in the Campeche Basin, the southern part of Gulf of Mexico. The PTTEP Group holds a 16.67 percent participating interest in the project with Repsol as the operator. The project is currently undergoing a pre-development study and evaluation of future petroleum potential.

Projects Ended Concession Divestment and Relinquishment in 2022

Contract 3 Project

The Contract 3 Project is located in the Gulf of Thailand, off the coast of Surat Thani Province. The PTTEP Group holds a 5 percent interest in the project with Chevron as the operator. All of the natural gas and condensate

produced from the project is sold to PTT according to long-term gas and condensate sales agreements, whilst the produced crude oil is under an annual sales agreement and spot cargo with other purchasers.

The end of the Contract 3 Project concession was on April 23, 2022. In 2022, average sales volume of the project was approximately 64 MMSCFD (approximately 10,400 BOED) for natural gas, approximately 2,600 BPD for crude oil and approximately 2,100 BPD for condensates.

Myanmar MD-7 Project

The MD-7 Project is located in the deep water of the Gulf of Moattama, Myanmar. The PTTEP Group has a 50 percent participating interest in the project and is the operator. TotalEnergies joined the consortium with 50 percent participating interest in 2017.

The project completed the drilling of an exploration well in March 2020 with no confirmed commercial reserves. The project submitted the block relinquishment notification letter in October 2020 after the fulfillment of the requirements under the Product Sharing Contract. The relinquishment approval by the Government of Myanmar was delivered on October 25, 2022.

Yetagun Project

The Yetagun Project is a natural gas and condensates producing project, located in the Gulf of Moattama, Myanmar. The PTTEP Group holds a 19.31784 percent interest in the project with PC Myanmar (Hong Kong) Limited as the operator. All of the natural gas from the Yetagun Project is sold to PTT on a take-or-pay basis pursuant to long-term GSA. To transport natural gas from Yetagun Project to Thailand, the PTTEP Group and the joint venture partners established a gas transportation company called Taninthayi Pipeline Company (TPC) to construct and operate an offshore pipeline and an onshore pipeline (parallel to the Yadana pipeline) from the project to the Thai border.

During 2022, the project suspended the production due to insufficient natural gas for minimum production and the machine has high temperature problem during Q2/2022. The project's total sales volume averaged 12 MMSCFD (approximately 1,900 BOED) for natural gas and approximately 600 BPD for condensates. The PTTEP Group had notified their decision to withdraw from Yetagun Project and TPC, with an effective date from May 31, 2022.

Block 17/06 Project

The Block 17/06 Project is located in the offshore west coast of Angola. On December 16, 2022, PTTEP Group has entered into a Sale and Purchase Agreement (SPA) to sell its entire 2.5 percent participation interest in Block 17/06 Project in Angola to SOMOIL BLOCO 17/06 (SU), S.A., a wholly-owned subsidiary of Sociedade Petrolifera Angolana, S.A (SOMOIL). Completion of the sale is expected by mid-2023 subject to the conditions prescribed in the SPA. This divestment marks the withdrawal of all PTTEP Group's investment in Angola.

Barreirinhas AP1 Project

The Barreirinhas AP1 Project is located in the Barreirinhas Basin, offshore east of Brazil. On August 31, 2022, the PTTEP Group has entered into a Sale and Purchase Agreement (SPA) to sell its investment in PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL), which are registered in Brazil, altogether

with all obligations to Ubuntu Engenharia e Serviços Ltda. PTTEP BL is holding a 25 percent interest in the Barreirinhas AP1 Project. Completion of the sale is subject to the conditions prescribed in the SPA.

Brazil BM-ES-23 Project

The Brazil BM-ES-23 Project is located in the Espirito Santo Basin, offshore east of Brazil. On August 31, 2022, the PTTEP Group has entered into a Sale and Purchase Agreement (SPA) to sell its investment in PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL), which are registered in Brazil, altogether with all obligations to Ubuntu Engenharia e Serviços Ltda. PTTEP BL is holding a 20 percent interest in the Brazil BM-ES-23 Project. Completion of the sale is subject to the conditions prescribed in the SPA.

PTTEP Australasia Project

- *Challis Field (AC/L3)*: On November 19, 2021, PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA) submitted a request to terminate and return the exploration block of AC/L3 and received the approval from the Government of Australia on August 2, 2022.

- *Orchid Field (AC/P54)*: On December 19, 2022, PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA) submitted a request to terminate and return the exploration license of AC/P54. The termination will be effective after receiving the official approval from the Government of Australia.

- *Audacious Field (AC/RL6)*: On December 20, 2022, PTTEP Australasia Timor Sea Pty Ltd (PTTEP AT) decided not to submit a renewal application for AC/RL6. The termination will be effective after receiving the official approval from the Government of Australia.

(2) Midstream

Oman LNG (OLNG)

PTTEP by PTTEP Oman E&P Corporation (POC) formerly Partex Oman Corporation has a 2 percent stake in Oman LNG LLC (OLNG) which owns two 3.4 million tons per annum capacity liquefaction trains located near Sur, Oman. A third liquefaction train by a separate company, Qalhat LNG (QLNG) in which OLNG is a joint investor, has an additional capacity of 3.6 million tons per annum. The three trains have a combined nameplate capacity of 10.4 million tons per annum. The LNG produced is sold into South Korea and Japan markets by existing long-term contracts (SPAs), due to be expired by end of 2024.

The partners in OLNG are the Government of Oman 51 percent, Shell 30 percent, Total 5.5 percent, Mitsubishi Corporation 2.8 percent, Mitsui & Co 2.8 percent, POC 2 percent, Korea Gas Corporation (KOGAS) 1.2 percent, Samsung 1 percent, Hyundai 1 percent, Daewoo International 1 percent, Itochu 0.9 percent, and SK Innovation 0.8 percent.

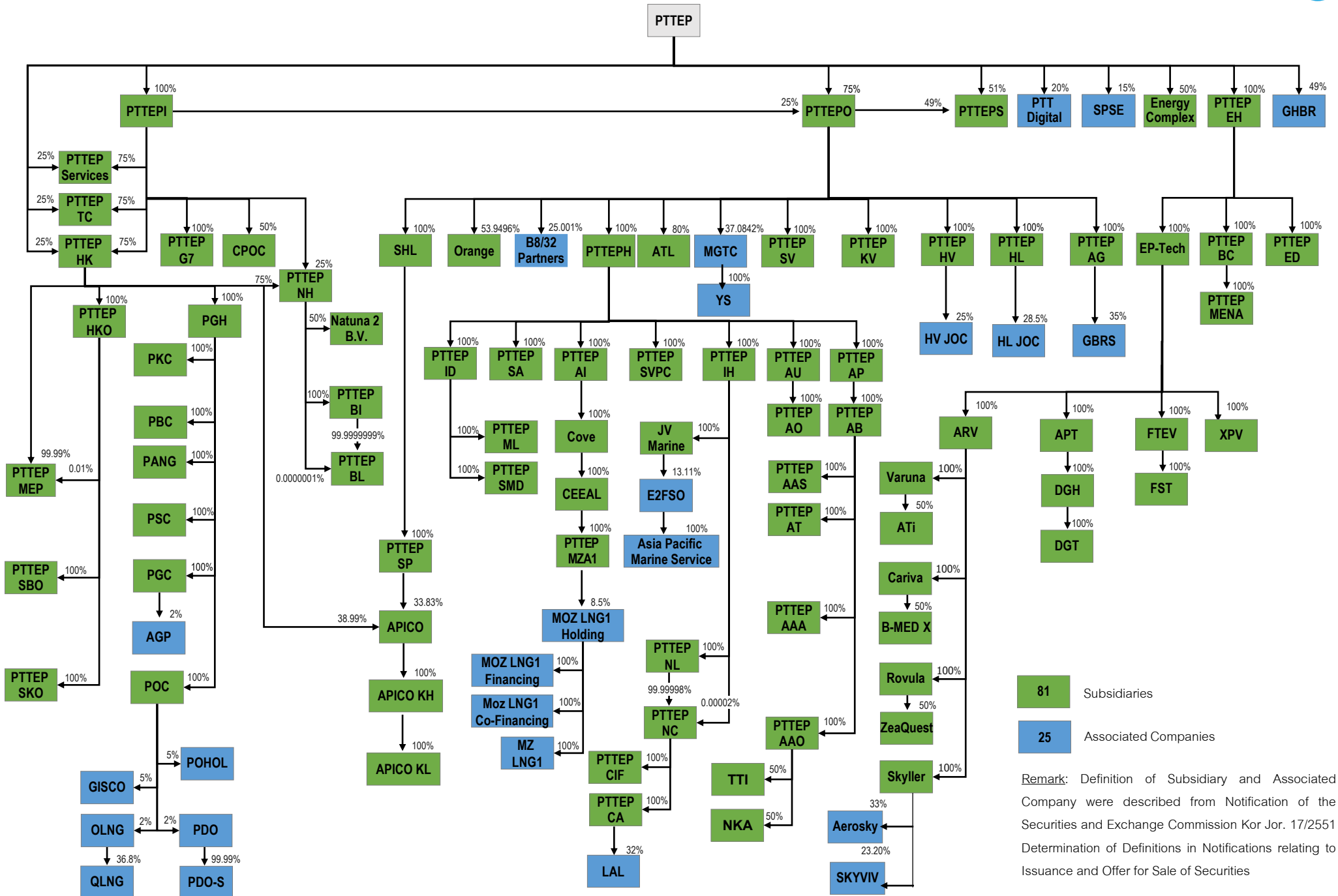
For QLNG, the partners are the Government of Oman 46.8 percent, Union Fenosa Gas 7.4 percent, Mitsubishi Corporation 3 percent, Itochu 3 percent, Osaka Gas 3 percent, and OLNG at 36.8 percent which makes POC indirectly holds 0.736 percent in QLNG.

the Good Corporate Governance and Business Ethics of the PTTEP Group, in order to ensure effectiveness, transparency, fairness, and the attainment of our business goals.

With respect to the selection of directors of the Company's subsidiaries and associated companies, we designate PTTEP executives responsible for projects under each relevant subsidiary and associated company as directors of these entities to ensure that they are managed in line with the Company's business direction and strategy. We may also appoint a local director, if required by domestic laws and regulations or investment conditions. The subsidiaries and associated companies meanwhile are obligated to report their performance to the Company on a quarterly basis in order to ensure their performance and effectiveness.

(2) Shareholding Structure of PTTEP Group

As of December 31, 2022, PTTEP invested in 106 legal entities, comprising 81 subsidiaries and 25 associated companies. The PTTEP Group Shareholding Structure is illustrated as below:



(3) Information of PTTEP

Company Name	PTT Exploration and Production Public Company Limited or PTTEP
Headquarters Address	555/1 Energy Complex Building A, 6 th and 19 th -36 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand
Type of Business	Exploration and production of petroleum and investments in related businesses
Registration Number	0107535000206
Telephone	+66-2537-4000
Facsimile	+66-2537-4444
Website	www.pttep.com
E-mail	Independent Directors: independentdirector@pttep.com Investor Relations: ir@pttep.com Corporate Secretary: corporatesecretary@pttep.com
Registered Capital	3,969,985,400 ordinary shares with THB 1 per share (THB 3,969,985,400)
Paid-Up Capital	3,969,985,400 ordinary shares with THB 1 per share (THB 3,969,985,400) as of December 31, 2022

(4) Subsidiaries and Associated Companies Information

- Subsidiaries Information¹

As of December 31, 2022, there were 81 subsidiaries that have the same contact address, telephone, and facsimile numbers as PTTEP as in 1.3 (3) Details of the directors designated by the PTTEP Group for each subsidiary are disclosed in Attachment 2 as follows:

No.	Abbreviation	Company Name	Number of Shares Sold		Total Direct/Indirect Holding	
E&P						
1	APICO	APICO LLC	338,278 389,937	Ordinary Share	PTTEP SP PTTEP HK	33.83% 38.99%
2	APICO KH	APICO Khorat (Holdings) LLC	-	-	APICO	100%
3	APICO KL	APICO (Khorat) Limited	5,885,168	Ordinary Share	APICO KH	100%
4	CEEAL	Cove Energy East Africa Limited	5,000	Ordinary Share	Cove	100%
5	Cove	Cove Energy Limited	509,240,963	Ordinary Share	PTTEP AI	100%
6	CPOC	Carigali-PTTEPI Operating Company Sdn. Bhd.	350,000	Ordinary Share	PTTEPI	50%
7	EP-Tech	EP-Tech Ventures Holding Company Limited	38,171,550	Ordinary Share	PTTEP EH	100%
8	JV Marine	JV Marine Limited	50,000	Ordinary Share	PTTEP IH	100%
9	Natuna	Natuna 2 B.V.	90,000	Ordinary Share	PTTEP NH	50%
10	Orange	Orange Energy Limited	1,000,000	Ordinary Share	PTTEPO	53.9496%
11	PANG	PTTEP (Angola) Corporation	50,000	Ordinary Share	PGH	100%
12	PBC	Partex (Brazil) Corporation	50,000	Ordinary Share	PGH	100%
13	PGC	PTTEP Gas Corporation	2,000,000	Ordinary Share	PGH	100%
14	PGH	PTTEP Group Holding B.V.	100,000	Ordinary Share	PTTEP HK	100%
15	PKC	PTTEP (Kazakhstan) Corporation	500	Ordinary Share	PGH	100%
16	POC	PTTEP Oman E&P Corporation	2,500	Ordinary Share	PGH	100%
17	PSC	Partex Services Corporation	3,000	Ordinary Share	PGH	100%
18	PTTEP AAA	PTTEP Australasia (Ashmore Cartier) Pty Ltd	1,700,000	Ordinary Share	PTTEP AB	100%

¹ Notification of the Securities and Exchange Commission No. Kor Jor. 17/2551 Re: Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities

No.	Abbreviation	Company Name	Number of Shares Sold		Total Direct/Indirect Holding	
19	PTTEP AAO	PTTEP Australasia (Operations) Pty Ltd	106,686,517	Ordinary Share	PTTEP AB	100%
20	PTTEP AAS	PTTEP Australasia (Staff) Pty Ltd	10	Ordinary Share	PTTEP AB	100%
21	PTTEP AB	PTTEP Australia Browse Basin Pty Ltd	50,000	Ordinary Share	PTTEP AP	100%
22	PTTEP AG	PTTEP Algeria Company Limited	50,000	Ordinary Share	PTTEPO	100%
23	PTTEP AI	PTTEP Africa Investment Limited	50,000	Ordinary Share	PTTEPH	100%
24	PTTEP AO	PTTEP Australia Offshore Pty Ltd	50,000	Ordinary Share	PTTEP AU	100%
25	PTTEP AP	PTTEP Australia Perth Pty Ltd	50,000	Ordinary Share	PTTEPH	100%
26	PTTEP AT	PTTEP Australia Timor Sea Pty Ltd	50	Ordinary Share	PTTEP AB	100%
27	PTTEP AU	PTTEP Australia Pty Ltd	50,000	Ordinary Share	PTTEPH	100%
28	PTTEP BI	PTTEP Brazil Investment B.V.	50,000	Ordinary Share	PTTEP NH	100%
29	PTTEP BL	PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada	790,293,700	Ordinary Share	PTTEP BI PTTEP NH	99.9999999% 0.0000001%
30	PTTEP CA	PTTEP Canada Limited	3,144,348,190	Ordinary Share	PTTEP NC	100%
31	PTTEP ED	PTTEP Energy Development Company Limited	421,019,233	Ordinary Share	PTTEP EH	100%
32	PTTEP EH	PTTEP Energy Holding (Thailand) Company Limited	699,541,855	Ordinary Share	PTTEP	100%
33	PTTEP G7	PTTEP G7 Limited	8,030,741	Ordinary Share	PTTEPI	100%
34	PTTEP HK	PTTEP HK Holding Limited	10,000	Ordinary Share	PTTEP PTTEPI	25% 75%
35	PTTEP HKO	PTTEP HK Offshore Limited	10,000	Ordinary Share	PTTEP HK	100%
36	PTTEP HL	PTTEP Hoang-Long Company Limited	50,000	Ordinary Share	PTTEPO	100%
37	PTTEP HV	PTTEP Hoan-Vu Company Limited	50,000	Ordinary Share	PTTEPO	100%
38	PTTEP ID	PTTEP Indonesia Company Limited	50,000	Ordinary Share	PTTEPH	100%
39	PTTEP IH	PTTEP International Holding Company Limited	50,000	Ordinary Share	PTTEPH	100%
40	PTTEP KV	PTTEP Kim Long Vietnam Company Limited	50,000	Ordinary Share	PTTEPO	100%
41	PTTEP MENA	PTTEP MENA Limited	500	Ordinary Share	PTTEP BC	100%

No.	Abbreviation	Company Name	Number of Shares Sold		Total Direct/Indirect Holding	
42	PTTEP MEP	PTTEP Mexico E&P Limited, S. de R.L. de C.V.	3,000	Ordinary Share	PTTEP HK PTTEP HKO	99.99% 0.01%
43	PTTEP ML	PTTEP Malunda Limited	50,000	Ordinary Share	PTTEP ID	100%
44	PTTEP MZA1	PTTEP Mozambique Area 1 Limited	5,000	Ordinary Share	CEEAL	100%
45	PTTEP NC	PTTEP Netherlands Coöperatie U.A.	-	-	PTTEP IH PTTEP NL	0.00002% 99.99998%
46	PTTEP NH	PTTEP Netherlands Holding Coöperatie U.A.	-	-	PTTEP HK PTTEPI	75% 25%
47	PTTEP NL	PTTEP Netherland Holding Limited	50,000	Ordinary Share	PTTEP IH	100%
48	PTTEP SA	PTTEP South Asia Limited	50,000	Ordinary Share	PTTEPH	100%
49	PTTEP SBO	PTTEP Sabah Oil Limited	10,000	Ordinary Share	PTTEP HKO	100%
50	PTTEP SKO	PTTEP Sarawak Oil Limited	10,000	Ordinary Share	PTTEP HKO	100%
51	PTTEP SMD	PTTEP South Mandar Limited	50,000	Ordinary Share	PTTEP ID	100%
52	PTTEP SP	PTTEP SP Limited	61,279,587	Ordinary Share	SHL	100%
53	PTTEP SV	PTTEP Southwest Vietnam Company Limited	50,000	Ordinary Share	PTTEPO	100%
54	PTTEPH	PTTEP Holding Company Limited	50,000	Ordinary Share	PTTEPO	100%
55	PTTEPI	PTTEP International Limited	2,000,000,000	Ordinary Share	PTTEP	100%
56	PTTEPO	PTTEP Offshore Investment Company Limited	6,667	Ordinary Share	PTTEP PTTEPI	75% 25%
57	PTTEPS	PTTEP Siam Limited	1,000,000	Ordinary Share	PTTEP PTTEPO	51% 49%
58	SHL	Sinphuhorm Holdings Limited	100	Ordinary Share	PTTEPO	100%
E&P Related						
59	APT	Asia Power and Transportation SG Holding Pte. Ltd. (Investments in power and gas pipeline projects for overseas projects)	5,450,000	Ordinary Share	EP-Tech	100%
60	ATL	Andaman Transportation Limited (Investments in gas pipeline projects for overseas projects)	62,500	Ordinary Share	PTTEPO	80%

No.	Abbreviation	Company Name	Number of Shares Sold		Total Direct/Indirect Holding	
61	DGH	Delta Gas Transportation SG Holding Pte. Ltd. (Investments in gas pipeline projects for overseas projects)	5,400,000	Ordinary Share	APT	100%
62	DGT	Delta Gas Transportation Limited (Investments in gas pipeline projects for overseas projects)	50,000	Ordinary Share	DGH	100%
63	PTTEP BC	PTTEP Business Center Company Limited (Business center for PTTEP and subsidiaries)	2,249,178,269	Ordinary Share	PTTEP EH	100%
64	PTTEP CIF	PTTEP Canada International Finance Limited (Raise fund for PTTEP business)	62,202,800	Ordinary Share	PTTEP NC	100%
65	PTTEP Services	PTTEP Services Limited (Personnel services support)	1,000,000	Ordinary Share	PTTEP PTTEPI	25% 75%
66	PTTEP SVPC	PTTEP Southwest Vietnam Pipeline Company Limited (Investments in gas pipeline projects for overseas projects)	50,000	Ordinary Share	PTTEPH	100%
67	PTTEP TC	PTTEP Treasury Center Company Limited (Treasury center for PTTEP and subsidiaries)	10,000,000	Ordinary Share	PTTEP PTTEPI	25% 75%
Other Businesses						
68	ARV	AI and Robotics Ventures Company Limited (Research and development and providing service for AI and robotics)	35,006,250	Ordinary Share	EP-Tech	100%
69	ATi	ATI Technologies Company Limited (Development and provision of technologies for the agricultural sector)	4,000,000	Ordinary Share	Varuna	50%
70	B-MED X	B-MED X Company Limited (Services for health care digital platforms)	200,000	Ordinary Share	Cariva	50%
71	Cariva	Cariva (Thailand) Company Limited (Development and provision of AI and robotic technologies for personal health, safety, and exercise)	19,352,560	Ordinary Share	ARV	100%
72	Energy Complex	Energy Complex Company Limited (Property Leasing)	180,000,000	Ordinary Share	PTTEP	50%

No.	Abbreviation	Company Name	Number of Shares Sold		Total Direct/Indirect Holding	
73	FST	FutureTech Solar (Thailand) Company Limited (Renewable energy business and electric power)	1,080,000	Ordinary Share	FTEV	100%
74	FTEV	FutureTech Energy Ventures Company Limited (Renewable energy business and various forms of power)	1,140,000	Ordinary Share	EP-Tech	100%
75	NKA	North Kimberley Airport Pty Ltd (Air base operations)	600	Ordinary Share	PTTEP AAO	50%
76	Rovula	Rovula (Thailand) Company Limited (Development and provision of AI and robotic technologies for subsea engineering)	94,091,290	Ordinary Share	ARV	100%
77	Skyller	Skyller Solutions Company Limited (Development and provision of drone services, AI and robotic technologies for air logistics)	36,412,270	Ordinary Share	ARV	100%
78	TTI	Troughton Island Pty Ltd [Air base (Secondary)]	100	Ordinary Share	PTTEP AAO	50%
79	Varuna	Varuna (Thailand) Company Limited (Development and provision of drone services, AI and robotic technologies for agriculture, and forestry)	38,262,010	Ordinary Share	ARV	100%
80	XPV	Xplor Ventures Company Limited (Venture capital in technologies and innovation business or mutual fund in energy and technologies business or digital asset)	186,825	Ordinary Share	EP-Tech	100%
81	ZeaQuest	ZeaQuest Company Limited (Development and provision of AI and robotic technologies for subsea engineering)	1,550,000	Ordinary Share	Rovula	50%

- Associated Companies Information¹

As of December 31, 2022, PTTEP had 25 associated companies as follows:

No.	Abbreviation	Company Name	Type of Business	Number of Shares Sold		Total Direct/ Indirect Holding
1	Aerosky	Aerosky Solutions Co., Ltd. Head Office: 3/24 Phahon Yothin 13 Alley, Phaya Thai, Phaya Thai, Bangkok 10400, Thailand Telephone: +66-2618-2266 Facsimile: -	Drone Solutions for Infrastructure and Equipment Inspection	300,000	Ordinary Share	Skyller 33%
2	AGP	Abu Dhabi Gas Industries Limited Head Office: P.O. Box 665, Abu Dhabi, United Arab Emirates Telephone: +971-2707-0000 Facsimile: +971-2602-3389	Gas Processing Facility	8,000	Ordinary Share	PGC 2%
3	Asia Pacific Marine Services	Asia Pacific Marine Services (EF) B.V. Head Office: Naritaweg 165, Telestone 8, 1043 BW Amsterdam, The Netherlands Telephone: - Facsimile: -	Lease of FSO (Vessel)	18,000	Ordinary Share	E2FSO 100%
4	B8/32 Partners	B8/32 Partners Limited Head Office: 19 Siam Commercial Bank Park Plaza, East 3 rd Building 5 th Floor, Ratchadaphisek Road, Chatuchak, Bangkok 10900, Thailand Telephone: +66-2545-5555 Facsimile: -	Petroleum Exploration and Production	110,000	Ordinary Share	PTTEPO 25.001%

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No.	Abbreviation	Company Name	Type of Business	Number of Shares Sold		Total Direct/ Indirect Holding
5	E2FSO	Erawan 2 FSO Pte. Ltd. Head Office: 3 Fraser Street #12-28 Duo Tower, Singapore Telephone: - Facsimile: -	Lease of FSO (Vessel)	100	Ordinary Share	JV Marine 13.11%
6	GBRS	Groupement Bir Seba Head Office: Zone d'activité Route Nationale N°3 BP 256 EURO JAPAN Hassi Messaoud, Ouargla, Algeria Telephone: +213-29-79-71-66 Facsimile: +213-29-79-09-15	Petroleum Exploration and Production	- ²	-	PTTEP AG 35%
7	GHBR	Groupement Hassi Bir Rekaiz Head Office: 03 Rue Doudou Mokhtar, Coopérative Mustapha Djouab, Lot N°17 Ben Aknoun, 16306 Alger, Algérie Telephone: +213-23-23-85-45 Facsimile: +213-23-23-85-44	Petroleum Exploration and Production	- ³	-	PTTEP 49%
8	GISCO	Gas Investments and Services Company Limited Head Office: 3 rd Floor, The Continental Building, 25 Church Street, Hamilton HM 12, Bermuda Telephone: - Facsimile: -	Financial Investment and Petroleum Technical Service in Overseas Project	12,000	Ordinary Share	POC 5%

² No share was issued. Percentage of shareholding is subject to participation interest in the concession.

³ No share was issued. Percentage of shareholding is subject to participation interest in the concession.

No.	Abbreviation	Company Name	Type of Business	Number of Shares Sold		Total Direct/ Indirect Holding
9	HL JOC	Hoang Long Joint Operating Company Head Office: Suite 2001, Me Linh Point Tower, 2 Ngo Duc Ke Street, District 1, Ho Chi Minh City, S.R. Vietnam Telephone: +84-8-3829-9359 Facsimile: +84-8-3822-6106	Petroleum Exploration and Production	- ⁴	-	PTTEP HL 28.5%
10	HV JOC	Hoan-Vu Joint Operating Company Head Office: Suite 2006, Me Linh Point Tower, 2 Ngo Duc Ke Street, District 1, Ho Chi Minh City, S.R. Vietnam Telephone: +84-8-3823-9525 Facsimile: +84-8-3823-9526	Petroleum Exploration and Production	- ⁵	-	PTTEP HV 25%
11	LAL	Leismer Aerodrome Limited Head Office: 1200, 215 – 9 th Avenue SW Calgary, AB T2P 1K3, Canada Telephone: +1-403-237-8227 Facsimile: +1-403-264-4640	Air Base Operations	200	Ordinary Share	PTTEP CA 32%
12	MGTC	Moattama Gas Transportation Company Head Office: No. 5 Sacred Tooth Relic, Lake Avenue, Punn Pin Gone Quarter No. 5, Mayangon Township, Yangon, Myanmar Telephone: +95-1-8650-977, 8660-466 Facsimile: +95-1-8650-478, 8650-479	Gas Pipeline in Overseas Project	1,000,000	Ordinary Share	PTTEPO 37.0842%

⁴ No share was issued. Percentage of shareholding is subject to participation interest in the concession.

⁵ No share was issued. Percentage of shareholding is subject to participation interest in the concession.

No.	Abbreviation	Company Name	Type of Business	Number of Shares Sold		Total Direct/ Indirect Holding
13	Moz LNG1 Co-Financing	MOZ LNG1 Co-Financing Company, LDA Head Office: Moçambique, Cidade de Maputo, DISTRITO KAMPFUMO, Bairro de Sommerschild, Avenida Julius Nyerere, n.º 3412 Telephone: - Facsimile: -	Financial Investment in Overseas Project	1,000,000	Ordinary Share	MOZ LNG1 Holding 100%
14	MOZ LNG1 Financing	MOZ LNG1 Financing Company Ltd. Head Office: 3510, 35 th Floor, Al Maqam Tower, ADGM Square, Al Maryah Island, Abu Dhabi, United Arab Emirates Telephone: - Facsimile: -	Financial Investment in Overseas Project	140,000,000	Ordinary Share	MOZ LNG1 Holding 100%
15	MOZ LNG1 Holding	MOZ LNG1 Holding Company Ltd. Head Office: 3412 ResCo-work08, 34 Al Maqam Tower, ADGM Square, Al Maryah Island, Abu Dhabi, United Arab Emirates Telephone: - Facsimile: -	Petroleum Exploration and Production	1,000,000	Ordinary Share	PTTEP MZA1 8.5%
16	MZ LNG1	Mozambique LNG 1 Company Pte. Ltd. Head Office: 50 Raffles Place #06-00 Singapore Land Tower, Singapore 048623 Telephone: - Facsimile: -	Petroleum Exploration and Production	2,500	Ordinary Share	MOZ LNG1 Holding 100%

No.	Abbreviation	Company Name	Type of Business	Number of Shares Sold		Total Direct/ Indirect Holding
17	OLNG	Oman LNG LLC Head Office: Ghala, P.O. Box 560, C.P.O, P.C. 116, The Sultanate of Oman Telephone: +968-2460-9999 Facsimile: +968-2462-5406	LNG Liquefaction Plant	1,209,877	Ordinary Share	POC 2%
18	PDO	Petroleum Development Oman LLC Head Office: Mina A1 Fahal, Muscat, The Sultanate of Oman Telephone: +968-2467-8111 Facsimile: 5212, Petro ON Cable: Petro Muscat	Petroleum Exploration and Production	1,720	Ordinary Share	POC 2%
19	PDO-S	Petroleum Development Oman Services LLC Head Office: Al Qurm, Bousher, Muscat Governorate P.O. Box 81, Oman, Postal Code 100 Telephone: +968-9274-4696 Facsimile: -	Petroleum Technical Service	500,000	Ordinary Share	PDO 99.99 %
20	POHOL	Private Oil Holdings Oman Limited Head Office: 8 York Road, London, England, SE1 7NA, UK Telephone: - Facsimile: -	Holding of Participating Interests in Oil and Gas	649,152	Ordinary Share	POC 5%
21	PTT Digital	PTT Digital Solutions Company Limited Head Office: 555/1 Energy Complex Building A, 4 th -5 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Telephone: +66-2537-3456 Facsimile: +66-2537-2935	Information Technology and Communication Services	15,000,000	Ordinary Share	PTTEP 20%

No.	Abbreviation	Company Name	Type of Business	Number of Shares Sold		Total Direct/ Indirect Holding
22	QLNG	<p>QALHAT LNG SAOC</p> <p>Head Office: Al Arfan Street, Gala Industrial Area – P.O. Box:3395, P.C.: 111 99 Street, Airport Heights, Ghala, Baushar, The Sultanate of Oman</p> <p>Telephone: +968-2462-5400</p> <p>Facsimile: +968-2462-5406</p>	LNG Liquefaction Plant	1,795,000	Ordinary Share	OLNG 36.8%
23	SKYVIV	<p>SkyVIV Company Limited</p> <p>Head Office: 102/99 Na Ranong Road, Khlong Toei, Khlong Toei, Bangkok, Thailand</p> <p>Telephone: +66-2348-8532</p> <p>Facsimile: -</p>	Distribution and Service for Engineering and Integrated Agriculture Drone	403,648	Ordinary Share	Skyller 23.20%
24	SPSE	<p>Sarn Palung Social Enterprise Company Limited</p> <p>Head Office: 555/1 Energy Complex Building A, 10th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand</p> <p>Telephone: +66-2537-2971</p> <p>Facsimile: -</p>	Social Enterprise	1,000,000	Ordinary Share	PTTEP 15%
25	YS	<p>Yadana Suboo Company Limited</p> <p>Head Office: No. 5 Sacred Tooth Relic, Lake Avenue, Punn Pin Gone Quarter No. 5, Mayangon Township, Yangon, Myanmar</p> <p>Telephone: +95-1-8650-977, 8660-466</p> <p>Facsimile: +95-1-8650-478, 8650-479</p>	Micro Finance	5,360	Ordinary Share	MGTC 100%