



Annual Report 2023
(Form 56-1 One Report)

Thai Oil Public Company Limited



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Financial Statements

Investors can find financial, related party transaction, and company's past information on Thaioil's website (www.thaioilgroup.com) through 'Investor Relations'/'Financial Information' and 'Publication'

TRANSFORMATION

To ensure the readiness for new businesses in the future and challenges posed by the changing global context as well as energy transition, Thailoil and Subsidiaries have transformed and adjusted both the business and support functions dimension to drive the organization toward sustainable growth.



OPERATIONAL TO BUSINESS EXCELLENCE

To uphold the supreme performance and sustainable business excellence, Thailo and Subsidiaries' operations are upgraded and driven by world-class systems and novel technologies as well as professionalism.



PARTNERSHIP & PLATFORM

To enhance the efficiency and potential of business operation while accelerating long-term competitiveness, Thaioil and Subsidiaries commit to building growth by cooperation with partners and utilization of significant platforms, both domestic and international.

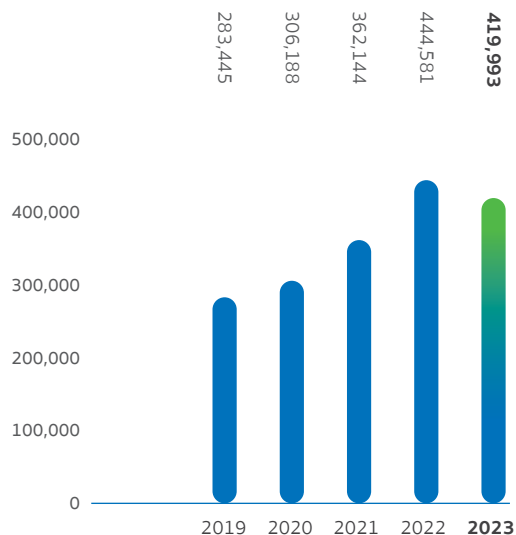


Financial Highlights



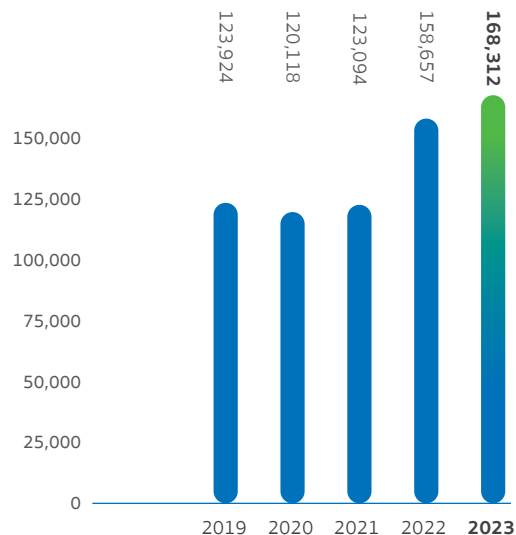
Total Assets

419,993
Million Baht



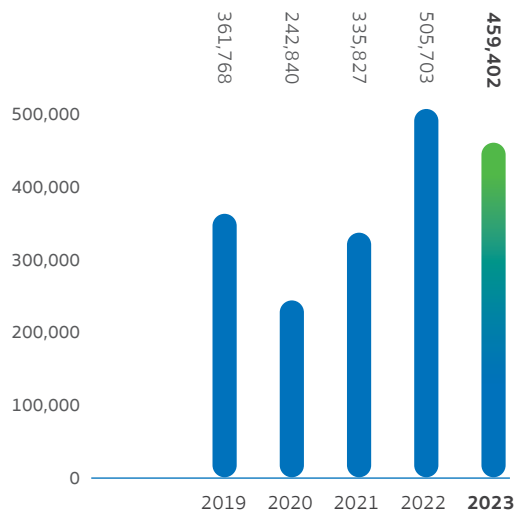
Total Equity

168,312
Million Baht



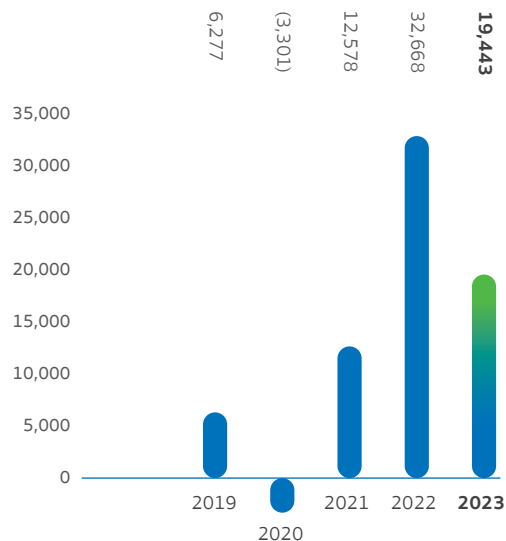
Sales Revenue

459,402
Million Baht



Net Profit

19,443
Million Baht



		2023	2022	2021	2020 ⁽¹⁾	2019 ⁽¹⁾
Operating Results						
Sales Revenue	Million Baht	459,402	505,703	335,827	242,840	361,768
EBITDA	"	35,453	37,187	28,142	(2,056)	14,149
Net Profit/(Loss)	"	19,443	32,668	12,578	(3,301)	6,277
Basic Earnings/(Loss)	Baht per Share	8.70	15.63	6.17	(1.62)	3.08

Financial Position

Total Assets	Million Baht	419,993	444,581	362,144	306,188	283,445
Total Liabilities	"	251,681	285,923	239,050	186,069	159,521
Total Equity	"	168,312	158,657	123,094	120,118	123,924

Financial Ratios

Interest Coverage Ratio	Times	8.7	9.6	7.8	(0.5)	4.3
Current Ratio	"	1.7	1.5	2.6	4.0	3.5
Net Debt to Equity Ratio	"	0.9	1.0	1.4	0.7	0.3
Return on Equity ⁽⁵⁾	Percent	12.0	23.5	10.7	(2.4)	5.0
Return on Assets	"	4.5	8.2	3.9	(1.0)	2.4

Important Information in Capital Market

Annual Average

Daily Closing Stock Price	Baht per Share	50.40	53.93	54.38	43.95	68.26
Market Capitalization ⁽³⁾	Million Baht	120,069	114,752	110,937	89,659	139,252
Dividend Payment	Baht per Share	3.40 ⁽²⁾	3.70	2.60	0.70	1.50
Dividend Yield ⁽⁴⁾	Percent	6.7	6.9	4.8	1.6	2.2
Book Value	Baht per Share	75.35	69.85	59.25	56.97	58.81

Remark :

⁽¹⁾ Re-presented the impact on the financial statements in accordance with Thai Financial Reporting Standards No. 5–Non-Current Assets Held for Sale and Discontinued Operations (TFRS 5).

⁽²⁾ Included the interim dividend for 2023 half-year results at the rate of 0.65 baht per share paid on September 22, 2023, and the remaining dividend of 2.75 baht per share is to be proposed to the 2024 Annual General Meeting of Shareholders for approval.

⁽³⁾ Calculated from closing price at the end of the year.

⁽⁴⁾ Calculate from average closing price for the year 2023.

⁽⁵⁾ Represent from the revised method of calculation based on The Securities and Exchange Commission, Thailand.

Message from the Board of Directors



A blue ink signature of Professor Dr. Supot Teachavorasinskun.

Professor Dr. Supot Teachavorasinskun
Chairman of the Board

A blue ink signature of Mr. Bandhit Thamprajamchit.

Mr. Bandhit Thamprajamchit
Chief Executive Officer and President

Dear Shareholders,

Throughout 2023, Thailoil and Subsidiaries faced constant challenges posed by the global inflation crisis, political uncertainty, the geopolitical conflict between Russia and Ukraine, and Israel-Hamas war. Internally, we faced challenges in the Clean Fuel Project (CFP) management, financial management amid a volatile economy, and management during the oil spill incident at Single Buoy Mooring-2 (SBM-2). At any rate, Thailoil and Subsidiaries emerged with a net profit of THB 19,443 million, thanks to the Board's precise short-term and long-term strategic plans, proactive actions, competency, experience, continuous improvement of management and staff, and synergistic efforts of all sectors across the supply chain.



Operational to Business Excellence

To address such volatility and continuous business growth, Thailoil and Subsidiaries focused on integrated management to ensure the Operational to Business Excellence (O2Bx) as a key element of Thailoil's corporate culture. O2Bx spans feedstock optimization, collaboration with PTT Group under Project ONE to procure crude oil, to optimal production planning across the value chain, which enabled us to maintain our utilization rate as high as 112%, which exceeded the industry average as well as last year's 107%. Thailoil managed to refine resiliently in line with the growth in market demand, consistent with domestic fuel demand once the economy began picking up. Products have been sold to high-demand markets while consistently selling High Value Products (HVPs) to the global market to meet demand in parallel with due cost management. Moreover, Thailoil succeeded in maintaining the outstanding safety record at the

"Excellence" level despite the ongoing construction of massive projects such as CFP and TOP SPP Expansion. The company also swiftly and efficiently resolved the oil spill incident at SBM-2. All these actions resulted in Thailoil and Subsidiaries' overall performance achieved as projected.

net profit of

19,443 million





Executing Projects and Scaling up Businesses for Secure Future and Long-Term Profit

Relentlessly, Thailoil and Subsidiaries have proceeded with business growth projects in line with the prescribed directions and strategic plans. CFP construction work was approximately, with 95.0% progress as of December 2023. The company aimed to start the operation of the Hydrodesulfurization Unit - 4 (HDS - 4) in Q1/2024 to create the opportunity for revenue generation while addressing the government policy of Euro 5 fuel standard effective as from January 1, 2024. As for the olefins business, the company aimed to expand the capacity in the second phase (CAP2) to improve the competitiveness of PT Chandra Asri Petrochemical Tbk (CAP) while maintaining the market leadership in Indonesia. Meanwhile, the downstream petrochemicals were improved with HVPs including Chlor-Alkali (CA) and Ethylene Dichloride (EDC). Furthermore, we stressed growth in the Disinfectant & Surfactant (D&S) group, characterized by high value together with high demand growth and synergy with a PTT Group strategy. The company also focused on the pursuit of new opportunities in the Bio Business and new energy technology business through Joint Ventures (JVs) together with Mergers & Acquisitions (M&As). Thailoil and Subsidiaries also invested in new businesses: namely, Sustainability Technology, Hydrocarbon Disruption Technology, Manufacturing Technology, and start-up business through venture capital. Finally, the company investigated opportunities to invest in Biojet/Sustainability Aviation Fuel (SAF) production to determine optimal approaches and investment periods.



Preparing Readiness and Enhancing Potential for Future Success

To support strategic plans and goals, Thailoil and Subsidiaries have taken steps to ensure preparedness in several ways. This included the personnel development under the “Happy Employee, Happy Company” concept through the SMILE campaign, with activities comprising of trainings to improve their caliber and competency, declaration of the Work From Home Policy, and organizing health promotion activities for the staff. In parallel with financial discipline, the financial management has been executed to maintain the credit rating at the investment grade level. To elaborate, the financial management consists of the refinance of TOP SPP Expansion project, the execution of ESG-linked financial derivatives instrument risks via financial cost restructure, and the use of Sustainability Linked Loans (SLLs), with 7-year tenor for the first time with commercial banks. In 2023, Thailoil was given an upgrade credit rating outlook to “Stable” from the previous “Negative” by leading Thai Credit Rating Agency. Finally, the company has continually organized promotional activities on knowledge and innovation development, attracting considerable interest from employees, who gave various new actionable ideas which should prove immensely helpful to Thailoil and Subsidiaries in the future.



Committed to Responsibility for Stable and Sustainable Growth

To duly fulfill the expectations of all stakeholders with ESG framework, the pledge calls on Thailoil and Subsidiaries to tackle decarbonization through goals such as reducing their greenhouse gas emissions by 15% by 2035 from the 2026 base year (Interim Target), attaining Carbon Neutrality by 2050, and achieving net zero greenhouse gas emissions by 2060 which in line with the goal of PTT Group and Thailand. This year, Thailoil proceeded with the energy efficiency improvement project, the reforestation project (2,000 rai inland and 56 rai in mangrove area), and an ongoing pursuit of low-carbon businesses, including investigation of investment opportunities to produce Biojets/SAF with PTT Group. As for CSR projects, the company's ongoing projects include solar cell installation and road improvement for Laem Chabang Hospital, Smart Farming, and the Circular Economy School Model Project. These projects have earned Thailoil 95.19% in community engagement survey, higher than the 85-percent goal. Thailoil also upgraded our Good Corporate Governance and Code of Conduct. This year Thailoil incurred zero major non-compliance with laws and regulations, while earning certification of precise policies and practices for controlling corruption risks, attested by Thai Private Sector Collective Action against Corruption (CAC) for the third consecutive time.



Uphold Standards, Strive for Excellence

The aforementioned projects have earned Thailoil and Subsidiaries 26 awards and recognition from several leading both international and domestic entities, with acclaim spanning all aspects, including SET Award 2023 - Business Excellence (Deal of the Year) Award; the highest ESG score in the Oil & Gas Refining and Marketing Industry for the 8th year and recognized as a DJSI member for the 11th consecutive year; 6th consecutive year of SET Award 2023 in the Sustainability Excellence Group under the Sustainability Award of Honor category; The highest evaluation rating of AAA in the SET ESG Rating for the year 2023, organized by the Stock Exchange of Thailand (SET) for the first time (the SET ESG Ratings were developed based on the previous assessment known as "THSI", which the Company has been listed as a sustainable stock since 2015); Low Emission Support Scheme (LESS) certificate; Honorable NACC Integrity Award; OAP Award; The 2023 Human Rights Awards in the category for business organization for the fourth consecutive year; and Thailand HR Innovation Award 2023 (Silver Award).

The Board of Directors, along with management and staff, remain grateful for all shareholders' full support to Thailoil's business operations. Thailoil and Subsidiaries pledge to leverage our robust foundation as well as our commitment to integrate knowledge, experience, and proficiency from all sectors to firmly strengthen our business growth, be prepared for new challenges while upholding the well-being of society and environment. Our underlying tenet is transparency intertwined with sustainable development for the best interests of all shareholders and stakeholders.

Audit Committee Report



Lt. Gen. Apichat Chaeyadar

Chairman of the Audit Committee

Dear Shareholders,

The Board of Directors (the Board) appointed the Audit Committee (AC), consisting of four independent directors, all of whom command diverse expertise, skills, and experience. The AC is chaired by Lieutenant General Apichat Chaeyadar, with Associate Professor Dr. Pasu Decharin, Mr. Plakorn Wanglee, and Police Captain Piya Raksakul serving as members; the composition and qualifications are regarded as suitable. Mr. Plakorn Wanglee is particularly qualified for reviewing financial statements' credibility against the requirements of Thailand's Securities and Exchange Commission (SEC) and Stock Exchange of Thailand (SET).

The committee independently executed Board-assigned and charter duties, which conform to the requirements and best practices for audit committees of SEC and SET. In 2023, the AC held eight meetings with perfect attendance by all members; the meetings included the consultation with management, the head of Corporate Internal Audit, the internal auditor, and the external auditor. In addition, the AC held one executive meeting with the external auditor for open consultation on the external auditor's work, the auditor's views, matters from the review and audit of financial reports as well as the cooperation with the committee and Corporate Internal Audit. Each quarter, the AC filed a performance report to the Board.

This year's performance highlights are:

1. Financial Report Review

The committee reviewed financial reports, including quarterly and annual separate and consolidated reports. The AC also examined key audit matters, suitability of the account entry system, and disclosure of other key information. To this end, the committee reviewed the credibility of estimated figures, management's assumptions requiring discretion, significant changes in figures and financial ratios, significant anomalous items, disclosed spending of mobilized funds under objectives, and display of key transactions potentially affecting financial reports, while obtaining clarification from the external auditor and management to ensure that financial report preparation was accurately, credibly, promptly, and adequately disclosed for the best interest and benefit of financial reports users. The external auditor reviewed and performed the audit, then provided unqualified opinions.

2. Connected Transactions

Having reviewed related-party transactions or those posing potential conflicts of interest with Thaioil and Subsidiaries under SET's and SEC's announcements as well as related laws and regulations, the committee concluded that such transactions comply with regular business practices, with fairness and sensibility executed for the best interests of Thaioil and its shareholders.

The transactions were also promptly disclosed to SET as required.

3. Review of Compliance, Corporate Governance, Risk Management, and Internal Control

The committee reviewed the efficiency and effectiveness of corporate governance practices while giving support to business following sustainable development practice. The AC also reviewed the company's operation to ensure compliance with laws and regulations, and urged monitoring and preparation for upcoming laws that could affect Thaioil, along with the efficiency and effectiveness of risk management and mitigation measures, while tracking management of key risk matters. The committee, in addition, provided observations and stressed personnel preparedness to sustain fast-growing and dynamic businesses. Furthermore, the committee reviewed the adequacy and suitability of Thaioil and Subsidiaries' internal control systems through the examination of internal audit report. The AC made observations on the findings, and inquired about the causes and scopes of the auditing. The committee relentlessly and regularly oversaw and monitored improvement, thus encouraging the identification of how to prevent future harm to Thaioil and related parties. Finally, the committee endorsed the report on sufficiency of the internal control system as required by SEC, resulting in the confidence in Thaioil's appropriate and sufficient internal control.

4. Internal Audit

The committee approved strategic plans, annual and long-term audit plans, execution plan, and audit outcomes, while recommending and monitoring progress of significant issues reviewing the independence of the internal audit. The AC also annually reviewed the charter of the internal audit, while valuing the manpower preparation for internal audit unit together with personnel recruitment and development to ensure staff competency and consistent efficiency and effectiveness of auditing. The committee advocated auditors' certification for greater professionalism while encouraging development and upgrading of internal audit operations to become more professional and add sustainable value to the organization. To this end, the committee advocated

consistently applying digital technology to the internal audit process, and required internal audit assessment against international professional standards. Finally, the AC conducted the annual performance assessment of the Vice President of Corporate Internal Audit.

5. Approval of External Auditor and Auditing Fee for 2024

In selecting the external auditor, the committee reviewed performance records, experience, independence, auditing fees, and compliance with SEC's announcements and nominated EY Office Co., Ltd. (EY) for the Board's endorsement and submission to the 2024 AGM for shareholders' approval. Finally, the AC provided pre-concurrence to the external auditor's non-assurance services that the auditor can present and serve Thaioil so that such scopes of service does not compromise its auditing independence.

In conclusion, this year the Audit Committee executed its charter duties and responsibilities with diverse expertise, prudence, and independence while providing creative views and advice for fair benefit to all stakeholders. The committee concluded that Thaioil and Subsidiaries had valued efficient and effective business conduct, prepared accurate, credible, and material financial reports in line with reporting standards along with adequate disclosure of connected transactions with potential conflicts of interest. Thaioil and Subsidiaries also commanded suitable and sufficient corporate governance, risk management, and internal control process, and complied with applicable laws and regulations.

February 8, 2024

On behalf of the Audit Committee



(Lt. Gen. Apichat Chaeyadar)

Chairman of the Audit Committee
Thai Oil Public Company Limited

Risk Management Committee Report



Ms. Pannalin Mahawongtikul

Chairman of the Risk Management Committee

Dear Shareholders,

The Board of Directors (the Board) appointed the Risk Management Committee (RMC), consisting of five members who are competent and experienced directors with various expertise and mastery of Thai oil and Subsidiaries' businesses. The committee is chaired by Ms. Pannalin Mahawongtikul, with Dr. Nattapon Nattasomboon, Dr. Veerapat Kiatfuengfoo, Dr. Buranin Rattanasombat, and Mr. Bandhit Thamprajamchit as members. The committee is responsible for supporting the Board in managing corporate risks to achieve business goals and enhance confidence in and credibility of Thai oil and Subsidiaries among investors and stakeholders.

The Risk Management Committee defines and reviews the corporate risk management framework and policies and processes in accordance with duties indicated in RMC charter, in addition to recommending an approach for appropriate risk management for efficient business operations, consistent with strategic business directions and plans. The RMC relentlessly supports and improves the efficiency of risk management throughout the organization under international standards so that risk management may become a corporate culture.

The committee also constantly monitors the outcomes of corporate risk management and project risks. In 2023, the RMC held a total of seven meetings. At the first meeting, Dr. Pailin Chuchottaworn served as Chairman. Later, the committee appointed Ms. Pannalin Mahawongtikul as Chairman. The committee has fulfilled its essential duties as follows:

1. Reviewed the risk appetite statement and assorted approaches for risk management, including strategic and business, commercial, financial, operational, and project management risks for consistency with prevailing situations and business factors.
2. Supervised, followed up, and reviewed plans as well as recommended corporate risk management approaches, 2023 key risk indices, and key projects on a quarterly basis so that effective and proper risk management may be in place at an acceptable level, in line with the risk management policy. The RMC regularly reported the findings of corporate risk management and its own performance to the Board including the signing of a water purchase agreement with YSSP Aggregate Co., Ltd., plan adjustment for the commercial operation

date (COD) of Hydrodesulphurization Unit 4 (HDS-4), and the signing of the amended contract for hiring Clean Fuel Project's main contractor.

3. Reviewed and recommended corporate risks, mitigation plans, and 2024 key risk indices so that Thail and Subsidiaries may operate its business efficiently and ensure consistency with strategic directions, business plans, and prevailing business environments.
4. Oversaw, monitored, and advised on Hedging on a quarterly basis for efficient operation and suitable risk mitigation.
5. Acknowledged milestone events, risk factors as analyzed from external factors, or key risk matters affecting Thail as quarterly reported by management, including risks arising from changes in the automotive manufacturing technology, business continuity management of oil spill incident at SBM-2, and long-term water supply strategy. Also, the committee provided management comments, advice, and support to corporate risk management at all levels.

This year the Risk Management Committee concluded that Thail and Subsidiaries had developed an extensive corporate risk management system for all aspects of risks and commanded ongoing risk management practices to cope with prevailing circumstances. The RMC's meetings were regularly organized to promptly review key and urgent risks for the effectiveness of Thail and Subsidiaries' risk management process. Thail and Subsidiaries indeed effectively and suitably managed key corporate risks within the indicated risk appetite.

December 13, 2023

On behalf of the Risk Management Committee



(Ms. Pannalin Mahawongtikul)

Chairman of the Risk Management Committee
Thai Oil Public Company Limited

Nomination and Remuneration Committee Report



Associate Professor Dr. Pasu Decharin

Chairman of the Nomination and Remuneration Committee

Dear Shareholders,

Thai Oil Plc's Board of Directors (the Board) appointed the Nomination and Remuneration Committee (NRC), which consists of at least three directors, the majority of whom must be independent directors. The current committee is chaired by Assoc. Prof. Dr. Pasu Decharin (independent director), with Lieutenant General Apichat Chaiyadar (independent director) and Mr. Terdkiat Prommool serving as members.

The NRC is charged with recruiting qualified persons under Thailoil's process and criteria for nomination as directors and the Chief Executive Officer (CEO) & President. The committee also selects directors for Board committees and reviews directors' remuneration models and criteria, before proposing for the consideration of the Board and the AGM as required by law.

In 2023 the committee executed all its charter duties, holding four meetings fully attended by all incumbent members (meeting attendances shown on page 99).

Below are the NRC's performance highlights in 2023:

Nomination

The NRC proceeded strictly with the process and criteria defined in the Corporate Governance and Code of

Conduct manual to nominate qualified persons for the Board of Directors' or shareholders' approval to appoint as required by law. To this end, the committee examined the composition and qualifications of the Board, both overall and individually, to match size, type, complexity, and diversity of Thailoil's businesses. The committee also reviewed personal qualifications which included education, expertise, skills, experience, and specialization applicable to Thailoil's businesses as well as independence as defined by law and the company's requirements in accordance with the defined structure and qualifications. These focus on Board Diversity which includes gender and age, and does not allow race, nationality, or origin to become limitation in the selection, in line with the international corporate governance. Below are the highlights of the committee's performance this year.

1. Recruited directors in place of those who resigned during the year. This year it nominated Dr. Veerapat Kiatfuengfoo to replace Dr. Prasert Sinsukprasert, who resigned.
2. Recruited and nominated directors for the Board in replacement of directors with term completion in

2023 and proposed the director list to the Board and the AGM. The re-elected director was Ms. Pannalin Mahawongtikul. The four replacement directors were Mr. Distat Hotrakitya, Dr. Nattapon Nattasomboon, Lieutenant General Apichat Chaiyadar, and Police Captain Piya Raksakul.

3. Recruited and nominated directors for Board committees: namely, Lieutenant General Apichat Chaiyadar to the Audit Committee and the Nomination and Remuneration Committee; Mr. Distat Hotrakitya to the Corporate Governance and Sustainability Committee; Police Captain Piya Raksakul to the Audit Committee and the Corporate Governance and Sustainability Committee; Mr. Suchat Ramarch to the Corporate Governance and Sustainability Committee; Mr. Plakorn Wanglee to the Corporate Governance and Sustainability Committee (in addition to his Audit Committee membership); Ms. Pannalin Mahawongtikul to another term on the Risk Management Committee; Dr. Veerapat Kiatfuengfoo to the Risk Management Committee; Dr. Nattapon Nattasomboon to the Risk Management Committee.
4. Organized orientation and provided useful documents to newly appointed directors. In 2023, five new directors were appointed, namely Dr. Veerapat Kiatfuengfoo, Lieutenant General. Apichat Chaiyadar, Mr. Distat Hotrakitya, Dr. Nattapon Nattasomboon, and Police Captain Piya Raksakul.
5. Encouraged and Supported minor shareholders' nomination of directors ahead of the 2024 AGM, between September 29 - December 31, 2023.

Remuneration

The NRC considered the directors' remuneration based on Thairoil's criteria, which include 1) the company performance and business complexity; 2) Board performance; 3) Board Responsibilities; and 4) comparison with peers in the same industry. The performance is highlighted below.

1. Reviewed the director remuneration payment structure and criteria for the shareholder approval in the 2023 AGM. The survey of comparison with leading peer companies revealed that Thairoil's criteria and director remuneration payment structure remained appropriate. Therefore, the same remuneration rate of 2022 had been recommended and approved by shareholders in the 2023 AGM.
2. Acknowledged a summary of remuneration payment for the CEO & President and endorsed the criterion for performance assessment and salary adjustment for the year 2023, for the Board's approval. The performance appraisal criterion was made up of corporate KPIs (70 marks) and leadership competency (30 marks).
3. Acknowledged the directors' 2022 remuneration payment survey outcomes, conducted by the Thai IOD.

January 24, 2024

On behalf of the Nomination and Remuneration Committee



(Associate Professor Dr. Pasu Decharin)

Chairman of the Nomination and Remuneration Committee
Thai Oil Public Company Limited

Corporate Governance and Sustainability Committee Report



Mr. Distat Hotrakitya

Chairman of the Corporate Governance
and Sustainability Committee

Dear Shareholders,

Thai Oil Plc is committed to operating business in compliance with the Good Corporate Governance (CG) and Code of Conduct as well as sustainable development, which include Environment, Social, and Governance aspects (ESG). This has been one of Thaioil missions and core principles through all the years. The Board of Directors has therefore appointed the Corporate Governance and Sustainability Committee (CGC) to take charge of the formulation of policies and guidelines in support of the CG and sustainability code of an international standard, by which listed companies must abide. The committee consists of five members, chaired by Mr. Distat Hotrakitya (independent director), with Mr. Plakorn Wanglee (independent director), Police Captain Piya Raksakul (independent director), Dr. Sompop Pattanariyankool, and Mr. Suchart Ramarch as members, succeeding the former committee since Meeting No. 2/2023 on June 14, 2023 (with the exception of Police Captain Piya Raksakul, who was appointed to the committee later and attended his first meeting at Meeting No. 3/2023 on September 20, 2023).

In 2023, the committee held four meetings (Information on director attendance appears on page 99). The CGC performed all charter duties and those assigned by the Board, with regular reports of outcomes submitted to the Board as summarized below.

1. Development of CG Policy and Guidelines

In 2023, Thaioil reviewed the policies, principles, and practices of CG and anti fraud to ensure they are up to date and in line with criteria, announcements, and practices concerning corporate governance of the Securities and Exchange Commission, Thailand (SEC) and the Stock Exchange of Thailand (SET), as well as CG assessment criteria of recognized institutes. Thaioil's policies, principles, and practices were found to be up to date, appropriate, and completely aligned with various criteria, reflecting the corporate governance assessment among listed companies (CGR) for 2023, where Thaioil was classified as "Excellent" (90-100 marks), the highest score for 15 years in a row and the highest assessment score of all SET-listed companies with market capitalization of over THB 10 billion for the 5th consecutive year.

2. Supervision, Promotion, and Monitoring of Compliance with CG Policy, Anti-Fraud Policy, and Code of Conduct

The Committee approved the annual CG development plan submitted by management, which covered the code of conduct, anti-fraud, and treatment of various stakeholder groups, providing comments and recommendations to management, as well as monitoring performance of the plan. The key activities in 2023 comprised:

- >> CG Amendment of the Compliance policy, improvement of the customer screening process, development of a monitoring system in compliance with the Digital Law, 2023 Board's performance assessment process by the external consulting company, promotion of transparent work performance through activities such as experts sharing activities, activities of GRC in Action, and provision of e-learning media on the topic of fraud, and others.
- >> Treatment of various stakeholder groups Maintaining the Thail's credibility at the Investment Grade, attested by renowned credit rating agencies, arranging Service Level Agreement (SLA), ESG assessment of suppliers with high ESG risks or major strategic suppliers by the external auditor, good relationship with government agencies through various activities, and proactive employee recruitment through new channels, resulting in recruitment of new employees who meet business demand, and others.

3. Sustainable Development (SD).

The committee approved the annual Sustainable Development Plan, covering sustainable achievement assessment, sustainable development, and culture and communication on sustainability, while providing comments and recommendations to management as well as monitoring performance against plan. The operations in 2023 were highlighted as follows:

- >> Determined Net Zero Greenhouse Gas (GHG) Emissions Pathway including the achievement of the interim

target for the reduction of GHG Emissions by 15% in 2035, Carbon Neutrality by 2050, and Net Zero Emission by 2060, which was approved by the Board.

- >> Improved work performance based on the guidelines and principles of sustainable development, such as assessment of the ESG impact on stakeholders in terms of value, and disclosed on Thail's website, and upgrading Thail and Subsidiaries' Business Code of Conduct for Supplier to the Sustainable Code of Conduct for Supplier, encompassing all ESG aspects of the sustainable development criteria, and others.
- >> Fostered the corporate sustainability culture through communication and activities such as SD e-News, Sustainability Talk by external experts on sustainability, assessment of staff's understanding about sustainability, as well as public relations of sustainability implementation to outsiders through the Integrated Report and knowledge-sharing on sustainability with external agencies.

4. Corporate Social Responsibility (CSR)

The committee approved the annual Community Management Plan and the CSR Development Plan, providing comments and recommendations to management as well as monitoring the performance under the plan. The highlights in 2023 were:

- >> Projects and activities for enhancing the quality of life of residents around the refinery, which covered education, public health, religion, culture, tradition, community economy support and environmental conservation, such as development of youth sports skills by professional coaches under the "Thail Sculpturing Youths' Dreams to Professional Athletes" project, occupational promotion and income generation for long-term participating members through the "Community Enterprise Laem Chabang Dolphin Group", providing knowledge about the Circular Economy to the community residents around the

refinery with systematic community waste management through the **“Thaioil CE for Community Model”**, and others. Continuous efforts on these CSR activities in 2023 earned Thaioil as high as 95.18% in a survey on community engagement by an independent consultant.

>> Carried out national social development projects and activities by applying Thaioil’s experience and expertise focusing on the optimal consumption of natural resources for sustainable development. These projects included the **“Rooftop Solar Power System Installation”** for a hospital and a Border Patrol Police school, **“Reforestation for Carbon Credit Benefit”** covering both inland and mangrove forests, **“Promotion of a Volunteer Culture”** through the **“You Initiate... We Fulfill Volunteer Year 3”** activity under the concept of **“Team Spirit”**, where management invited staff and contractors within their respective functions to participate and devote their own knowledge, expertise, and their mental as well as physical strength to CSR activities, and others.

With a strong determination to operate the business with corporate governance, sustainable development, and social responsibility throughout 2023, Thaioil was widely recognized at national and international levels. This is evident in the recognition of Thaioil as a Dow Jones Sustainability Indices (DJSI) member for the 11th consecutive year, earning the world’s highest score in the Oil and Gas Refining and Marketing Industry for the 8th year in 2023, as assessed by S&P Global, an

SET Award 2023 in the Sustainability Excellence Group under the Sustainability Awards of Honor category for the 6th consecutive year, and the Honorable Mention Award from the 11th NACC Integrity Awards 2022 from the Office of the National Anti-Corruption Commission Integrity Awards for operating with integrity, honesty, transparency, and others.

These achievements are a testament to the corporate governance standards of Thaioil and Subsidiaries, resulting in the commitment and cooperation of the Board, management, and staff in parallel with sustainable development and social responsibility. All efforts of which share one goal: Continuous and sustainable growth of Thaioil, earning trust from stakeholders and recognition in the international arena.

January 22, 2024

On behalf of the Corporate Governance
and Sustainability Committee



(Mr. Distat Hotrakitya)

Chairman of the Corporate Governance
and Sustainability Committee
Thai Oil Public Company Limited

Thaioil and Subsidiaries' Vision, Mission, and Strategies



Vision

Empowering Human Life
through Sustainable Energy
and Chemicals



Mission

To enrich stakeholders' well-being and deliver sustainable returns built upon innovation, technology, and resilient portfolio, with top-class management and accountable corporate governance

Thaioil and Subsidiaries strive to become a highly competitive company in the energy and chemical sector while enhancing national energy security and economic prosperity to deliver suitable returns and improved quality of life to all stakeholders while sustainably pursuing organizational growth with due regard for balanced economic, and Environment, Social, and Governance (ESG) aspects.

In 2023, Thailoil and Subsidiaries remained focused on the achievement of its defined vision and mission under the directions and strategic plans for scaling up value from Thailoil and Subsidiaries' existing businesses, together with acceleration toward new businesses, notably those that conform to megatrends. This is to enhance capability and competitiveness, create a diversified and flexible investment portfolio, and increase the opportunity for long-term sustainable business growth. To this end, we have adopted three key strategies and approaches (3Vs) described below:



1) Value Maximization: Integrated Crude to Chemicals

Integrating the value chains of current businesses while pursuing investment opportunity in petrochemical and high value product businesses to add product value as well as enhance operation flexibility to ultimately increase competitiveness. To this end, Thailoil will optimize existing production platforms to satisfy customers' needs. This is dividend into five business units as follows:

Refinery: The core business and production platform for petrochemical feedstock with investment in the Clean Fuel Project (CFP) to build up flexibility and strengthen long-term competitiveness, which contribute to national energy security during the looming energy transition

Aromatics: An extension of the refining business to satisfy regional aromatics demand

Olefins: An extension of refinery to petrochemical business through the investment in PT Chandra Asri Petrochemical Tbk (CAP) in Indonesia, that the country's No. 1 petrochemical producer, to fulfill petrochemical product demand and shape growth opportunities for other businesses in the Indonesian market, which commands ever-promising growth

Specialty Chemicals: An extension to investment in downstream petrochemical businesses with aims to become a solution provider to meet downstream end users' needs in target industries

High Value product (HVP): Product development, value chain extension, and joint investment with business partners to create high value products to meet customers' niche demand



2) Value Enhancement: Integrated Value Chain Management

Integrating operations and value chain management within Thailoil and Subsidiaries to enhance competitiveness and achieve a sustainable business through developing and distributing products to regional markets. Thailoil accommodates and supports the sale and distribution of Thailoil and Subsidiaries' commodity products and specialty chemicals, focusing on five markets: namely, automotive, personal care, food & nutrition, electronics, and healthcare. The target countries consist of Vietnam, Indonesia, and India, which are distributed through TOPNEXT International Co., Ltd.



3) Value Diversification

Diversifying investment portfolio for secure profits while seeking New S-Curve business opportunities compatible with future business trends:

High Value Businesses (HVB): Seeking collaboration with business partners and focusing on promising growth in Disinfectant & Surfactant (D&S) businesses. This aligns with Thailoil and Subsidiaries' competitiveness and PTT Group's strategic directions.

Technology and Green: Increasing investment portfolio flexibility to match industrial trends and energy transition through 2 approaches: 1) Joint Ventures (JV) and Mergers & Acquisitions (M&A) in the BioBusiness and new energy technology businesses, and 2) investment through Corporate Venture Capital (CVC) in sustainability technology, hydrocarbon disruption technology, and manufacturing technology.

Power business: Supporting power security and fostering profit security for Thailoil and Subsidiaries through the operation of the TOP SPP power plant and investment through Global Power Synergy Plc (GPSC), PTT Group's power flagship.

To efficiently achieve these strategies, Thailoil and Subsidiaries have focused on the "TOP" approach:



Transformation This implies organizational transformation and reform of business and support functions to ensure readiness for emerging businesses in future.



Operational to Business Excellence This implies business upgrading with world-class systems for excellent performance and business excellence.



Partnership and Platform This implies nurturing growth with business partnership and key business platforms, both domestic and abroad.

Thailoil and Subsidiaries strive to achieve sustainable business growth and uphold the international level of leadership in sustainability through the management of the Environment, Social, and Governance (ESG) in parallel with comprehensive consideration for stakeholders to attain the goal of becoming a truly sustainable organization.

36 Awards and Certificates of 2023 Achievement



7 Management Awards >

1. People Management Award (Advanced Level) for Best Talent Management, presented by the Personnel Management Association of Thailand
2. Three awards granted by Corporate Governance Asia Magazine at the 13th Asian Excellence Award 2023:
 - » Asia's Best CEO
 - » Asia's Best CFO
 - » Best Investor Relations Professional
3. Outstanding Role Model for Human Rights Award 2023, presented by the Rights and Liberties Protection Department, Ministry of Justice
4. Thailand HR Innovation Award 2023 (Silver Level) at Thailand HR Day 2023
5. Full 100 marks on the 2023 AGM Checklist assessment, attested by Thailand Investors Association, for the 8th consecutive year.



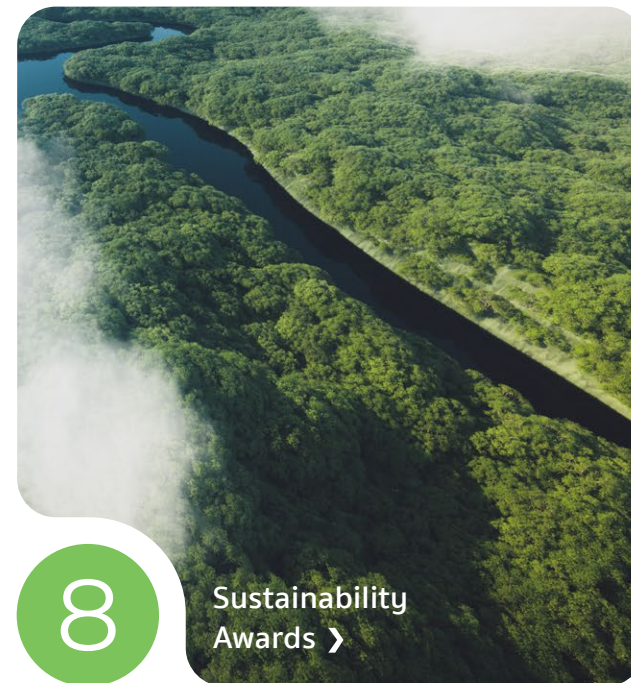
2 Finance and Investment Awards >

1. Best Investor Relations Company Award at the 13th Asian Excellence Award 2023, organized by Corporate Governance Asia Magazine
2. Business Excellence Group Award (Deal of the Year Award) for Thaioil's rights offering issuance and transaction amounting to THB 10 billion in 2022, one of the SET Awards 2023, presented by SET and Money&Banking Magazine



14 Operation Awards >

1. Platinum and Gold awards in the category of Excellent Project, PTT Group Operation Excellence 2023
2. Four awards for integrated quality standards granted by the Office of Atoms for Peace (OAP Award):
 - » Radioactive Materials - one Outstanding award for TOP SPP Co., Ltd., a subsidiary of Thaioil
 - » Radioactive Materials and Generators - two Very Good awards for Thai Oil Plc
 - » Radioactive Generators - one Very Good award for LABIX Co.,Ltd, a subsidiary of Thaioil
3. Environmental Governance and Outstanding Safety Award (Gold Star Award) for Sak Chaisidhi Co., Ltd., a subsidiary of Thaioil
4. Certification of the verification of ISO 20400 Sustainable Procurement
5. Recertification and Extension of Management System of ISO 9001 Quality Management
6. Recertification and Extension of Management System of ISO 14001 Environmental Management
7. Recertification and Extension of Management System of ISO 45001 Occupational Health and Safety Management
8. Recertification and Extension of Management System of ISO 50001 Energy Management
9. Recertification and Extension of Management System of IMS (Integrated Management System)
10. Recertification and Extension of Testing and Calibration Laboratories ISO/IEC 17025 for Thai Lube Base Plc, a subsidiary of Thaioil
11. Recertification and Extension of Testing and Calibration Laboratories of ISO/IEC 17025 for Thai Paraxylene Co., Ltd., a subsidiary of Thaioil



8 Sustainability Awards >

1. The highest score in the Oil&Gas Refining and Marketing Industry for 8th year from Dow Jones Sustainability Indices (DJSI) 2023
2. 11th consecutive year of DJSI membership in 2023 of the Oil&Gas Refining and Marketing Industry assessed by S&P Global
3. Ranked among the "Top 1% S&P Global ESG Scores 2022" in S&P Global Oil&Gas Refining and Marketing Industry Group, under the 2023 assessment in Sustainability Yearbook
4. Platinum Award for the 3rd year in The Asset ESG Corporate Awards for 2022, organized by The Asset Magazine
5. Sustainability Excellence Award, Honorary Achievement, one of the SET Awards 2023, for the 6th consecutive year, presented by SET and Money&Banking Magazine
6. Ranked AAA in the SET ESG Rating for 2023 in the category of Resource Industry Sector, assessed by SET
7. Sustainability Disclosure Award 2023, an honorary award for disclosing sustainability information, granted by Thaipat Institute, for the 5th consecutive year
8. Honorary Award 2023 for the role model in the Low Emission Support Scheme (LESS), granted by the Ministry of Natural Resources and Environment



3 Corporate Governance Awards >

1. 3rd membership renewal of Thai Private Sector Collective Action Against Corruption (CAC)
2. The Honorable Mention Award from the 11th NACC Integrity Award by the Office of the National Anti-Corruption Commission
3. Rated "excellent" for the 15th consecutive year from the assessment of the Corporate Governance Report of Thai Listed Companies for 2023, with the highest score for the 5th consecutive year



2 Social Responsibility Awards >

1. 15th consecutive year of the CSR-DIW Continuous Award, presented by the Department of Industrial Works, Ministry of Industry
2. Green Industry Award, 4th Level, for Thaioil's subsidiaries, Sak Chaisidhi Co., Ltd., presented by the Department of Industrial Work, Ministry of Industry



Summary of Business Achievements in 2023



In 2023, Thailo and Subsidiaries have been continuously facing a great deal of uncertainty arising from various external circumstances, including global hyperinflation, which led to interest rate hikes by the central banks in many countries, concerns on global economic recession, political uncertainty, and aggravating geopolitical risks in several regions-for instance, the ongoing Russia-Ukraine conflict and Israel-Hamas group war. These caused the fluctuation of crude and petroleum product prices.

Nonetheless, with a strong organizational culture, a unified committed workforce pursuing operation excellence, prioritization of work plans and proactive execution, continuous development and improvement, risk management, and resilience for the operation to handle fluctuation and seize the business opportunity during favorable situations. Thailoil achieved truly efficient nameplate capacity while posting a higher gross profit margin than leading peer companies, seizing opportunities when market situations improved and became more favorable. **Consequently, this year, Thailoil and Subsidiaries posted a net profit of THB 19,443 million.** Below are the highlights of the business achievements:



1. Short-Term Profit Maximization

Thailoil and Subsidiaries has integrative managed in pursuit of Operation Excellence and Commercial Excellence across the Value Chain from crude supply, operation, and product distribution in parallel with Cost Management.

1.1 Operation to Business Excellence (O2BX): To achieve an Operation to Business Excellence (O2BX), Thailoil and Subsidiaries had captured market opportunity reflecting from the utilization rate as high as 112% in 2023, which exceeded the peer industrial average. Thailoil and Subsidiaries' continuously outstanding safety records with the Total Recordable Case Frequency (TRCF) exceeding the target rate indicated they can maintain the chance to refine and distribute products to meet market demand. In addition, Thailoil and Subsidiaries prioritized strategic management focusing on market penetration to Southeast Asia, expansion of customer base for new customers, and strengthening relationships with existing customers, resulting in customer engagement up to 94.4%.

1.2 Productivity Improvement: Thailoil and Subsidiaries' goal for short-term management is a rise in profits, with exceptional efforts from our workforce and creativity for maximizing profits, leveraging competitiveness, and cost management reduction, through 2 major projects including Margin Improvement and Orchestra Plus.

>> **Margin Improvement** Thailoil leverages systematic management as well as collaboration of all functions. The significant executions include: 1) feedstock optimization by increasing the ratio of high-sulphur crude from 88% in 2022 to 91.5% in 2023; 2) plant de-constraint and optimization for ongoing process efficiency improvement; 3) energy optimization to reduce fuel cost and enhance production efficiency; and 4) commercial excellence, including collaboration with PTT Group under Project ONE to purchase crude oil with grades matching Thailoil and Subsidiaries' requirements, and pursuit of opportunities to export products to high-potential markets, and so on. As a result, Thailoil and Subsidiaries' gross profit margin increased from the business plan by THB 6,943 million or 1.76 USD per barrel.

>> **Cost Management** Even though our production costs, expenses, and product prices sharply rose from surging inflation in 2023, Thailoil and Subsidiaries successfully lowered expenses through various approaches: for instance, procurement management reviews, catalyst life optimization, maintenance planning & control excellence, FX management, cross country swaps, and proper tax planning. This resulted in saving in operating expenditure totaled THB 1,810 million (USD 0.45 per barrel) which was higher than the target.



2. Long-Term Strategic Execution

To fulfill our vision of “Empowering Human Life through Sustainable Energy and Chemicals”, Thailoil and Subsidiaries executed the 3Vs strategies-Value Maximization: Integrated Crude to Chemicals, Value Enhancement: Integrated Value Chain Management, and Value Diversification. In 2023, our achievements consisted of:

- >> Preparation of the test run Hydro Desulfurization Unit 4 (HDS-4) under the Clean Fuel Project (CFP), to ensure HDS-4's commercial operation in early 2024. This enhances the opportunity of extra income while fulfilling the public sector's enforcement of measures concerning Euro 5 fuels;
- >> Product distribution in Indonesia, one of the target countries with high growth. Products of which included petrochemicals from PT Chandra Asri Petrochemical Tbk (CAP), and Thailoil and Subsidiaries' products expansion. Such expansions was executed through PT Tirta Surya Raya (TSR), an affiliate company of TOPNEXT International Co., Ltd, penetrating Indonesian market and increasing sales volume to 26,000 tons, higher than the set target, and growing the customer base by 90 customers;
- >> Development and distribution of high value products for higher returns than that of commodity products while meeting niche needs of customers. This year Thailoil and Subsidiaries sold eight high value products, generating over THB 256 million;
- >> Establishment of a TOPNEXT International Co., Ltd office in India in July 2023, followed by the secondment of Thailoil and Subsidiaries' employees to the office in India to accommodate and support the product sales;
- >> Investigation of investment opportunities for biojets/ Sustainable Aviation Fuel (SAF) together with PTT Group by leveraging the Hydroprocessed Esters and Fatty Acid (HEFA) technology. The feasibility study was completed, and the JV term sheet was achieved;
- >> Investment through Corporate Venture Capital (TOP Ventures) This year, Thailoil and Subsidiaries invested in Holiferm Limited (a startup engaging in the biosurfactant business) and VISUP Co., Ltd. (a technology fund under the Vidyasirimethi Institute of Science and Technology: VISTEC). Thailoil is investing in seven startups and four venture capital funds;
- >> TOP SPP Expansion Project, which provides stable income from power business to Thailoil and Subsidiaries. The project was completed and began commercial operation in April 2023 as planned and within the set budget.



3. Key Enablers and Sustainability

3.1 Treasury Management:

- >> **Retention of investment grade rating** Thailoil focused on proactive communication and relations with credit rating agencies in parallel with financial discipline to maintain investment grade level and international acceptance. In 2023, Fitch Ratings (Thailand) therefore announced an outlook upgrade for Thailoil and Subsidiaries from “Negative” to “Stable”, with our rating maintained at “A+”. As for the overall ratings, Fitch Ratings (Thailand), Moody's, and S&P Global maintain the credit rating of Thailoil and Subsidiaries at “Investment Grade” with “Stable” outlook.
- >> **Financial preparation for future business growth** Thailoil succeeded in securing new loans replacing the existing one (Refinance) under the TOP SPP Project, and conformed to ESG-Linked derivatives, which saved Thailoil and Subsidiaries' financial cost. Thailoil also secured sustainability-linked loans.

3.2 Human Resources and Organization: Thailoil and Subsidiaries continually value proactive human resource and organization management for employees' satisfaction and engagement with Thailoil and Subsidiaries. As a result, the 2023 human capital index stood at 83% (increasing from 80% in 2022) below are the highlights.

>> **People Capacity** Thailoil and Subsidiaries successfully maintained workforce productivity through proper allocation of the workforce model and job characteristics. Thailoil achieved the top quartile among peers in the same industry. This year, Thailoil completed the Strategic Workforce Planning (SWP) plan to accommodate business growth in line with the main strategic directions and business directions as well as long-term strategic plans;

>> **People Capability** Thailoil developed training plans to enhance employees' experience and competency to sustain new businesses as required by our strategic directions, and systematically implemented learning organization plans.

>> **People Experience** Proactively and relentlessly, Thailoil delivered happiness among employees by leveraging the “Happy Employee, Happy Company” approach through the SMILE campaign, designed to promote employees' quality of life. Employee Choice: Work From Home policy was implemented to ensure that employees can achieve Work-Life Harmony while attracting more Gen Y and Gen Z to work with Thailoil.

3.3 Innovation Upgrade: This was achieved by the promotion of the innovation culture through the POSITIVE values. The I-Initiative in the core value of POSITIVE was upgraded to I-Innovation to reinforce the significance of innovation, which is the key for Thailoil and Subsidiaries to be a leading sustainable

organization. To this end, Thaoil relentlessly promoted employees' understanding of innovation. This year, the company-wide brainstorming workshops were arranged, where employees presented their new actionable ideas, which translated into potential benefits of THB 961 million.

3.4 Application of Digital Technology: Digital technology is applied to enhance business caliber and competitiveness. This includes the application of databases and Artificial Intelligence (AI) to ensure smart price forecasts, plan predictive maintenance, and engage in corrosion analytics to forecast maintenance time. This helps lower machinery disruption while increasing process reliability in parallel with cyber security to the international standardization.

3.5 Sustainability Management: Thaoil and Subsidiaries defined and implemented the sustainability strategic plan embracing the aspects of Environment, Social, and Governance (ESG) in addition to stakeholder treatment along with the drive for sustainable growth. Thaoil and Subsidiaries have been continually recognized for the sustainability management, evident in the highest score for sustainable development in Oil&Gas Refining and Marketing Industry for the 8th year from the Dow Jones Sustainability Indices (DJSI) assessment. Thaoil has also been recognized as a DJSI member of Emerging Market for the 11th consecutive year. Below are our key actions taken this year.

1) Enhance Clean Environment: Thaoil and Subsidiaries internationalized its environmental management in line with global trends. A pathway was developed for the pursuit of Net Zero Greenhouse Gas Emissions, with interim targets of 15% GHG reduction by 2035, Carbon Neutrality by 2050, and Net Zero by 2060. The goal of which would be achieved through 3C strategies: 1) Cut Down Existing Emissions through the project to increase energy efficiency, which Thaoil and Subsidiaries have continuously implemented. 2) In 2023, Thaoil and Subsidiaries together with Royal Forest Department executed the reforestation project, accounting for 2,000 rai in Phrae Province, for the benefit of carbon credits. The forestation area of 6,300 rai also in Phrae Province was additionally requested to be executed in 2024. Moreover, the mangrove forestation project for carbon credits was executed with Department of Marine and Coastal Resources over the area of 56.22 rai in Chonburi Province. Another 300 rai in Trang Province was requested for the mangrove forestation project in 2024; and 3) Control Future Emissions, pursuing future businesses with low carbon emissions, including the investigation of investment opportunities for biojets/SAF together with PTT Group.


2) Engage Society: Thaoil and Subsidiaries constantly engage in social projects, including a project to the solar cell system installation and road improvement for Laem Chabang Hospital, the Smart Farming Center, and the Circular Economy School Model. These result in this year community engagement standing at 95.19%.

3) Ensure Good Governance: Thaipol and Subsidiaries continuously garner recognition as well as admiration from all sectors on good governance and the code of conduct. This year, Thaipol and Subsidiaries posted zero major non-compliance and received a membership renewal certificate for the 3rd consecutive period of Thai Private Sector Collective Action Against Corruption (CAC) for commanding clear policies and guidelines for controlling corruption risks.

Projects and executions are clear evidence that Thaipol and Subsidiaries are committed to applying knowledge and expertise in energy and chemical leadership with integrated business operations across the value chain. Thaipol and Subsidiaries are also committed to corporate governance, responsibility for the environment, communities, and society, as well as fair treatment for all sectors and stakeholders, to drive toward sustainable growth alongside society and the country. The commitment and success have earned Thaipol and Subsidiaries various awards and certificates of honor presented by leading agencies and entities both in Thailand and from abroad (details as described under “Awards and Certificates of 2023 Achievements”).

Milestones of 2023


January



01

Thaioil organized National Children's Day activities for youths residing in 10 communities around operating sites, at Thaioil and Subsidiaries' Community Health and Learning Center, Sri Racha District, Chonburi Province; and co-organized such activities with PTT Group at the Head Office of PTT Plc.


February



02

Thaioil organized the "Thaioil Klansook Market" or Happiness Refining Market to provide community residents of Chonburi Province a channel for product distribution, career promotion, and income generation.


March



03

Her Royal Highness Princess Maha Chakri Sirindhorn presided over the opening of "Prompanya Library", watched the inmates' work, and visited "Nava Farm" exhibition, Innovation for Happiness Project of Thaioil and PTT Group, at Central Prison, Chonburi Province.


June



07


Thaioil donated to the Foundation for Slum Child Care in Bangkok and Sinapis Center Lorenzo Home in Chonburi Province under the 'You Initiate, We Fulfil' Project Year 2. The project encourages employee participation in public-service activities, and the company shall make the donations topping that of employees.

July



08


Thaioil co-organized the "Delivering "Net Zero" Together" exhibition at the National Director Conference 2023, intended to drive for the achievement of Net Zero GHG Emissions by 2060.



09

Thaioil executed "Thaioil CE School Model", the project to share knowledge and nurture awareness in waste management with students in the Laem Chabang area, Chonburi Province.


March



04

Thaioil signed a memorandum of understanding (MOU) on the cooperation between PTT Group and the Royal Forest Department, the Department of National Parks, Wildlife and Plant Conservation, and the Department of Marine and Coastal Resources, involving 2-million-rai reforestation project to increase carbondioxide absorption area and carbon sequestration sources.


April



05

Thaioil held the 2023 Annual General Meeting of Shareholders (AGM).


May



06

Thaioil together with Kao Industrial (Thailand) Co., Ltd., executed the road resurfacing with specially formulated water-based bitumen for enhanced strength and durability. Co-developed by researchers of both companies, the environment-friendly bitumen-seal road was handed over to Laem Chabang Hospital, Chonburi Province.


August



10


Thaioil held 2023 scholarship award ceremony on the occasion of Thaioil's 62nd anniversary.

September



11

Fitch Ratings (Thailand) maintained Thaioil's credit rating at "A+", the investment grade level with low risk.



12

Thaioil participated in the 'Anti-Corruption Day 2023' to declare its intention to fight all forms of corruption.

October



13

Thaioil sponsored the construction of the Siriraj Academic Center of Geriatric Medicine.



14

Thaioil delivered a solar power generation system to the hospital in Phanat Nikhom District, Chonburi Province.



15

Thaioil delivered an organic agriculture learning center "Bio Farm" to a community capital learning center (Saraphi Center) in Tha Chang Subdistrict, Sawang Wirawong District, Ubon Ratchathani Province, and Tha Chang Noi Organic Agriculture Community Enterprise to elevate cultivation process as well as agricultural production.

November



19

Thaioil together with communities surrounding the refinery, organized the 2023 Unity Kathin Ceremony at Wat Manorom, Chonburi Province.

December



20

Thaioil and Petroleum and Petrochemical College (PPC) signed the memorandum of understanding (MOU) on research and development (R&D) collaboration with the Faculty of Pharmaceutical Sciences, Chulalongkorn University to upgrade R&D for business opportunities.



21

Thaioil together with Krungthai Bank Plc signed an ESG-linked financial risk hedging agreement.

October



16

Thaioil delivered a smart greenhouse and new normal farming learning center to Chonburi Central Prison, Rajamangala University of Technology Tawan-ok (Bang Phra Campus), and Thai Rajamangala Farming Community Enterprise to enhance the cultivation process and raise the quality of agricultural products.

November



17

Thaioil completed the 2023 firefighting and evacuation drill under fire simulation at the platformer unit.



18

Thaioil delivered a solar power generation system to five Border Patrol Police Schools in Tak Province.

December



22

Thaioil joined the declaration of intention to drive toward sustainable development goals at the 2023 Council and Associates Conference and Seminar (2023 TBCSD Annual Event).



23

Thaioil together with PTT Plc donated survival kits to flood victims in Pattani Province.



24

Thaioil organized the "TOP Group QSHE Day 2023" to advocate awareness of quality, security, safety, occupational health, environment together with energy conservation for employees and contractors.

Remark: Investors can find Milestone of 2021-2022 on the Company's website (www.thaioilgroup.com) through 'Investor Relations/Publications/Form 56-1 One Report'.

Market Review and Outlook



In 2023, the Dubai crude oil price average was 82.1 USD per barrel, decreasing from 96.3 USD per barrel in 2022, due to the less-than-expected decrease of crude supply from Russia after European countries banned the import of crude from Russia into Europe since December 5, 2023, and Russia managed to export to China and India.

Global Market and Economic Review

The 2023 global economy was under severe pressure from the high inflation and continuous rise in interest rates imposed by central banks all over the world, forcing economic activities worldwide to slow down. The U.S. Federal Reserve System (FED) has raised the interest rate continuously since 2022 to a 22-year record high level of 5.25-5.50%. The Euro Central Bank (ECB) followed suit by increasing its interest rate from 2.0-2.75% in early 2023 to a 24-year record high at 4.0-4.75% at the year-end. Despite the positive economic forecast after the pandemic and the opening of the country, China's economic growth was lower than expected due to the sluggish performance of the property sector, which accounted for more than 30 percent of the overall economy. In 2023, several defaults were recorded for many giant property enterprises; even though positive resolutions to extend the repayment period could be reached. The failures could cause more damage than the Evergrande collapse in 2021 if they failed to pay. Moreover, China's sluggish economy was affected by lower global economic activities, leading to lower exports from China. The Chinese government intervened with several economic stimuli in 2023 including the lower adjustment of the Reserve Ratio Requirements (RRR) for all banking institutions twice providing flexibility for banks to lower interest rates, an opposite direction to other global central banks' actions to stimulate economic activities and economic growth.

Due to the above factors as well as, other risks including wars in the Middle East and the conflict between Russia and Ukraine, the International Monetary Fund (IMF) lowered the 2023 global economic growth forecast in their October 2023 report from 3.5% in 2022 to 3.0% and limited the world economic growth in 2024 to 2.9%, much lower than the 20-year average prior to the COVID-19 pandemic of 3.8%. The IMF's special focus was on four critical factors affecting the 2024 global economic growth: (1) the direction of the monetary policies issued by

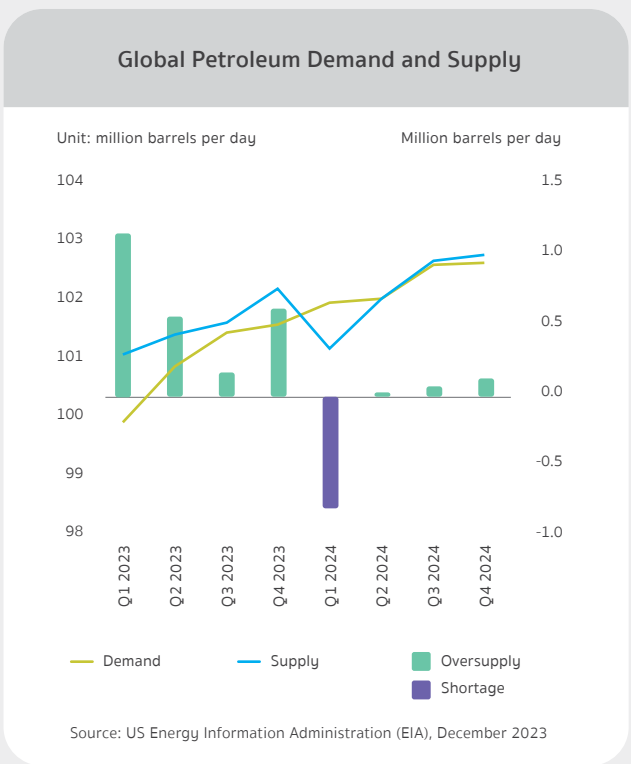
all central banks, particularly on the timing of interest rate reduction after the inflationary pressure subsides; (2) property sector crisis in China; (3) worldwide geopolitical tensions; and (4) price hikes in energy and food sectors, caused by wars and climate change.

Crude Oil Market and Refining Industry

The 2023 Dubai crude oil price average was 82.1 USD per barrel, decreasing from 96.3 USD per barrel in 2022, due to a less-than-expected decrease of crude supply from Russia after European countries banned the import of crude from Russia into Europe on December 5, 2022, and Russian managed to export crude to China and India. On the other hand, crude supply from the non-OPEC countries was significantly higher than that of the 2022 level by more than 2.7 million barrels per day; half of which was from the U.S. In addition, the oil market was under pressure from the sluggish global economy, especially in China, the world's second-largest oil-consuming country, increasing concerns about less global oil demand. The U.S. Energy Information Administration (EIA) forecasted that the global oil demand would grow by 1.8 million barrels per day, slightly lower than the previous forecast of 2.0 million barrels per day.

Following the downward volatility trend of the crude oil price in May 2023, OPEC+ countries derived its resolution with a Voluntary Cut countermeasure to reduce global supply by 1.66 million barrels per day from May 2033 to December 2024, aiming to stabilize the global market demand and supply. Moreover, Saudi Arabia made further cuts by 1.0 million barrels per day and Russia for another 0.3 million barrels per day from the export for the period between July 2023 and Q1/2024. Other members of OPEC+ made further voluntary oil supply cuts totaling 0.7 million barrels per day. Implementing the production cut policy, the 2023 OPEC+ production was reduced by 1.2 million barrels per day against that of the year 2022, resulting in the limited increase of global crude oil supply.

The 2024 average Dubai crude oil is predicted to be lower than the 2023 level due to the sluggish global economy limiting global demand. The U.S. EIA made a forecast of global oil demand growth for 2024 at 1.3 million barrels per day against 1.8 million barrels predicted for 2023. Supply from non-OPEC countries was expected to increase, led by the U.S., Canada, Brazil, and Guyana. In addition, crude supply from Venezuela was expected to rise following the U.S. temporary revocation of economic sanctions on the oil and gas industry until April 18, 2024. With the production cut policy launched by OPEC+ effective to the end of 2024, the global crude supply growth is expected to be limited, leading to a balance of global crude demand and supply.



With higher demand especially for jet fuels following the full reopening of countries after the pandemic, the 2023 refining industry was at a good level. Supply from new refineries, on the other hand, was limited as most

major refineries encountered delayed resumption, and some resumed operations on a limited scale, with several and differing technological challenges. Many U.S. and European refineries were shut down on emergency due to the record-high temperature in 2023. Supplies of diesel and gasoline from Russia were unstable and significantly decreased after Russia prohibited the export during September-October 2023 to ensure sufficient domestic consumption during maintenance shutdowns. This caused concerns in the petroleum market; however, Russia lifted the export control and resumed normal operation around the year-end. Supplies of diesel and gasoline, as well as other petroleum products from Russia, were off the market less than expected, despite the import ban on all petroleum products into the European market since February 5, 2023. This is because Russia increased exports to Asia, the Middle East, South America, and Turkey instead; while European countries increased their imports from Asia, the Middle East, and the U.S. Moreover, in early 2023, the market was pressured by a jump in petroleum product exports from China following support from the Chinese government as part of the economic stimulant policy for the domestic economy.

The overall refining market in 2024 is expected to be in balance with an additional 1.7 million barrels per day supply of petroleum products from new refineries in 2023 and 2024, mostly from the Middle East, Nigeria and Mexico, slightly outpacing the previously forecasted 2024 demand growth. Supply from China, the largest exporter of the region, is stable in 2024 compared to that of 2023 after the export control intervention from the government, reducing pressure on the global market. Nevertheless, the refining business is still supported by the petroleum product inventory, especially gasoil and jet fuel, lower than the five-year average; the uncertainty of major refineries' commercial operation date; and the 2024 climate forecasted to face higher temperatures which could affect refineries as the situations in 2023.

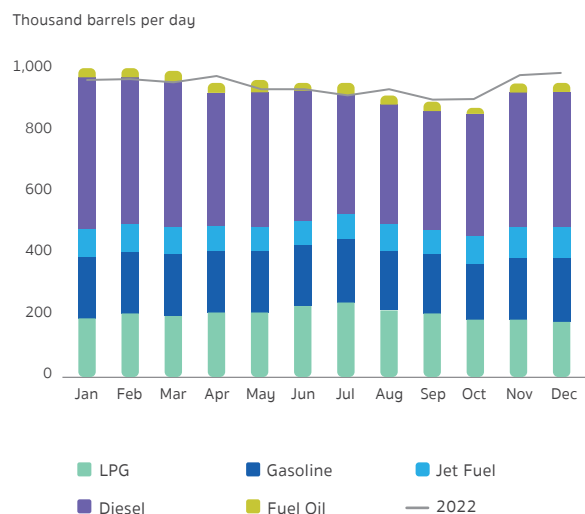
Domestic Market for Petroleum Products

Thailand's 2023 economic growth decreased from 2.6% in 2022 to 2.5%, according to a forecast made by the National Economic and Social Development Council (NESDC). The economic growth drivers are the consumption growth in the private and tourism sectors supported by several government stimulant measures, such as Visa exemption for tourists from China, Kazakhstan, India, and Taiwan, reduction in the retail prices of gasoline, and control of retail prices of gasoil not exceeding 30 baht per liter. This leads to an increase in fuel consumption, especially gasoline and jet fuel. However, it is expected that the exports will slow down due to the decrease in economic growth of Thailand's trading partners, including the U.S. and the EU, and the prices of Liquefied Natural Gas (LNG) for power generation since 2023.

The domestic demand for petroleum products in the first month of 2023, excluding Liquefied Petroleum Gas (LPG),

increased around 0.6% compared to the same period of the year 2022. This was due to the growth of gasoline consumption resulting from the continuous increase of traveling by cars. This led to an increase in the overall demand for every type of gasoline by 4.0% compared to the same period of 2022. Moreover, the gasoline consumption was supported by the increase in jet fuel demand following more continuous tourist arrivals. The first five tourists traveling to Thailand are from Malaysia, China, South Korea, India, and Russia. The jet fuel demand increased by 50.0% compared to the same period of 2022. Moreover, the government has launched the Visa exemption measure to attract more tourists and stimulate the domestic economy and tourism, starting with Visa exemption for tourists from China, Kazakhstan, and Russia, and then extending to tourists from India and Taiwan. The accumulated tourist number in 2023 was approximately 28.2 million, increasing from that of 2022 at 154.4%.

Domestic Demand for Petroleum Products, 2023



Source: Department of Energy Business, Ministry of Energy

To support the population and business sector on electricity tariffs, the Cabinet passed the resolution on March 7, 2023, to collect the excise tax on diesel (B0) and fuel oil for power generation at the rate of zero (0) baht for six months from March 16 to September 15, 2023. However, power producers decided to use LNG since its price has decreased continuously since early 2023, leading to the decrease in 2023 demand for gasoil and fuel oil for power generation by 63.6% and 56.2% respectively against that of 2022. Moreover, the stagnant economy of the trading partners caused the export value to constantly slow down. Even though the export value recovered in Q4/2023, the export value for the year 2023 was still in deficit of 1%. The demand for gasoline and fuel oil was lower than that of 2022 at 5.7% and 15.8% respectively. The 2023 demand for LPG, on the other hand, surged by 1.1% against that of 2022, due to the

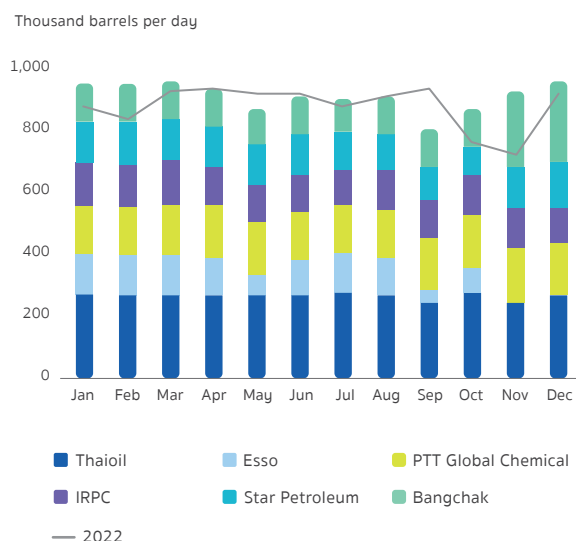
constant recovery of petrochemicals and the government measure of maintaining the retail price of household-used LPG at 423 baht per 15-kg tank until March 31, 2024.

The average domestic output in 2023, namely gasoline, gasoil, jet fuel, and fuel oil, stood at 914,804 barrels per day, increasing 4.7% from 873,807 barrels per day in 2022, driven by higher domestic demand. Thailoil's output remains the highest proportion among all domestic refineries, contributing around 29.3% of all output in Thailand.

The NESDC reported in November 2023 the forecast of 2024 economic growth of Thailand at 2.7-3.7%, driven by factors as follows: (1) the gradual recovery in exports, notably those to the major markets, including the U.S., China and Japan, and the global trade recovery; (2) increasing private investments incentivized by several public measures, such as continuous investment promotion for the target industries, including electric vehicles (EVs) 3.5 policy (2024-2027); (3) steady domestic consumption growth under relatively low and stable inflation, together with an improved labor market; (4) expansion of the tourism industry, supported by several public measures, including the Visa exemption policy for tourists from China, Kazakhstan, India and Taiwan.

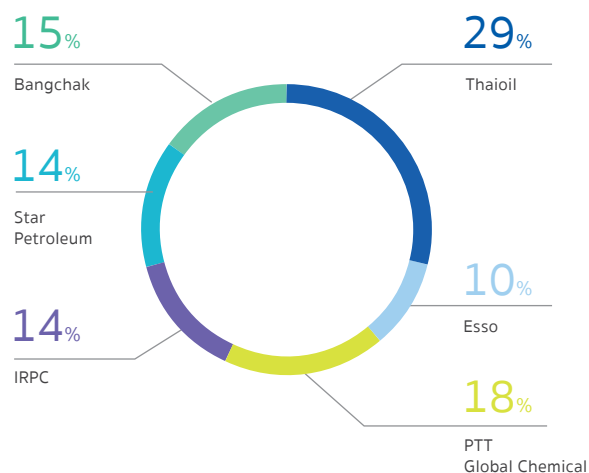
The overall consumption of petroleum products in 2024 is expected to increase by 2.8; the consumption of gasoline, jet fuel, and gasoil was 3.7%, 24.2%, and 0.4% respectively. This results from the constant increase in traveling and activities in the transport sector, following the higher sales of private vehicles and the increase in tourist arrivals expected to increase around 35 million or 24.3% compared to that of 2022. The consumption of fuel oil, however, is expected to drop 1.7% following a decrease in its consumption for power generation.

Domestic Petroleum Refinery Production in 2023



Source: Department of Energy Business, Ministry of Energy

Share of Refining Output in 2023



Source: Department of Energy Business, Ministry of Energy

Aromatics Market

Under the border reopening policy after the pandemic by the Chinese government beginning in Q1/2023, the aromatics market recovered from 2022. Moreover, the supply of paraxylene and benzene became tight following maintenance shutdowns of major producers in China, coupled with operation delay of new plants in Q2/2023 and a reduction in supply from certain producers who switched their outputs to gasoline to address the higher demand for gasoline in Q3/2023. Nevertheless, the demand for aromatics was limited due to high inflation, concerns about China's economy, and the geopolitical tension in the Middle East. The overall demand for paraxylene and benzene increased by 1.6 and 0.8 million tons respectively, which was lower than the increase in paraxylene and benzene supply, rising by 6.3 and 3.1 million tons respectively.

In 2024, the aromatics market is expected to recover with a forecast of a lower rate of supply growth at around 1.1 million tons, than the rate of demand growth at around 1.5 million tons, due to the constant increase in demand for downstream products. The demand for benzene is, however, limited to around 1.0 million tons due to global economic uncertainties, causing the demand for electrical appliances, electronics, and automobiles, to grow less than the supply which increases by 1.7 million tons. New facilities' commercial operation date, therefore, must be closely observed.

Olefins Market

The 2023 high-density polyethylene (HDPE) and polypropylene (PP) markets were weakened compared to that of 2022 following the additional supplies of 3.3 million tons of HDPE and 5.7 million tons of PP amid slower economic activities caused by high inflation, the unpredictable direction of China's economy, and geopolitical tensions in the Middle East. The 2023

demand for HDPE and PP in the Asian markets, therefore, rose only by 0.9 and 1.4 million tons respectively.

In 2024, it is expected that the HDPE market will be supported by the demand for HDPE with the expected growth at around 1.2 million tons, close to the supply in the Asian region, which is expected to grow around 1.3 million tons. With economic measures launched by the Chinese government to stimulate economic activities, the import of HDPE for domestic consumption in China is expected to rise. Under the same economic measures, the demand for PP is forecasted to rise by 2.7 million tons. However, with the PP supply growth at 6.2 million tons, the PP market will still be under pressure due to the oversupply.

Lube Base Oil and Bitumen Market

The lube base oil market in 2023 was acceptable. With the closure of 360,000 tons per year of lube base oil Group 1 plant in Japan, the market was not oversupplied. The price of fuel oil, feedstock for the production of lube base oil Group 1, plummeted in 2023, resulting in a slightly narrower spread compared to that of 2022. The lube base oil Group 2 and Group 3 markets, on the other hand, were under severe pressure following the commercial operation of new facilities in China with a capacity of 1,535,000 tons per year, and uncertainty of regional economic growth affecting the limited demand for lube base.

The 2023 bitumen market remained good, with a positive spread between the prices of bitumen and fuel oil in the Asian region, following the demand for bitumen that went up due to the border reopening after the pandemic and infrastructural development by several governments in the region. However, the market was still under pressure of increasing supplies from production resumption and capacity expansion of the plants in the region, as well as

economic uncertainties in the region and countries with limited demand, especially around the year-end.

The 2024 lube base oil market is forecasted to weaken slightly compared to 2023, following the decrease in demand for lube base oil Group 1 in the region, which was affected by the substitution of higher quality and more environment-friendly lube base oil Group 2 and Group 3. More pressure is expected from additional supplies of lube base oil Group 2 and Group 3 from new plants in India and China.

The 2024 bitumen market is predicted to decline compared to that of 2022, following higher supplies from several refineries in the region resuming their operations with higher capacity. With higher budgets for infrastructure development in the region, especially India and China, the demand for bitumen could be higher even if budget approvals are delayed in some countries.

Linear Alkyl Benzene (LAB) Market

The 2023 LAB market was weakened compared to that of 2022, being pressured by the sluggish global economy and high inflation, as well as increases in prime interest rates imposed by several central banks around the world, thus deferring economic activities and economic growth. However, the LAB market was still supported by the growing LAB demand in Asia in accordance with the constant growth of cleaning agents.

The 2024 LAB market is expected to increase, supported by continuously higher LAB demand of around 1.6 percent due to no additional supply but higher awareness of health and life quality development in the Asian region. Nevertheless, the market will still be limited by the slower global economic growth.

Solvent Market

The 2023 overall markets of solvents and chemicals were in contraction, following the global economic slowdown,

caused by the ongoing war between Russia and Ukraine since early 2022. The crude oil price has maintained a high level since early 2023, and inflation increased all over the world, causing the production cost and product price to increase, and diminishing the purchasing power in the market.

The domestic demand for solvents and chemicals was slowed down following the economic recession, leading to much lower consumption of solvents and chemicals evident in the constant decrease of Thailand's export value and Manufacturing Production Index (MPI) in the first nine months of 2023. On the other hand, the supply of solvents and chemicals surged due to the imports from China and South Korea, including chemical products for washing and cleaning, additives for various industries, aromatics, chemical solvents, and hydrocarbon solvents. Moreover, after the acquisition of ExxonMobil (Thailand) Co., Ltd. by Bangchak Sriracha Public Company Limited, ExxonMobil Marketing (Thailand) started to import chemical products in August 2023 to maintain their market shares, thus leading to higher market competition with higher supply and lower demand.

The overseas markets slowed down in 2023, especially during the first half of the year when the demand decreased following the global economic recession, thus affecting the need for Thairoil's solvents and chemical products. Thairoil's major export markets with local distributors were Vietnam and Indonesia, which encountered a sharp demand drop. In the first half of 2023, India's chemical market was also stagnant, where retail prices were lower than the prices of Thairoil's imports. Moreover, enormous extra supplies of solvents and chemicals from Iran and Europe flooded into the Indian market, leading to oversupply and intense market competition for distributors to protect the market shares. The Asian market demand recovered around the end of Q3, resulting from higher global crude oil prices, leading



to more demand for speculation of stocks with concerns about continuous price increases.

The overall 2024 solvent and chemical market in Asia is expected to grow in line with the GDP growth, particularly in Southeast Asian emerging markets, whose average economic growth outpaces that of other regions. The supply of solvents and chemicals is likely to increase due to more products from existing regional producers and imports from other regions. The shortage of cargo vessels and higher freight costs subsided in 2023; Thaioil therefore foresees that the freight costs would be in balance which helps increase the capability to export products from Asia to the destined markets and other regions. This causes the overall solvent and chemical market to grow despite higher competition.

The domestic demand for solvents and chemical products in 2024 is expected to gradually grow in line with economic

growth. The market supply also is expected to increase, partly from higher imports. The overall domestic solvent and chemical market is likely to gradually grow amid continuously strong market competition.

The demand for specialty chemicals in Thailand and destined markets, including Vietnam, Indonesia, and India, is expected to grow satisfactorily due to the higher needs for daily consumer products and the higher demand for industrial uses. These specialty chemicals are used in five major industries: namely, the automotive, personal care, healthcare, electronics, and food & nutrition.

Ethanol Market

The demand for ethanol for gasoline blending in 2023 was around 3.5 million liters per day, decreasing 8.7% compared to that of 2022, following the constant fall of demand for gasohol E85 after the hike of retail price averaged at 34.8 baht per liter, against 32.1 baht per liter

in 2022. The retail price of gasohol E85 in 2023 was 0.3 baht-per-liter higher than the retail price of gasohol E20 as a result of the government subsidy to promote the use of gasohol E20 as the basic gasoline in Thailand by 2027.

The domestic supply of ethanol in 2023 dropped from 2022 by 6% both ethanol from molasses and cassava. The 2022/2023 milling season has 94 million tons of cane in process, which is less than expected at 100 million tons. The lower amount of cane resulted from unseasonal rainfall, and harvesting troubles, as well as higher costs including fertilizers and labor. The molasses output decreased by 4% from the previous season. The cassava output for the October 2022-September 2023 season plunged by 21%, affected by drought and ongoing Cassava Mosaic Disease (CMD). The export of cassava in 2023 is also expected to slow down, especially the export to China, due to lower domestic supply and a sluggish economy in China.

The average price of ethanol in 2023 increased by 7% compared to that of 2022, reaching 30.3 baht per liter, reflecting the higher price of feedstock including molasses and cassava following the limited supply. The average price of molasses was 6-7 baht per kilogram, cassava chips 8-9 baht per kilogram, and fresh cassava 3-4 baht per kilogram.

The demand for ethanol in 2024 is likely to grow in line with the demand for gasoline at around 2% compared to that of 2022, supported by the increase in personal vehicle sales by 8% compared to that of 2022 and the continual rise of tourist arrivals and travel by personal vehicles. However, the ethanol business is to continue to face pressure from the sluggish global economy and the government support to promote gasohol E20, thus relentlessly reducing the demand for gasohol E85. Moreover, the supply is likely to fall following the

declining supply of molasses and cassava. The cane in the milling process of the 2023/2024 season is expected at 70-80 million tons, decreasing from 94 million tons in the previous season. The expected output of cassava is 27.9 million tons for the 2023/2024 season, decreasing from 30.7 million tons in the previous season. The tapioca harvesting acreage is expected to drop from 9.3 million rai to 9.0 million rai due to the Cassava Mosaic Disease (CMD). The CMD management subcommittee, therefore, introduced a new breed of cassava that could survive the CMD and prevent its outbreak. Thaioil continues to monitor government policy and measures, which could affect the demand for ethanol.

Power Industry

As of December 11, 2023, the total installed generating capacity, including all the contractual capacity operated by the Electricity Generating Authority of Thailand (EGAT) was at 49,603.80 megawatts, increasing by 0.82% from that of 2022. The 2023 peak electricity demand was recorded on May 6, 2023, at 34,131 megawatts, increasing by 5.82% from that of 2022, due to the economic recovery and higher temperature as a result of the El Niño phenomenon.

The power traded on the EGAT system in 2023 totaled 208,035 billion units, increasing 3.46% from that of 2022. This can be divided into 60.30% natural gas, 19.60% coal, 17.70% renewable energy, and 2.40% other sources, including diesel and fuel oil. The total power consumption classified by user included 42.00% industrial sector, 29.00% household sector, 24.00% business sector, and 5.00% in other sectors.

As for the power demand under EGAT's system in 2024, EGAT projected that the demand would increase from that of last year by 3.39% in line with Thailand's GDP of 3.20%. However, factors affecting the estimate of power

demand include the geopolitical conflicts in regions, the economic slowdown in China affecting Thailand's export and tourism recovery, the progress of economic stimulant measures from the public policy on the process, the El Niño phenomenon of rising temperature, and ongoing drought in 2024. The 2024 power demand proportion on EGAT's system was projected to decrease from the previous year (from 80.30% to 80.10%). In contrast, the power production for own use would rise from 6.30% to 6.90%, resulting from more efficient technological evolution and the tendency for more power generation from renewable energy for own use, as well as the public policy advocating the use of renewable energy.

In 2024, the proportion of power generation in EGAT's system considered by power producers, would undergo a certain change. EGAT projected that it would generate about 30.90%, the same level as that of 2023. Small Power Producers (SPPs) would command smaller proportions in line with the ending SPP agreements. Independent Power Producer (IPPs) would gain a bigger proportion in line with the commercial operation date of new power plants. Considering fuel type, power generation would rely mostly on natural gas at 59.50%, a slight drop from 2023 due to the conservation of natural gas resources, resulting in the use of fuel for power generation instead. Renewable energy would account for about 17.70%.



Feedstock Procurement, Product Distribution, and Industrial Competition



Feedstock procurement

Thaioil procures crude oil-main feedstock for refining-from domestic and overseas sources, taking into consideration estimated yields from each type of crude against market demand at a given time for maximum returns. Thaioil's policy is to diversify crude procurement from different sources to reduce dependence on any particular supplier to mitigate risk in case of crude cannot be delivered. Two types of crude supply agreement: namely, term contract and spot contract, are made to ensure balance between feedstock security and the opportunity to profit from market fluctuation.

In 2023, Thailoil's imports accounted for 81.42% of the total volume of crude and other feedstock. A majority of the crude, or 91.5%, was procured from Middle Eastern countries such as the UAE, Saudi Arabia, and Oman since their crude grades give the maximum yield. Crude imports from the Far Eastern region, which includes Vietnam, Indonesia, Australia, and Malaysia, accounted for 1.3%; North America, 0.5%; and The remaining 6.7%

from domestic sources. Domestic crude is transported by rail and tanker, while imported crude is shipped directly to the refinery. Through a Single Buoy Mooring (SBM), Thailoil could receive crude and other feedstock delivered by very large crude carriers, enhancing crude oil movement efficiency while reducing the unit cost of shipping.

The table below shows the costs of crude and other feedstock procured from various sources (Excluding by-products provided by Thai Lube Base Plc (TLB) and Thai Paraxylene Co., Ltd. (TPX))

Sources of crude and other feedstock	2023		2022		2021	
	(THB million)	percent of the total volume	(THB million)	percent of the total volume	(THB million)	percent of the total volume
Middle East	302,335	91.5	342,647	88.0	149,212	66.0
Far East	4,154	1.3	8,770	2.5	30,708	14.0
Thailand	20,971	6.7	30,653	8.0	22,963	9.0
Africa	-	-	4,146	1.0	23,559	10.0
Europe	-	-	11	0.0	871	0.5
North America	1,554	0.5	1,693	0.5	945	0.5
Total	329,014	100.0	387,920	100.0	228,258	100.0

This year, Thailoil and PTT Group cooperated in securing crude oil, international trading of petroleum and petrochemical products, derivatives trading, and procuring tankers through PTT Plc (PTT) under Project ONE. In short, Thailoil purchased wholly from PTT. For other feedstocks, Thailoil imports additives and product color substances in line with market demand,

the applicable laws, and public-sector requirements. TLB procures long residue (a raw material for lube base oil production) from Thailoil as well as other domestic and overseas markets. LABIX Co., Ltd. (LABIX) imports normal paraffin to accommodate full-scale production of Linear Alkyl Benzene (LAB) (a feedstock for detergents and cleaning agents) for economic value.

Product Sales

In 2023, Thaioil sold a total of 20,549 million liters of products as detailed below.

Product (Million liters/year)	2023		2022		2021	
	Sales volume	Percent of total sales	Sales volume	Percent of total sales	Sales volume	Percent of total sales
LPG	883	4	850	4	693	4
Unleaded Gasoline ⁽¹⁾	3,567	17	3,436	17	3,292	18
Light Naphtha	256	1	276	1	138	1
Isomerase/Reformate	2,295	11	2,235	11	2,197	12
Jet/Kerosene	3,695	18	3,447	17	2,076	11
Low-speed Diesel/ High-speed Diesel	7,576	37	7,408	37	7,339	40
Fuel Oil ⁽²⁾	1,292	6	1,533	8	1,580	9
Long Residue	944	5	891	5	1,012	5
Sulphur	41	0	40	0	30	0
Total	20,549	100	20,116	100	18,357	100
Remarks: ⁽¹⁾ Including Gasohol sales ⁽²⁾ Including Refinery Slop Oil						

Thaioil sells its petroleum products to PTT Oil and Retail Business Plc (OR) under the Product Offtake and Crude Oil Supply Agreement (POCSA) at market prices. Under the procedures for setting product volumes, OR must first propose the types and volumes of desired products, which must account for at least 49.99% of Thaioil's capacity, mainly for domestic sale. Thaioil will then notify OR of the types and volumes to be delivered by an agreed time. In addition, if Thaioil have surplus products, OR is entitled to buy them before other buyers at prevailing market prices under POCSA terms. Other surplus products are exported by Thaioil, based on suitability and favorable market conditions,

both domestically and regionally, through trading partners. Nevertheless, for product exports via large tankers, sales will go through PTT Plc under Project ONE.

Domestic product pricing is referenced to Singapore market prices at a given period for respective products, which are benchmarked to ex-refinery prices. Such prices, set daily in US dollars, reflect regional supply and demand. Thaioil's domestic product pricing is based on an import parity basis, while export pricing is based on an export parity basis. The company sells petroleum products to customers at ex-refinery prices, calculated based on FOB (free on board), depending on each period of market conditions.

In 2023, about 86% of Thailoil's total petroleum products were sold domestically, comprising 34% to OR and 22% to its subsidiaries (TLB, TPX, and LABIX), 18% to PTG Energy Plc (PTG), 4% to Shell Company of Thailand Ltd. (SHELL), 1% to Chevron (Thailand)(CHEVRON)*, 1% to Susco Plc (SUSCO), 1% to Bangchak Corporation Plc (BCP), and 5% to other buyers. The remaining 14% was for export. Details

of the types and volumes of Thailoil's petroleum products sold during 2021-2023 together with percentage against total sales appear below.

Remarks: *Since November 1, 2023, CHEVRON has processed debt conversion by transferring the contract to Star Fuels Marketing Co., Ltd., its subsidiary company.

Petroleum products sold and percentage of total sales by Thailoil (Million liters/year)	2023		2022		2021	
	Sales volume	Percent of total sales	Sales volume	Percent of total sales	Sales volume	Percent of total sales
Domestic						
OR	6,964	34	6,700	33	5,274	29
Thailoil's subsidiaries	4,437	22	4,109	20	4,119	22
PTG	3,803	18	3,324	17	3,205	18
SHELL	870	4	687	3	620	3
CHEVRON	251	1	343	2	235	1
SUSCO	248	1	201	1	164	1
BCP	105	1	113	1	188	1
Others ⁽¹⁾	960	5	1,693	8	951	5
Total	17,638	86	17,170	85	14,756	80
Export						
OR	1,087	5	1,791	9	1,125	6
Others ⁽²⁾	1,870	9	1,202	6	2,544	14
Total	2,957	14	2,993	15	3,669	20
Total sales	20,595	100	20,163	100	18,425	100

Remarks:

⁽¹⁾ Including Refinery Slop Oil

⁽²⁾ Including sales to PTT International Trading Pte. Ltd. in Singapore, wholly owned by PTT

Industrial Competition in 2023 and Outlook


Competition

Currently, there are seven major refineries in Thailand: namely, Thai Oil (TOP), Bangchak Corporation Plc (BCP), Bangchak Sriracha Plc (BSRC), PTT Global Chemical Plc (GC), Star Petroleum Refining Plc (SPRC), IRPC Plc (IRPC), and the Fang Oilfield, operating a combined refining capacity of approximately 1,243,500 barrels per day. BCP and BSRC are the two refineries operating integrated businesses through their own service stations, whereas the rest operate only the refining business under offtake agreements or free-market delivery, or both, for the sale of various products. Thairoil's major and secondary competitors are domestic and regional refineries. Major competitors are largely national and international integrated oil companies with several petroleum businesses, notably those conducting exploration and production of crude oil, oil refining, and marketing. Thanks to integrated businesses, massive investment, and resources in addition to consistently procuring crude oil, these companies thrive through volatile markets and are efficiently price competitive.

The oil-refining business is highly competitive in prices and product yields. Thairoil's advantage lies in the complex refinery with sophisticated refining systems, and in being the country's largest capacity, which enables Thairoil to offer high value products at one of the highest proportions in Asia. Thairoil can also leverage flexibility since its distillation units are connected to petrochemical and lube base oil units, thus benefiting production maneuverability amid volatile market prices. For example, Thairoil can hike its outputs of various grades of gasoline to meet domestic demand, whether gasohol 91, gasohol 95, or E20. Thairoil is the sole domestic refiner of ULG 95 and gains most of Indochina market shares. The company can produce gasoline and diesel of high quality as required by standards, while adjusting the volumes of jet fuels and diesel in line with prevailing market circumstances.

In view of the improving COVID-19 situation, one is witnessing soaring demand for petroleum products. Thairoil recognizes the value of product distribution to meet domestic demand and extends cooperation with the public policy in preparing Euro 5 diesel production's Hydrodesulphurization unit, the new standard in Thailand, as adopted as part of the government's action plan to drive the national agenda of "solving the problem of particulate pollution". The Euro 5 emission standards will undergo modifications to reduce sulphur content below 10 Parts Per Million (ppm), which is environmentally friendly. The costs of product distribution to major market regions is low due to the relatively short distances to such locations; and Thairoil commands several channels of product distribution and transportation: 1) a pipeline directly connected to the refinery, capable of distributing various products to depots in the North and the Northeast to sustain each region's demand; 2) lorry product loading operating 24 hours a day to meet the demand of domestic and Indochinese customers; and 3) a jetty and conventional buoy mooring (CBM) supporting distribution of petroleum products by tankers of different sizes. The proportions of distribution and transport this year were 40%, 35%, and 25% of total sales, respectively.

Production Processes and Process Development



In 2023, Thailoil's throughput of crude oil and other feedstock accounted for 307,000 barrels per day, or 112% of its nameplate capacity, while Thai Lube Base Plc (TLB) and Thai Paraxylene Co., Ltd. (TPX) commanded 211,000 tons per year and 609,000 tons per year, or 79% and 73% of the nameplate capacities of lube base oil and aromatics respectively. LABIX Co., Ltd. produced 148,000 tons per year of Linear Alkyl Benzene (LAB), representing 123% of nameplate capacity.

Thaioil and Subsidiaries executed businesses and process operations in line with prevailing economic situations and domestic fuel demand, which was gradually recovered. Thaioil's 2023 utilization increasing from that of 2022. Thaioil and Subsidiaries were relentlessly focusing on developing high value products to meet market demand. This is considered a part of the margin improvement measures ranging from production management to add value to hydrocarbon to supply chain management, implemented together with cost saving by reducing financial costs amid high inflation rates under the ongoing Productivity Improvement Project. In 2023, Thaioil and Subsidiaries generated 2.21 USD per barrel or THB 8,753 million in total benefit. Our key activities are summarized below:

Thai Oil Plc (Thaioil)

- >> Collaborated with companies in PTT Group to procure the highest economic crude oil by comparing crude oil from existing sources with new sources. Also, managed logistics to achieve fully loaded tankers to save transportation costs per unit
- >> Increased the capacity of the Hydrodesulphurization Unit-2/3 from 5,500 to 5,800 tons per day to meet the rising gasoil demand
- >> Increased the capacity of the Continuous Catalyst Regeneration Platformer Unit-1/2 from 3,300 to 3,400 tons per day to meet the rising gasoline demand
- >> Dispatched short residue from the High Vacuum Unit-1 for further distillation at the High Vacuum Deep Cut Unit to increase Vacuum Gas Oils (VGO), the feedstock for the Hydrocracking Unit-1/2
- >> Increased the volume of platformate at the Continuous Catalyst Regeneration Platformer Unit-1/2 with the application of the Reactor Model to decide a suitable period for filling chlorides into the catalyst so that the catalyst may command high efficiency
- >> Managed the use of short residue containing high sulphur and low value as process fuel without affecting the environment and neighboring communities
- >> Prepared the Hydrodesulphurization Unit-2/3 and the CCG Hydrodesulphurization Unit along with the storage tank and piping system to produce gasoil and gasoline under the Euro 5 standard, due for enforcement from January 1, 2024
- >> Completed the replacement of catalysts of the Gasoil Hydrodesulphurization Unit-2 in November, earlier than planned due to efficient planning and execution
- >> Improved process of various manufacturing units for greater energy efficiency:
 - Reviewed the process efficiency of the Hydrogen Manufacturing Unit-1/2 to deactivate one unit during periods of lower hydrogen demand due to lower overall capacity or during periods of increased hydrogen derived from the Continuous Catalyst Regeneration Platformer Unit-1/2. To this end, efficiency and limitations were compared so that Thaioil may produce enough hydrogen to meet the market demand to minimize energy consumption and costs
 - Lowered reaction temperatures of the Isomerization Unit to control isomerase vapor pressure, which in turn lowered steam consumption
 - Curbed the surplus air volume at the Crude Distillation Unit-2, Hydrotreater Unit-2, Hydrodesulphurization Unit-3, and Hydrocracking Unit-2, resulting in lower fuel consumption at the furnace
 - Increased the combustion temperature at the heating furnace of the Crude Distillation Unit-2, thus lowering fuel consumption
 - Improved the efficiency of the heating furnace at the Crude Distillation Unit-2 by improving its internal wall through repairing and filling cracks to minimize heat losses

These improvements successfully reduced about 335,851 gigajoules (GJ) in energy consumption, equivalent to THB 163 million

Thai Lube Base Plc (TLB)

- >> Developed feedstock databases with the Feedstock Selection Project and improved product analytical processes for greater accuracy and precision, thus enabling selection of long residue from new sources that were economic, and enhancing the capacity of imported long residue to cut the overall operating costs
- >> Imported from other producers the 500 Extract for TDAE feedstock, thus raising the TDAE capacity
- >> Increased the production of 150 Label Free Oil (150LFO), a new high value product from TDAE Unit to meet more customers' needs
- >> Constantly produced the 40/50 special grade of bitumen, whose quality is superior to the 60/70 standard grade, to meet customers' greater needs
- >> Used the low-value short residue from Thairoil as a feedstock for bitumen production to add value and production volume to bitumen

Thai Paraxylene Co., Ltd. (TPX)

- >> Managed production efficiently, resulting in 99.9% of operational availability
- >> Developed high value products of the year 2023 through process modification to produce high purity toluene feedstock of the pharmaceutical industry, and distribute to customers. TPX together with Sak Chaisidhi Co., Ltd. conducted the feasibility study on the viability of using toluene from TPX as feedstock for methylcyclohexane for the solvent industry
- >> Modified processes of various manufacturing units to suit market circumstances for maximum product economics, including reduction of the toluene volume for blending with gasoline so that toluene production

may be increased during periods of higher demand and higher economic returns

- >> Modified processes of various manufacturing units to improve energy efficiency:

- Lowered excess purity in paraxylene with a real-time purity monitoring system at the Mixed Xylene (Parex Unit)
- Lowered energy consumption for paraxylene production by adjusting parameters of the ACCS control system, adjusting water injection, and optimizing line flush at the Mixed Xylene (Parex Unit)
- Increased the upper limit of the furnace pressure to lower the volume of excess air into the Isomar Unit, thus lowering the fuel consumption at the furnace
- Reduced electricity consumption at compressors by using a variable-speed motor at the Xylene Rerun Unit
- Adjusted the SMOC system of the Xylene Rerun Unit to reduce fuel consumption while maintaining product properties as required
- Decreased the toluene volume for feeding the ED Sulfonate Unit to lower energy consumption. The surplus toluene served as a component for gasoline blending for periods of high economic value

These modifications successfully reduced energy consumption by approximately 13,793 GJ, equivalent to THB 10 million.

LABIX Co., Ltd. (LABIX)

- >> Processed with efficiency, hence 100% operational availability
- >> Reallocated the crude grades of Thairoil and Subsidiaries based on cost-effectiveness, which increased the paraffin in the kerosene from Thairoil. LABIX relies on this kerosene as paraffin feedstock, thus pre-empting paraffin imports from expensive sources while enhancing

the overall energy efficiency of all sub-units of the Front End Unit

- >> Increased LAB capacity from 405 tons per year to 422 tons per year by replacing machine components with limitations, including pump motors and control valves, thus optimizing paraffin conversion
- >> Modified processes of various manufacturing units for greater energy efficiency
 - Duly lowered fuel consumption of the Unionfining Unit by gradually lowering surplus fuel consumption while maintaining product quality, thus lowering energy consumption
 - Improved process efficiency of the Molex Unit so as to separate more paraffin, enabling it to consume less paraffin feedstock and yet obtain the same amount of yield, thus reducing the energy consumption per unit for paraffin production
 - Increased the temperature of desorbents at the exit of the fan-type heat exchanger of the Molex Unit to reduce heat loss with air, thus trimming the energy consumption for raising desorbent temperature before entering the absorption tower

These modifications successfully reduced energy consumption by approximately 14,389 GJ, equivalent to THB 7 million.

TOP SPP Co., Ltd. (TOP SPP)

- >> TOP SPP's power and steam capacity expansion started operation as planned on April 1, 2023, to replace the power plant operated by Thailoil Power Co., Ltd., which ceased its operation due to the expiration of PPA with EGAT. These new capacities hiked power generation efficiency as well as power plant stability.
- >> Efficiently implemented the Reliability Improvement Program and introduced the predictive maintenance system to gas turbines, thus raising operational availability higher than targeted

>> Continuously executed plant optimization to achieve energy conservation and expense reduction goals, including

- Considered additional commissioning of gas turbine generators with lower fuel consumption as the first option, resulting in higher overall utilization of the first project while commanding cost saving
 - Switched to a heat recovery steam generator with superior efficiency to steam generator with fired boilers to produce ultra-high pressure steam, thus lowering the fuel consumption rate per unit of steam production
 - Continually operated the reverse osmosis unit, thus reusing water to lower process water expenses
 - Increased the cycles of the demineralization unit of the boiler-feed water to lower the consumption of chemicals used to restore the unit's efficiency
- >> Efficient process and constant control and audit resulted in higher Primary Energy Saving (PES) indices of power production unit than that indicated in the PPA, thus achieving the highest rate of fuel saving (FS)

Refining Performance Assessment

Thailoil and Subsidiaries maintained excellent overall refining performances, due to efficient business management as well as processing operations in parallel with prompt responses to market demand through integrating the work of various parties. Thailoil also maintained the plant utilization at the high level with excellent performance outcomes of the Productivity Improvement Project as well as sound ongoing development of energy efficiency based on the capacity comparison in the biennial Solomon Benchmarking. The latest edition (2022) was received this year with the findings as follows:

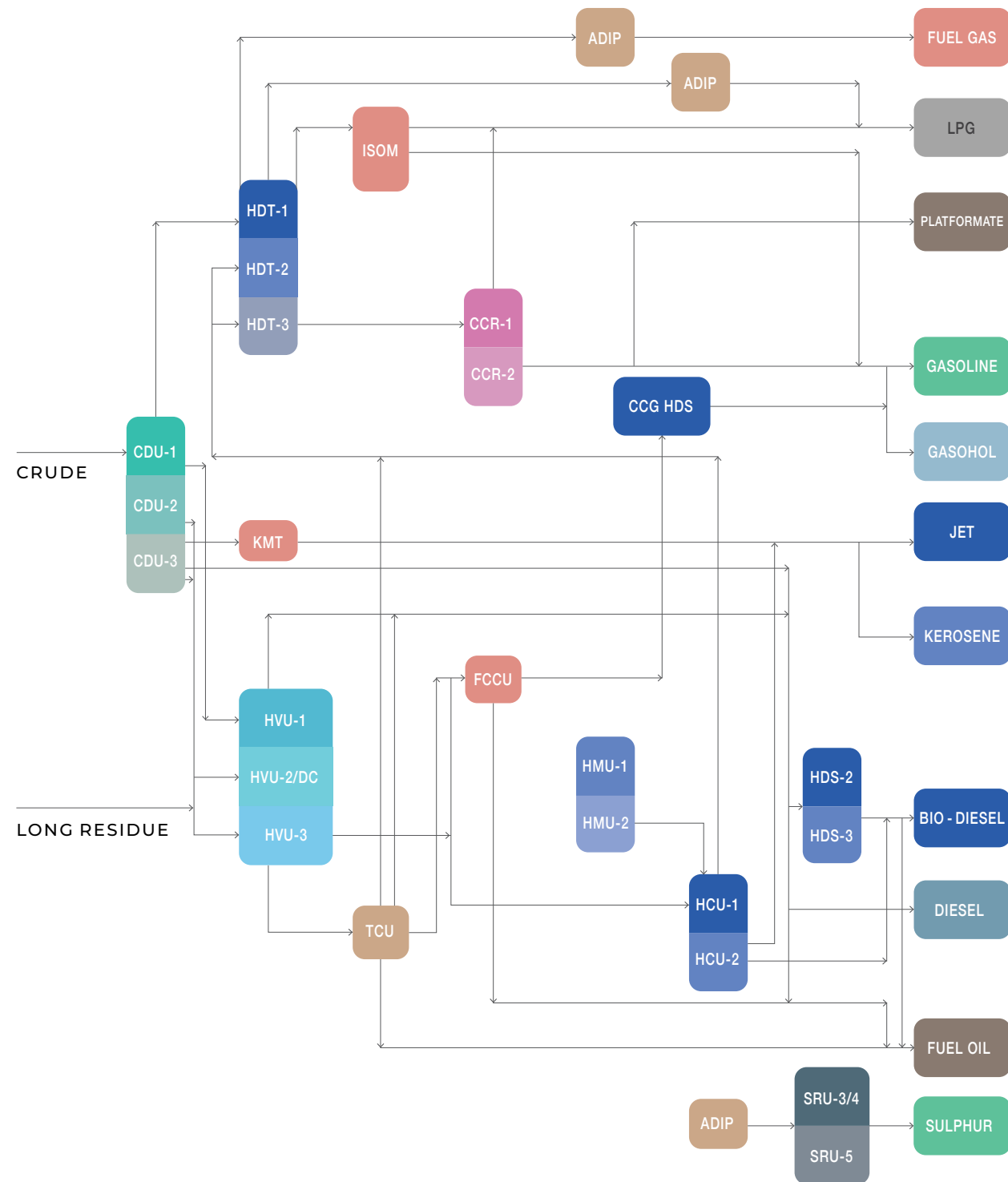
- >> Thailoil's net cash margin and operational availability were in the 1st Quartile while maintaining the non-energy cash cost and process utilization in the 2nd Quartile. As for the energy intensity index, even though the 2022 energy efficiency was improved from that of 2020, the 2022 energy efficiency was in the 3rd quartile, compared with other companies in Asia-Pacific, which was a downgrade from the 2nd quartile. This resulted from the lower number of peer participants this year, whereas their energy efficiency proved higher than the average of two previous years. This caused the overall refining performance competition to become more difficult challenges. Nevertheless, once all units of CFP start a commercial operation, the energy efficiency is to rise as a result of CFP's application of more sophisticated and efficient technologies than that of existing units.
- >> TLB maintained the energy intensity index, operational availability, and non-energy cash costs in the 1st Quartile on account of its ongoing management and improvement of process units.
- >> TPX successfully raised its net cash margin from the 3rd Quartile in 2020 to the 1st Quartile in this 2022

despite the slow market in the year 2022, resulted in low process utilization. However, in process management, TPX maintained its energy intensity index in the 2nd Quartile. TPX also improved its other key indices, including operating expense reduction and enhancement of operational availability, both of which have room for improvement, so that it may be prepared to address market opportunities under more favorable conditions.

Due to the successful commissioning of TOP SPP Expansion Project, Thailoil and Subsidiaries' power and steam distribution was efficiently secure, which improved Thailoil's energy efficiency and TPX's energy intensity index be better than planned. LABIX, meanwhile, raised its energy efficiency continually on account of various project implementation. On the other hand, while benefited from more efficient power and steam generation, TLB found its energy efficiency index inferior to goals. This resulted from lower production capacity than planned, as Thailoil and Subsidiaries commanded group production plans based on prevailing market demand to maximize hydrocarbon values. This caused the proportion of petroleum to increase while that of lubricants drop due to the sluggish lubricant market demand.



CRUDE AND FEEDSTOCK REFINING PROCESSES



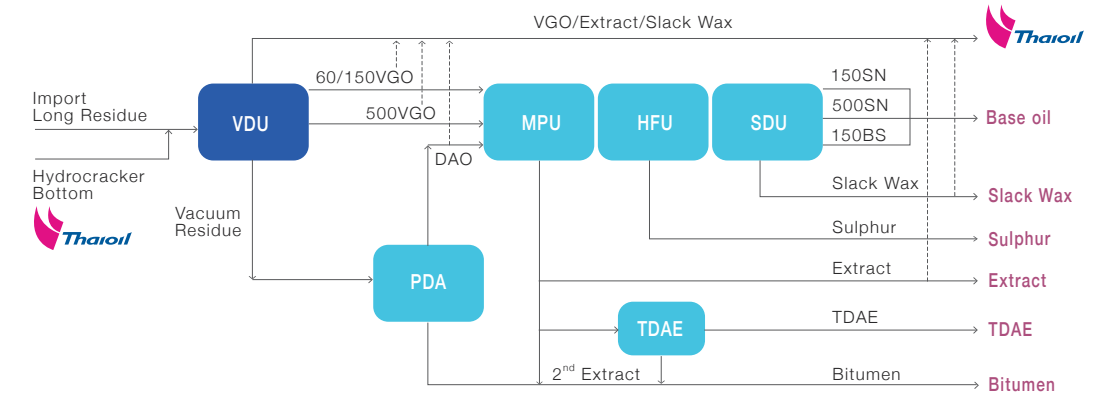
Flow Diagram of Thaioil Refinery



PETROCHEMICAL AND LUBE BASE OIL PRODUCTION PROCESSES OF THAI OIL AND SUBSIDIARIES

SIMPLIFIED LUBE CONFIGURATION

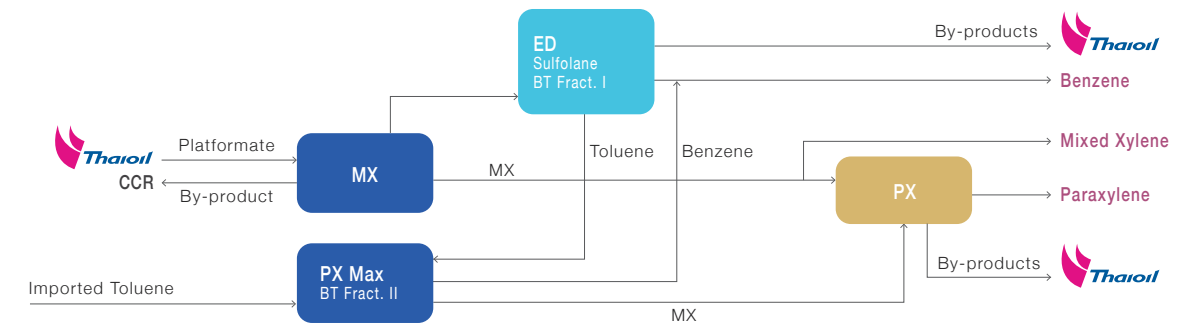
● DISTILLATION ● QUALITY IMPROVEMENT ● PRODUCT



Flow diagram of TLB, for the production of lube base oil

SIMPLIFIED AROMATICS CONFIGURATION

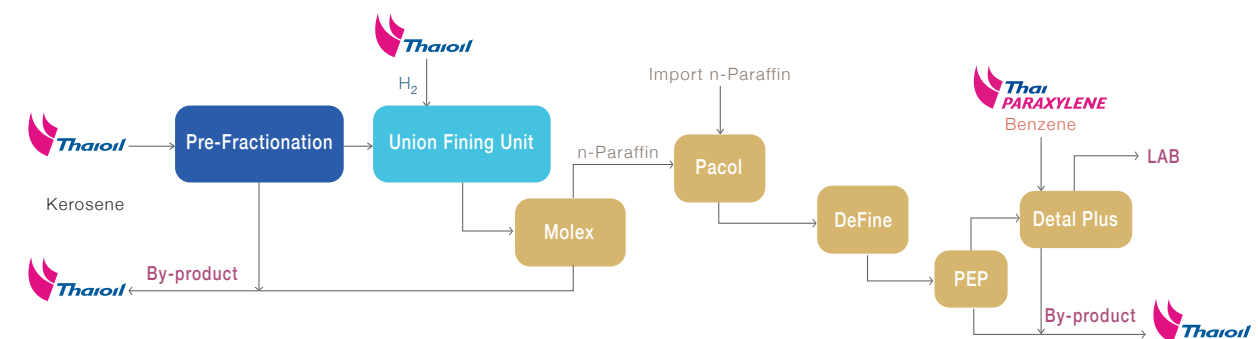
● DISTILLATION ● QUALITY IMPROVEMENT ● UPGRADING ● PRODUCT



Flow diagram of TPX, with aromatics outputs as feedstock for downstream petrochemical industry

SIMPLIFIED LAB CONFIGURATION

● DISTILLATION ● QUALITY IMPROVEMENT ● UPGRADING ● PRODUCT



Flow diagram of LABIX, for the production of Linear Alkyl Benzene (LAB)

Details related the production processes of petroleum products from crude oil and other feedstock, including the production processes of lubricants and petrochemicals of Thaioil and Subsidiaries, are disclosed at the company's website (www.thaioilgroup.com) under "Thai oil and Subsidiaries' Businesses" under "Refining business, lube base oil business, petrochemical business, and other businesses".

Future Projects



Thaioil and Subsidiaries are committed to driving sustainable growth by constantly executing a strategic plan as 3Vs for their greater competitiveness, and through project investments that align with their long-term strategic plans. To this end, Thaioil and Subsidiaries focus on optimizing their current assets, investment in high-growth businesses with attractive and quick economic returns.

To achieve the vision of Empowering Human Life through Sustainable Energy and Chemicals, Thailoil and Subsidiaries are committed to driving sustainable growth by constantly executing a strategic plan as 3Vs for their greater competitiveness, and through project investments that align with their long-term strategic plans. To this end, Thailoil and Subsidiaries focus on optimizing their current assets, investment in high-growth businesses with attractive and quick economic returns, and scaling up the values of Thailoil and Subsidiaries toward emerging businesses to create a diversified and flexible investment portfolio, and reduce the fluctuation of refining margin. Furthermore, Thailoil and Subsidiaries values investment planning in accordance with prevailing market situations, industrial trends, and energy transition to maximize the appropriate benefit to both the organization and stakeholders.

Ongoing Projects

Clean Fuel Project (CFP)

Thailoil and Subsidiaries have invested resources in the Clean Fuel Project (CFP) to expand the capacity from 275,000 to 400,000 barrels per day, resulting in diverse types of crude handling, achieving economies of scale, and improving product values, and produce more environmentally friendly. These would improve Thailoil and Subsidiaries' competitiveness, address the market demands, both Thailand and Southeast Asia, and lays a foundation for feedstock production for future petrochemical products.

CFP was worth about USD 4,825 million in investment, and approximately USD 151 million in interest during its construction. The sale of the Energy Recovery Unit (ERU) has trimmed project investment by approximately USD 757 million. By contrast, the COVID-19 pandemic during 2020-2022 impacted a great deal of projects worldwide, including the equipment production, machinery transport, and construction sectors. Since CFP has continuously

suffered from the pandemic, the project has been facing the schedule delay. Nevertheless, Thailoil in conjunction with the project contractors and advisors have resolved these obstacles by altering their implementation approach to minimize impacts. For instance, accelerating the progress, adding subcontractors to meet these new plans under strict COVID-19 measures, and modifying work for greater efficiency. Due to the complexity of such work processes and measures, the CFP investment budget has grown by roughly USD 550 million, with USD 422 million in interest during construction and project timeline has been extending 2 years from plan.

Thailoil and Subsidiaries remain, keep focusing on completing the project under the strategic plans for growth and long-term profit. CFP is recorded 95.0 percent progress nowadays. Thailoil plans to start commissioning of the Hydrodesulfurization unit (HDS-4) in Q1/2024 ahead of schedule plan to support the production of EURO-5 standard. As for other process units, work is being accelerated to enable more test runs.

RHCU Pilot Plant

The Residue Hydrocracking Unit (RHCU), a new unit under CFP, analyzes and assesses heavy crude oil grades that are low-priced as well as suitable for its optimal production planning. RHCU is aimed to test catalyst efficiency to gain essential technical data for selection of suitable low-priced catalysts. The project is currently under construction. After test runs, RHCU is due for commercial operation in early 2024.

Hai Phong Terminal

The terminal expansion in Hai Phong, a major port in northern Vietnam, is aimed to create opportunities for market penetration and the solvent and chemical business expansion in the northern Vietnam to meet rising demand accompanying economic growth. The project is under construction, with due Commercial Operation Date (COD) in late 2024.

Projects under Feasibility Studies

High Value Products (HVPs)

Thaioil and Subsidiaries command a strategic plan to increase the proportion of high value product (HVP) by adding value to commodities, thus meeting specific requirements of customers and reducing the volatility of long-term profits. Thaioil and Subsidiaries are studying and developing HVP by leveraging market lead and technology push as guidelines. In addition, the group has integrated cooperation with both PTT Group and external business partners to achieve this objective.

Petrochemical Business Expansion

Thaioil and Subsidiaries' investigation of opportunities is ongoing for extending the value chain to downstream petrochemicals with a focus on specialty chemicals and the goal of investment in a solution provider business, applying technology and niche expertise on polymer improvement to match end users' needs, especially in the constantly outstanding growth industries, including healthcare, automotive, and electronics.

High Value Businesses (HVBs)

Thaioil and Subsidiaries' interest lies in Disinfectants and Surfactants (D&S), which command high growth rates and are in line with the competitiveness of Thaioil and Subsidiaries and the strategic direction of PTT Group. Thaioil and Subsidiaries are preparing for the D&S business entry through the commercial development, technical service/adaptive Research and Development (R&D), and R&D in collaboration with knowledgeable educational institutions in parallel with the investigation of the investment viability in suitable target companies that can serve as essential business platforms for Thaioil and Subsidiaries.

International Logistics, Infrastructure, and Distributors in Target Countries

Currently investigating the investment potential to relentlessly improve and establish logistic management system, utilities and existing business infrastructure, Thaioil and Subsidiaries are reviewing the feasibility of Joint Venture (JV) and Merger and Acquisition (M&A) with chemical distributor partners to accommodate and support the sales and distribution of commodity products and the sales growth of specialty chemicals to regional markets. The focus is on high-growth economies, namely Vietnam, Indonesia, and India. This would strengthen the business competitiveness in a sustainable way while yielding a key platform for Thaioil and Subsidiaries' business growth and expansion.

Technology and Green (TAG)

Thaioil and Subsidiaries' business growth strategy focuses on new Technology and Green (TAG) to enhance the investment portfolio flexibility in line with industrial trends and future energy transition. To this end, two approaches are adopted: 1) JV and M&A in Bio Business and New Energy. Thaioil and Subsidiaries are currently investigating opportunities for biojets/Sustainable Aviation Fuel (SAF) by leveraging the Hydroprocessed Esters and Fatty Acid (HEFA) technology in parallel with the Alcohol to Jet (ATJ) technology through the collaboration with PTT Group and business partners; 2) investment through Corporate Venture Capital (CVC) via TOP Ventures Co., Ltd., under three investment frameworks, namely Sustainable Technology, Hydrocarbon Disruption Technology, and Manufacturing Technology. Moreover, Thaioil and Subsidiaries have adopted an approach to start collaboration with startups; investments have been engaged to foster new businesses or support existing businesses of Thaioil and Subsidiaries.

Risk Factors and Enterprise Risk Management

In 2023, the world faces new risk factors namely Geopolitical Risk between the Russia and Ukraine conflict, and the Israel-Hamas war. In addition, macroeconomics slowed down as well as the recovering demand for petroleum products due to each country's internal economic problems. Moreover, lifestyles have turned into the New Normal, with the increasing application of emerging online technologies to facilitate and enhance work efficiency. This results in more and more Cyber Attacks, and Ransomware is widely elevated. All these factors directly affect businesses, causing Thailo and Subsidiaries to elevate them to key corporate risks.

To ensure efficient risk management and handling of potential impacts while maintaining business competitiveness amid high uncertainty and volatility, Thailo and Subsidiaries applied the risk management approach under the model of The Committee of Sponsoring Organizations of the Treadway Commission Enterprise Risk Management 2017 (COSO ERM) and ISO 31000: 2018 (Risk Management Principles and Guidelines), regarded as universal practices. The risk management emphasizes integrated execution embracing Thailo and Subsidiaries' risk management and risk appetite, consisting of six elements: strategic, commercial/marketing, financial, operation, Environment Social and Governance (ESG), people and organization. The risk appetite framework was then connected to the process of mapping out the strategic plan, investment plan, and business plan to align with corporate objectives and goals. This was complemented by the identification of key risk factors, both internal and external, derived from

stakeholders' expectations, and brought to define measures and plans for each factor. Moreover, Risk Management is applied to scrutinize financial and non-financial factors to evaluate impacts and identify mitigation plans or suitable decisions. Finally, key risks were identified along with Key Risk Indicators (KRIs) to closely monitor key risks and risk management outcomes. By revealing likelihood against the category of consequence severity and potential impact, the Risk Assessment Matrix is categorized into five risk levels together with six aspects of impacts: namely, personal, environmental, property, reputation, goal, and net profit of Thailo to set a mitigation plan and manage the stage of risk suitably. Risk Coordinator shall follow up and communicate the operation progress every quarter. Furthermore, reports were then regularly made for the Risk Management Steering Committee (RMSC), Risk Management Committee (RMC), and Board of Directors (the Board) for efficient and effective steering of enterprise risk management. However, risk management processes and conformance to standards are audited by internal and external auditors (Management System Certification Institute (Thailand), MASCI) annually. Finally, Thailo and Subsidiaries defined risk management among the Key Performance Indicators (KPIs) of Thailo and Subsidiaries' executives.

Currently, the severity of threats tends to increase, as well as calamities and situations that could disrupt businesses are approaching; Thailo, thus, has prepared to be ready by defining its Business Continuity Plan (BCP) to comprehensively cover critical processes and key support processes under the ISO 22301:2019

Business Continuity Management. The simulation of disasters was designed as part of BCP drills in conjunction with continual emergency drills of the refinery. Also, integrated Governance, Risk&Control, and Compliance (GRC) approach was developed to ensure Thailoil's sustainably growth, operation with business ethics corporate governance, compliance systematic risk management, and compliance with laws, regulations, and the company's articles of association.

Corporate Risk Management and Mitigation Plans

Thailoil has been encouraged to systematically monitor and review corporate risks as well as the effectiveness of mitigation plans by quarterly tabling Thailoil and Subsidiaries' risks, mitigation plans, and 2023 outcomes of KRI management follow-up for RMC's endorsement before pursuing the Board's approval. Thailoil and Subsidiaries grouped risks into 3 aspects with 11 key risks, and defined corresponding preventive measures or mitigation plans to achieve goals, as described below:

Business as Usual

1. Market/Commercial Risks

In 2023, the crude price and its spread of crude oil and petroleum products (both of which directly affect Thailoil and Subsidiaries' profitability) highly fluctuated amid the Russia-Ukraine conflict. Thailoil therefore proactively adjusted its margin hedging. To this end, the Hedging Steering Committee regularly screened and reviewed the strategic plan and set hedging goals under the framework endorsed by RMC and the Board. Thailoil also engaged in productivity improvement and cost management to minimize such risks.

In 2023, the margin hedging reports were monthly issued to the Risk Management Committee (RMC) for up-to-date Risk Management.

As for commercial risks, Thailoil prioritized risk management of the reliance on major customers by selling petroleum products to PTT Oil and Retail Business Plc (OR) under the Product Offtake and Crude Oil Supply Agreement (POCSA) enabling Thailoil to know in advance the volumes of petroleum products required by the customers so that Thailoil could plan the production volumes to accurately match customers' demand. Thailoil also sold petroleum products to other traders both domestic and international, and sold them as feedstock to Thai Paraxylene Co., Ltd., and Thai Lube Base Plc, as well as expanding our business into petrochemical business to Indonesia, which is considered a major step to diversify our investment to mitigate commercial risks to meet risk appetite.

2. Business Disruption Risks

Geopolitical conflicts, the aggravating cost of living, and domestic political situations including dissatisfaction with election outcomes, may lead to black swan events that could cause civil unrest, and eventually impact Thailoil's business.

Thus, Thailoil closely monitored the Russia-Ukraine conflicts as well as the war between Israel and the Hamas group. In the meantime, the company intimately monitored an unsatisfied election outcome protest or political problems, and the rising cost of living as well as additional energy costs that could result in public dissatisfaction, thus leading to unrest. Therefore, Thailoil drew up a BCP and constantly rehearsed plans to be better prepared for emergencies.

3. Risk from major incidents affecting or disrupting business (Major Incidents)

Major incidents could post impacts on business operations; the cause of which is possibly from both external and internal factors. Apart from affecting business operations, these risks affect the reputation, communities, society, and the environment. Thailo, thus, came up with preventive measures and mitigation plans by adding measures for security, safety, occupational health, and the environment in the operation by employees and those related. Thailo stressed process safety management and risk assessment for site activities; advocated safety activities of operators and contractors by ensuring the incorporation into every work process and intensive adherence; advocated inspection, maintenance, and assurance of efficient and reliable performance of equipments. Thailo also analysed business performance and generated an incident report, coordinated with nearby communities, local government agencies, and industry groups to form a collaboration on equipment and resources for safe and ongoing operations. In addition, BCP was regularly revised, improved, and rehearsed. Thailo and Subsidiaries have engaged in applicable insurance: namely, physical loss or damage and business interruption insurance, third party liability insurance, miscellaneous insurance, and environmental liability insurance to safeguard Thailo's assets or properties under Thailo's responsibility. This includes the refinery, depots, supplies and equipment, and others. The insurances cover losses of life and properties of third parties, including public liability, pollution liability, and product liability in addition to protection against potential loss to the environment and rehabilitation expenses.

Furthermore, water supplies for future projects were considered a key risk to the business operation, Thailo mapped out a strategic plan for water management while ceaselessly monitoring the situation of all related

sectors' water management, with proper planning and proper allocation of water consumption.

4. Cybersecurity Risks

After the COVID-19 pandemic, workplace trends have altered and business operation relies more on more reliance on technology, including work-from-home practice and digital workplaces where employees connect, communicate, and collaborate through multiple channels, using electronic meeting through. Microsoft Teams (MS Teams), The digital technology is applied to increase efficiency in every step of the business, leading to cyber risks of data leaks, infrastructure attacks, and ransomware among others. Thailo, therefore, elevated the security measures for IT systems to protect itself from external threats. This included compliance with ISO 27001:2013 Information Security Management System; relentless system monitoring and inspection; communication on measures and guidelines to related parties; and regular testing of protection systems by third-party experts to identify defects and seek additional protection guidelines, as well as increase Zero Trust Architecture measures. Thailo also conducted a security maturity level assessment against international standards, and commissioned a third-party expert to conduct a vulnerability assessment in addition to engagement in a BCP drill on the IT disaster recovery plan to ensure that the business could proceed seamlessly and continually meet customers' and stakeholders' needs.

Strategic Initiatives

5. CFP Execution and Readiness for Startup & Operation

CFP is a major project that impacts Thailo's growth and sustainability. Together with our contractors and related stakeholders in all sectors, Thailo and Subsidiaries, therefore, value and manage this project risks, which are divided into six aspects: namely, occupational health and safety, management of communities around the refinery,

project period, capital management, quality, and preparedness of existing and future process units. This is to ensure that CFP can commercially operate as planned. Despite being affected by the COVID-19 pandemic, the CFP project management team had devised mitigation plans, including the prioritization of engineering and procurement work under the prevailing situation and compliance with the COVID-19 pandemic control measures.

6. CAP Project Execution Risk

Thaioil has been continuously monitoring investment outcomes in PT Chandra Asri Petrochemical Tbk (CAP). Since investment in CAP marks a milestone of business step in the olefins petrochemical industry, Thaioil emphasizes and takes seriously risk management of CAP performance and overall operations, profits and progress before deciding to expand CAP's capacity. This is to ensure the achievement of Thaioil's plans while lowering potential risks despite new external risk factors affecting the plans.

7. Long-Term Business Disruption Risks

Climate change and natural disasters cause new risks nowadays, and people care about environmental factors enormously, because global warming seems to heating up faster than predicted. An Electric Vehicle (EV Car) eye-catching megatrend is essential to deal with climate change instead of an Internal Combustion Engine (ICE). Thus, the Peak Oil and Net Zero Greenhouse Gas Emission seem to have sped up in recent days. Fossil Fuel has been drastically phased out, which impacts Thaioil's business in the long term or causes disruption. Thaioil has, therefore, decided to extend to the olefins business by investing in CAP in Indonesia to sustain the growing demand for olefins products. This would support the growth of business structure covering petroleum and

petrochemical businesses. Thaioil and Subsidiaries also engaged in long-term planning and implementation of assorted strategic plans to prepare for a low-carbon society, as pledged by Thailand to the 26th Meeting of the United Nations Framework Convention on Climate Change Conference of the Parties (COP26), by increasing process efficiency to curb and lower GHG emissions and by studying the investment in green business.

Strategic Enablers & Sustainability

8. Risks from Funding Management for Mega Project (Financial Risk)

The volatile economy has affected petroleum product demand. Thaioil has, therefore, developed new financial tools to add options and flexibility for securing loans through capital markets. Thaioil has also restructured the investment capital to sustain future growth by closely monitoring movement of these markets.

9. Risks from Human Resources Recruitment and Development (Staff Readiness)

To ensure the CFP execution and New S-Curve Business growth to proceed seamlessly and be prepared for changes, Thaioil has restructured the workforce and modified the recruitment strategies as well as improved potentials to keep up with business requirements to align with the New Normal. This included proactive recruitment focusing on internal as well as external coordination for accessing more and more human resources through various channels, modification of corporate image communication, personnel development planning that addresses future needs by designing essential expertise and enhancing knowhow among related personnel, and introduction of technology to support personnel development. Moreover, Thaioil has created learning media, added communication channels, and strengthened

relations within the organization to address needs from all groups of age, and modified the work format for job flexibility, apart from growing our welfare diversity to meet employees' needs. Thailoil has also modified plans and activities to enhance engagement with Thailoil, and ensure the alignment with employees' needs and expectations. Finally, the company has modified the personnel administration for greater agility to address corporate needs while supporting compliance with the human rights in the workplace.

10. Risks from Thailoil Image, Stakeholder Expectation, Community Complaints, and Stakeholder Involvement (Community Complaints Including Social Concerns)

It has been over six decades that Thailoil has demonstrated its commitment to operating its business with responsibility for communities, society, and the environment for sustainable development. Thailoil values business operation in parallel with community development for a better quality of life through Corporate Social Responsibility (CSR) projects in the area surrounding the refinery as well as in remote areas covering the quality of life, education, environmental conservation, energy, and natural resources to become an admired, accepted, and trusted organization among communities and society. Thailoil supports and organizes regular activities with communities around the refinery to foster good relationship with the communities, Thailoil's virtual family members. The Health and Learning Center was established by Thailoil and Subsidiaries to achieve such good relationship. Thailoil also provides opportunities for various groups of stakeholders to engage in the operation management through three coordinates involving Thailoil and Subsidiaries, communities, and local authorities, and five participates in together thinking, acting, resolving, learning, and developing. This would ensure all sectors' participation in operation for public benefit and with

the same goal. Thailoil complies with the environmental whistleblowing process should our operations affect community living. The company also engages in community administration through our CFP Support Center, set up to coordinate and receive complaints from community members affected by CFP to ensure that Thailoil commands necessary actions to ease environmental impacts on communities. Finally, Thailoil is committed to operating businesses with fair treatment to all stakeholders for sustainable mutual benefit.

11. Reputation Risks

Within time of modern technology, the connection is possible and easy at the fingertips; however, the technology is a two-sided coin. On one side, the communication is easy and convenient; on the other side, the negative news can be spread at the same speed. Therefore, the reputation management is significantly upgraded. Thailoil has shown its interest in preparing to address online losing facts, fake news and media in general, misinterpretation of interviews, miscommunication, groundless complaints, and so on. This is because reputation risks could post severe damage to share prices and revenue. Thailoil management has therefore carefully mapped out a process for preventing and coping with problems that could affect its reputation by defining an organization supervision policy to create trust among stakeholders and society. The policy provides management's and employees' behavioral standards when dealing with third parties. This includes customers' confidentiality, preparation of community announcements, formulation of plans and rehearsals for crisis communication, and preparation of the crisis response work procedure, in addition to the Document Object Model (DOM) to help Thailoil detect negative news. Furthermore, Thailoil's public relations system has been

improved to screen external and internal intelligence and news to uphold the company reputation.

Emerging Risks

The business operation is possibly affected by political, economic, social, environmental, legal, and technological changes, which tend to forge the emerging risks as follows:

Risk name	Risk level	Period	Explanation	Potential impact on Thaioil	Mitigation approach
1. Economic Volatility Risk	High	Short-term (within 1-2 years)	<p>Risks from economic volatility include:</p> <ul style="list-style-type: none"> >> Geopolitical conflicts, e.g., the Russia-Ukraine war, affecting energy prices in Europe due to the boycott of oil imports from Russia, which hikes energy costs >> The Israel-Hamas war that could spread concerns due to the ground attacks by Israel worrying countries in the region. If war expands to the Middle East, which houses oil fields and key shipping routes, the energy prices will be affected and inflation worsen. 	<ul style="list-style-type: none"> >> Volatility of market oil prices, affecting Thaioil's costs. >> Financial volatility arising from tight monetary policy, hiking Thaioil's financial costs, and causing foreign exchange rate volatility. 	<p>Thaioil closely monitors the economic situations, both domestic and international, and defines measures to manage risks caused by economic volatility, including</p> <ul style="list-style-type: none"> >> Commercial risk management and oil price volatility management via margin hedge, designed to lower risks of price changes >> Financial risk management through interest rate swap contract to lower risks of interest rate changes including cross currency swap and forward foreign exchange contract to lower foreign exchange risks

Risk name	Risk level	Period	Explanation	Potential impact on Thai oil	Mitigation approach
1. Economic Volatility Risk (continue)			<p>>> Volatility in global money markets resulting from countries' restrictive monetary policy through increasing interest rate to curb inflation, notably in the EU and the U.S.</p> <p>>> China's economic deflation, leading to stagnant growth in 2024 due to the crisis of its real estate market, once a key economic mechanism driver.</p> <p>Other issues possibly impacting on the Thai economy and oil demand include:</p> <p>>> Volatility in global money markets due to inflation</p> <p>>> Geopolitical conflicts</p> <p>>> China's economic deflation</p> <p>>> El Niño phenomenon</p>		<p>>> Portfolio restructure to increase proportion of non-refining investment for greater business diversity.</p>

Risk name	Risk level	Period	Explanation	Potential impact on Thaioil	Mitigation approach
2. Energy Transition to Renewable Energy Risk	High	Medium-term (within 3-6 years)	<p>>> The public sector has issued various laws and regulations promoting alternative energy. The National Electric Vehicle Board (EV Board) has a tangible plan to promote EVs according to 30@30 Policy. The goal is to produce ZEV (Zero Emission Vehicle) at least 30% of all vehicles produced in 2030. Currently, the public sector's EV promotion has included of reducing EV subsidies and measures to attract EV producers to operate in Thailand through tax and non-tax measures.</p> <p>>> Energy Policy and Planning Office (EPPO) has developed a plan for EV infrastructure to sustain the EV number.</p>	<p>>> More consumption of renewable energy causes fuel demand to drop, and implies less revenue and profit for Thaioil.</p>	<p>>> Productivity increase, notably for gasoil and jet fuels, through CFP to lower production costs and enhance long-term competitiveness.</p> <p>>> Investment expansion of new S-Curve targeting the increase in profit proportion of more than 20% of the total profit, with a focus on those with promising growth potential in line with Thaioil's sustainability goal.</p> <p>>> Pursuit of new investment opportunities, including High Value Products (HVPs) with special properties and high values, together with investment in startups, following technological development trends.</p>

Risk name	Risk level	Period	Explanation	Potential impact on Thaioil	Mitigation approach
3. Bill of National Climate Change Act Risk	High	Medium-term (within 3-6 years)	<p>>> Thailand has identified its Carbon Neutrality goal for 2050 and Net Zero GHG Emissions for 2065.</p> <p>The bill of National Climate Change Act, is on process and expected to be enforced soon. This bill incorporates the requirement for the private sector to report GHG emission volumes and prescribes economic mechanism to attract the private sector to lower GHG emissions. Moreover, promotional measures will be issued to advocate population's change of routine behavior to resolve climate change problems, including the development of mass transportation and the promotion of clean energy production and consumption.</p>	<p>>> In complying with new laws and requirements concerning GHG emission report, Thaioil may need to invest in technology to improve internal systems and internal processes.</p> <p>>> Increasing expenses needed for compliance and system improvement for emerging carbon standards, including carbon taxes or fees under the emission trading scheme.</p>	<p>Lower GHG emission to achieve the goal under the 3Cs framework:</p> <p>>> Initiate lowering of carbondioxide under Scope 1 and Scope 2 to achieve the interim target, for instance, lowering GHG emissions by 15% by 2035 from the 2026 base year.</p> <p>>> Promote the offsetting with the remaining GHG under the Carbon Neutrality and the Net Zero plans by 2050 and 2060, respectively.</p> <p>>> Pursue investment opportunities in alternative energy businesses, which are environment friendly with low carbondioxide to control the emission in the future.</p>

Internal Controls

Thaioil recognizes the value of the internal control system under the international framework of The Committee of Sponsoring Organizations of Treadway Commission 2013 (COSO 2013) for attaining all three aspects of internal control goals, namely efficient and effective operations, credibility of financial and other reports, and full compliance with laws and regulations. The Board of Directors (the Board) assigned the Audit Committee to review results of internal control assessment. Meanwhile, the Operational Risk Management Section takes charge of monitoring and reviewing the adequacy of the internal control system annually.

In 2023, the Board examined the assessment outcomes of the Securities and Exchange Commission, Thailand (SEC) form, prepared by Thaioil's executives and subsequently reviewed by the Audit Committee, and concluded that Thaioil's internal control system proved adequate and suitable for its business operations to accomplish the targets, with the five elements of operations and system development to support internal control under COSO as follows:

1. Control Environment

The Board and executives of Thaioil support the corporate culture that stresses integrity and business ethics, consistent with the organization's vision and mission, by managing a sound and suitable control environment as detailed below:

>> Formulation and review of policies on corporate governance and code of conduct which include anti-fraud and anti-corruption, are approved and enforced as operating guidelines for directors, executives, and employees. Conflicts of interest are to be reported via an electronic system every year. No gifts policy is enforced emphasizing on no giving and accepting gifts, assets, or other benefits.

Executives and employees are required to comply with such policies and guidelines as well as the Personal Data Protection Act B.E. 2562. This earned Thaioil multiple awards at national and international levels in 2023.

- >> Independence of the Board from executives is evident in clearly defined roles and responsibilities of the Board. The Board takes charge of reviewing and endorsing key strategies and policies as well as objectives, financial goals, risks, work plans, and budgets. The Board is to also uphold compliance with laws while ensuring that executives pursue business policies and strategies efficiently and effectively.
- >> The organization is structured with emphasis on efficient internal control, equipped with checks and balances through different functions whose authorities, duties, and responsibilities are independent of each other. Each line of work has its own top executive. The organization structure is regularly reviewed in line with business strategies and plans.
- >> Thaioil devised Human Resource Development Plans to enhance employees' competency and capability systematically and sustainably, duly embracing personnel attraction, development, retention, and engagement, with a succession plan of key positions prepared. Thaioil also defined a process for fair performance management process that reflects the ability to perform against Key Performance Indicators (KPIs). A long-term personnel recruitment strategy was identified, addressing the changing environment and prevailing business needs.
- >> Thaioil operates based on Integrated Governance, Risk&Control, and Compliance (GRC), and is equipped with ethics and good governance as well as systematic risk management in key processes, with a

TOP Group GRC Integration Working Team established to drive GRC and ensure continuous operation development in an efficient and systemic manner while enhancing the awareness and understanding of GRC to employees at all levels.

2. Risk Assessment

Thaioil values and incorporates risk management into the entire organization to drive the business towards both short-term and long-term goals with confidence. The Risk Management Committee (RMC) and the Risk Management Steering Committee (RMSC) are to ensure efficient risk management and its suitability with the operation and business growth.

To this end, Thaioil has devised a risk management plan embracing risk assessment, analysis, and review in line with its strategies and business plans as well as Thaioil's objectives and goals. The plan takes into account external and internal factors relating to both current and future business, as well as corruption probability. Thaioil identifies Risk Appetites and Key Risk Indicators (KRIs) to facilitate performance monitoring and reporting, details of which can be found in the 'Risk Factors and Corporate Risk Management' section. Thaioil has also mapped out measures and guidelines for cyber security management, compliance with the Personal Data Protection Act B.E. 2562, and sustainable organizational development, with extraordinary value given to ESG and employee management with due regard for generation gaps.

Each year those responsible for business processes shall assess changes in circumstances potentially affecting risk management and internal control to define plans and ensure that their improvement and validity are in line with prevailing situations.

3. Control Activities

Efficient and effective control activities help Thaioil mitigate risks within its risk appetite. Key control measures are as follows:

- >> The internal control measures are based on good control principles, including segregation of duties, Corporate Authorization Procedures (CAP) (under revision), reviewing process, and document filing. The Governance, Risk&Control, and Compliance Self Assessment (GRCSA) form is sent out for applicable units to assess the efficiency and effectiveness of key process and activity control. The Operational Risk Management Section shall review the assessment and monitor additional control improvement plans within a given timeframe to ensure that Thaioil is well equipped with adequate, suitable, and updated internal control.
- >> Preventive and monitoring control activities, both manual and automatic, are inherent in work processes. All executives are responsible for supervising and inspecting their respective units' work processes to ensure efficiency and propriety under work regulations with suitable, concise, and auditable internal controls. Also, the Continuous Control and Monitoring System (CCMS) has been continually implemented to automatically monitor control activities.
- >> Control process of the Information Technology (IT) system security was identified following the standard defined by the National Institute of Standards of Technology (NIST). Phishing e-Mail, Awareness and IT service management was reviewed and improved to be updated to keep pace with the changing situation, particularly the Work-From-Home practice. The Two-Factor Authentication system was upgraded for higher security using the One Time Password (OTP) code together with a log-in system designed to register personal electronic devices to allow access to the work systems.

4. Information and Communication

Thaioil values IT and communication systems that systematically support business execution, operation, management, and financial reports to accommodate

the Board's and executives' decision making and ensure the efficiency and effectiveness of internal controls. Policies and protocols for IT and communication are appropriately devised.

To maintain proper internal communication, Thaioil has developed an internal communication manual as well as guidelines for efficiently managing contents and communication channels. Employees shall therefore receive prompt, complete, and accurate information. To this end, responsible parties have been appointed for each internal-communication channel, including the intranet, e-Mail, e-Newspaper, and internal bulletin (Akanee). Notably, the CEO Townhall supports continual communication between high-level executives and employees to ensure goal attainment. To accommodate the Board's decision-making, critical information such as meeting papers are properly communicated and sent to the Board at least five business days ahead of the meeting date according to best practice.

As for external communication, Thaioil provides accurate and sufficient business information updates through public relations and advertising channels, including printed media, website, and social media such as Facebook. Moreover, performance outcomes and other related information that benefit investors' decision-making are provided at analyst meetings. During crises, a crisis communication center specially established to provide accurate, appropriate, and timely information.

In addition, Thaioil has laid down measures for filing complaints and whistle-blowing in writing. The process starts from receiving complaints, fact finding, to concluding cases. Channels for lodging complaints are clearly specified along with protection provided for whistleblowers and other parties concerned to encourage employees and third parties to report or provide information about non-compliance, fraud, or any action which is seeking unlawful benefits.

5. Monitoring Activities

Thaioil requires all executives to supervise and audit their respective work systems to ensure efficiency and compliance to policies, requirements, and work regulations under a concise internal control system. Thaioil equally values the management of Security, Safety, Occupational Health and Environment (SSHE), in which energy management and social responsibility are currently included, by requiring employees to undergo annual self assessment and revise their operation as required by regulations. This prevents and minimizes losses concerning the safety and occupational health of employees and contractors as well as process safety. More details appear under "Risk Factors and Corporate Risk Management" section.

Thaioil annually monitors results of internal control, at corporate level with executives conducting the assessment using the SEC's internal control adequacy assessment forms, and at the process level with process owners using the GRCSA form. Should any change in tasks or work processes occur during the year, the Operational Risk Management Section is to duly update and improve work procedures and control measures. Monitoring is also carried out through the CCMS system that can detect real-time non-compliance, with a report regularly submitted to process owners and management meetings. The approach ensures that all parties recognize the importance of compliance with business processes and internal control mechanisms. At the same time, Corporate Internal Audit Department formulates annual audit plans based on key risks, changes or increases in work processes or systems, and requests by management and the Audit Committee (if any), while in 2023 a Corporate Internal Audit Department developed an Assurance Map to aid decision making on the adequacy suitability, and improvement in risk management to thoroughly cover significant matters and reduce the redundancy of auditing activities.

Sustainability



Thaioil and Subsidiaries' sustainable management and development performance report, covering environmental, social, and governance aspects, has been incorporated in the 2023 Integrated Report.

For more information








Sustainability Management Policy and Goals

Thaioil and Subsidiaries are determined to operate and grow a sustainable business with attention to Environment, Social, and Governance (ESG) aspects as well as impacts on stakeholders throughout the value chain. The Sustainability Management Policy was thus, identified and launched to drive the sustainable development in the same direction as sustainable business.

In support of the corporate vision and business strategies as well as United Nations Sustainable Development Goals (UN SDGs) while responding to the global trends involving ESG issues, which have become more and more vital to stakeholders and business operations, in 2023, Thaioil reviewed its sustainability management strategy implemented within Thaioil and Subsidiaries, and identified a sustainability strategic plan and goals regarding ESG operations, detailed as follows:

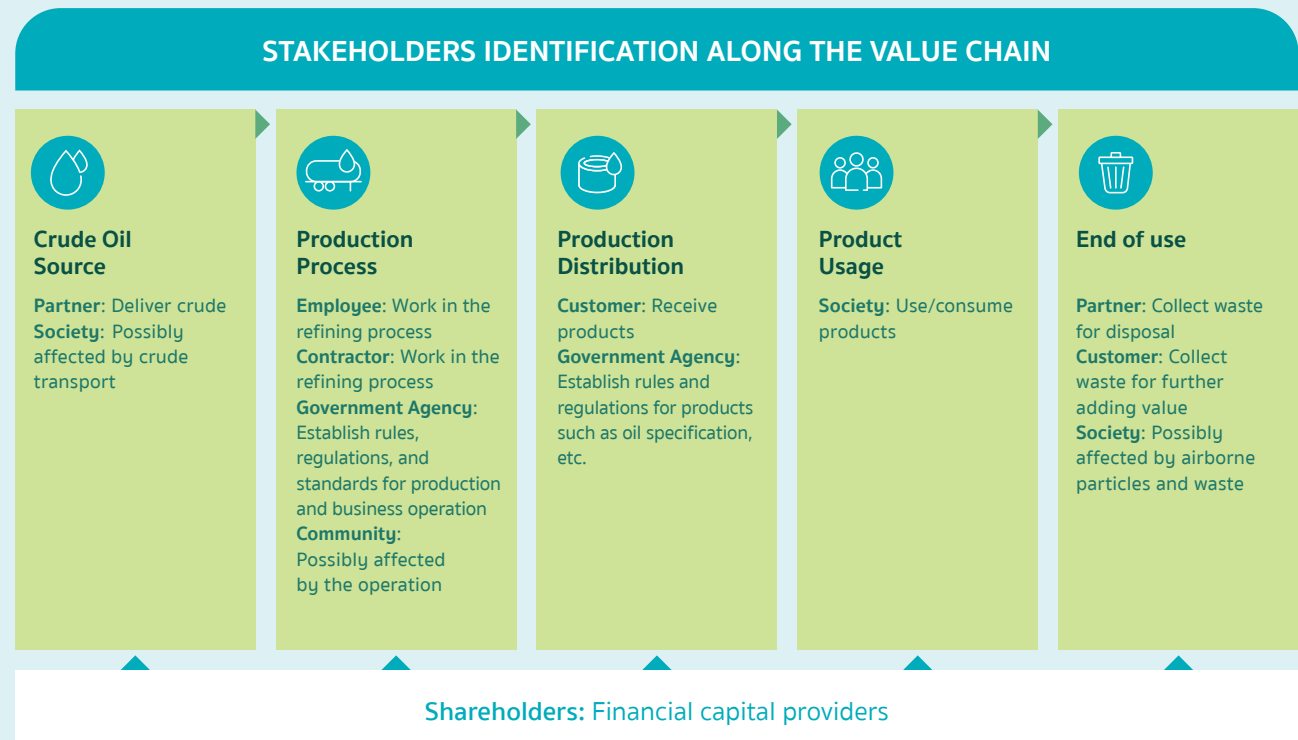


Additional information about Thaioil and Subsidiaries' Sustainability Management Policy is available on Thaioil's website, on the topic 'Sustainability/ Sustainability Management/ Policy'.

Sustainability dimension	 E: Environment	 S: Social	 G: Governance
Strategy 	Enhance Clean Environment Enhancing environmental management in line with the global direction	Engage Society Bonding with while creating value for communities and society to achieve long-term mutual growth	Ensure Good Governance Fostering confidence in corporate governance and organizational transparency
Success Indicators 	Net Zero GHG Reduction: Reducing GHG emissions by 15% from the base year 2026 by 2035 to achieve Carbon Neutrality by 2050 and Net Zero Greenhouse Gas Emissions by 2060 through implementation of the Net Zero GHG Emissions Strategy	Creating Social Value: Upgrading people's quality of life in line with Thailoil and Subsidiaries' strategy that aims for engaging in a petrochemical business and innovation while supporting for Net Zero Greenhouse Gas Emissions Strengthen Community Engagement: Maintaining community engagement of over 90% Nature-based Solution: Supporting Net Zero Greenhouse Gas Emissions tasks through projects relating to forest conservation, restoration, and forest area expansion to enhance GHG absorption	Zero Case of Non-Compliance and Fraud Incidents: Achieving zero violation of laws and corporate rules and regulations Good Governance Recognition: Being recognized as a business entity with good governance

Management of Impacts on Stakeholders along the Business Value Chain

Thailoil and Subsidiaries identified stakeholders by analyzing their involvement along the supply chain, ranging from crude procurement, production, to waste disposal after product consumption. Impacts between one another were analyzed as shown in the diagram below:



As a result of such analysis into the value chain, stakeholders are divided into six main groups. An internal unit was established to take charge of continual communication and exchange information with each group of stakeholders to understand their expectations and points of view about the business. (More information is available in the 2023 Integrated Report on the topic “Stakeholders and Sustainability Matters”.)

Sustainability Management in Environmental Aspect

Thaioil and Subsidiaries developed an environmental management system by devising a policy on **quality, security, safety, occupational health, environment, and energy management policy**, which serves as a framework. In addition, Thaioil and Subsidiaries have adopted the ISO 14001: 2015 environmental management system, and established a systematic environmental database to control and minimize impacts while conserving a good environment in parallel with driving sustainable business growth. The following environmental impact management is included in the database.



Additional information on the policy on quality, security, safety, occupational health, environment, energy management, and corporate social responsibility is available on Thaioil's website on the topic 'Sustainability/WORLD: Environment Well-Being/Environmental Quality Management'.



Environmental Management

Thaioil and Subsidiaries have systematically applied ISO 14001: 2015 to business operations with regular reviews for continuous improvement. The Five-Year Environmental Master Plan has now been upgraded as a framework for the operations and for driving environmental sustainability management. Also, the Compliance Unit was established as the core unit to drive the assessment of compliance with laws and regulations. Meanwhile, management tools and systems have been developed to support higher operating efficiency. In 2023, following an examination by the Management System Certification Institute (Thailand), Thaioil and Subsidiaries were found to engage in no major non-compliance with laws and regulations concerning the environment. (More information is available in the 2023 Integrated Report on the topic “Environmental Impact Management”.)



Water Management

Thaioil and Subsidiaries boast an efficient and systematic water management under the project 'Thaioil Circular Economy - WE GO Theme' (Thaioil CE WE GO), initiated to minimize risks from shortage of water required for processes while preventing conflicts with neighboring communities. Volumes of water consumed are accurately and clearly disclosed to the public and are open to examination. A business continuity plan has also been developed and reviewed, taking into consideration the shortage of water needed for processes to reduce water consumption and raise water management efficiency in the long run. In 2023, Thaioil and Subsidiaries could replace 37% of freshwater with sea water. (More information is available in the 2023 Integrated Report on the topic “Sustainability/WORLD: Environment Well-Being/Circular Economy”.)



Waste and Hazardous Goods Management

Thaioil and Subsidiaries command systemic industrial waste management by developing a waste inventory, minimizing industrial waste from the beginning of operation using the Circular Economy principle coupled with the 3Rs strategy (Reduce, Reuse, and Recycle), and applying them for waste management, collection control, transport, and safe disposal as suggested by laws and technical principles. In 2023, Thaioil and Subsidiaries achieved the goal of zero landfill. (More information is available on Thaioil website topic “Sustainability/WORLD: Environment Well-Being/Circular Economy”).)



Energy Management

Thaioil and Subsidiaries keep on executing the energy conservation project to achieve energy efficiency at various levels of production. In 2023, there were a total of 23 projects involving energy conservation, capable of reducing 464,839 gigajoules of energy or 28,003 tons of carbon dioxide equivalent per year. The attempt resulted in cost saving of around 215 million baht. (More information is available on Thaioil website topic “Sustainability/WORLD: Environment Well-Being/Circular Economy”).)



Biodiversity Management

In addition to doing business with strict and continuous adherence to measures entailed in the Environmental Impact Assessment (EIA), Thaioil and Subsidiaries have joined PTT Group Biodiversity and Ecosystem Service in reviewing the manual on biodiversity and ecosystem management. The manual provides guidelines for managing responsibilities for habitats and natural resources surrounding the refinery to ensure that the operations of Thaioil and Subsidiaries will not cause negative impact on the ecosystem. No deforestation nor encroachment on reserved forest areas was caused by

Thaioil and Subsidiaries during 2023. (More information is available on Thaioil website topic “Sustainability/WORLD: Environment Well-being/Biodiversity”).)



Climate Change Actions

To achieve the Net Zero GHG Emissions target by 2060, Thaioil and Subsidiaries have continuously executed projects to reduce GHG emissions in production processes. Risks were assessed and opportunities were analyzed to support production control planning while systematically monitoring climate change actions taken to support Thaioil and Subsidiaries' attempt to reduce GHG and the country's GHG reduction goal. In 2023, direct emissions of GHG from the operations of Thaioil and Subsidiaries amounted to 3.38 million tons of carbon dioxide equivalent, better than the target of no more than 3.46 million tons of carbon dioxide equivalent. (More information is available in the 2023 Integrated Report on the topic “Climate Change Actions”).)



Air Quality Management

Air quality management at Thaioil and Subsidiaries' operations is reflected in process design, maintenance planning, control of the sulphur content in fuels, greater use of fuels with low emissions than those with high emissions, application of clean production equipment and processes, application of technology with efficient combustion that releases low nitrogen oxides, and implementation of projects to minimize impacts on the environment and communities, as well as constant control of ventilation ratios and regular air quality tests, based on the 2007 Shell International Practice Standard. All these attempts are to reduce environmental impacts at sources. (More information is available in the 2023 Integrated Report on the topic “Environmental Impact Management”).)

Sustainability Management in Social Aspect

To become a sustainable organization, Thaioil and Subsidiaries have been committed to operating businesses with responsibility for society as well as safety and occupational health. Potential impacts on all stakeholders have also been taken into consideration. Stakeholders are treated equally and fairly with respect to their rights in a systematic manner using the Plan-Do-Check-Act approach. This could be witnessed in, for example, the policy announcement the risk assessment, the measure formulation to control and minimize impacts together with result monitoring and reporting for further improvement, as well as implementation of various activities and projects to promote the corporate culture and awareness of integrity, perseverance, patience, and social responsibility to create a balanced society with upgraded living.



Safety and Occupational Health Management

Thaoil and Subsidiaries have followed the five-year master plan on safety, occupational health, and emergency and crisis management, with determination to achieve the corporate safety goal of 'No Harm, No Leak, Goal Zero' stated in the strategic plan that aims for 'Operational Excellence to Business Excellence' (O2Bx), and drives toward the world-leading refinery. To this end, safety is a major factor to be improved and upgraded. Thaioil and Subsidiaries adopt the principle "All Safe White Green" to develop and reinforce awareness and leadership in work safety among all staff and contractors. The plan has been implemented through the GEMBA Management Walk and Talk activity held by senior executives, and the QSHE Roll-Out activity, alternately held at various construction sites and operating sites of various projects, particularly during the annual maintenance shutdown period. This is the campaign supporting safety awareness, and enhance participation of the operators in the process area. In 2023, Thaioil Group's Total Recordable Injury Frequency Rate (IRIFR) of employees and contractors was on par within the top 10% of companies in oil and gas industry by the International Association of Oil&Gas Producers (IOGP) criteria. (More information is available in the 2023 Integrated Report on the topic "Occupational Health and Safety".)



Human Rights Management

Thaoil and Subsidiaries are strongly determined to drive the business strictly based on human rights throughout the value chain. The organization stands firm on principles of international organizations advocating human rights, including the United Nations Global Compact (UNGC), Universal Declaration of Human Rights (UDHR), United Nations Guiding Principles on Business and Human Rights (UNGPs), Core Conventions of the international Labour Organization (ILO), International Finance Corporation (IFC), and National Action Plan on Business and Human Rights (NAP). Two policies on human rights were launched in 2015 with amendments made in 2021 detailed as follows:

- >> Thaioil Group Human Rights Policy in the Workplace- to protect employees' human rights
- >> Thaioil Group Business and Human Rights Policy together with guidelines on human rights for partners- to support human rights and prevent risks for Thaioil and partners from activities which may violate human rights.

These two policies address sexual harassment and other forms of harassment as well as illegal labor, both child labor and forced labor in domestic business operations, and compliance with international regulations for overseas businesses.

In 2023, 100% of Thailoil and Subsidiaries' business activities, covering activities in Thailoil's core business and those in partnership with others, were assessed against Human Rights Due Diligence (HRDD). No complaints were lodged by staff and partners about human rights violation by any internal or external stakeholders under corporate risk management principles that are systematically aligned with those of the United Nations. (More information is available on Thailoil website topic "Sustainability/I: Our Well-Being/Human Rights".)



Social Responsibility Management

Thailoil and Subsidiaries are confident that organizational sustainability thrives from the balanced coexistence between business operations and communities and society. Thailoil's Board of directors launched the **Thailoil Group Corporate Social Responsibility Policy** together with guidelines for policy implementation and continuous monitoring. Management and the unit responsible for social and community development were assigned to formulate a strategic plan and a long-term development plan, and to visit neighboring and remote communities to foster relationships. The results of which would regularly be reported to the Corporate Governance and Sustainability Committee to ensure goal attainment regarding the enhancement of community and social potential to increase the engagement and long-term mutual growth.



Additional information relating to policies and principles on human rights of Thailoil and Subsidiaries is available on the company's website on the topic 'Sustainability/I: Our Well-Being/Human Rights'.



Additional information relating to policies on social and environmental responsibility of Thailoil and Subsidiaries is available on the company's website on the topic 'Sustainability/WE: People's Well-Being/Social and Community Responsibility'.

The 2023 Community Engagement Index, prepared by an independent consultant to measure relationships between communities and Thailoil and Subsidiaries, was at 95.1%, which was better than the minimum target of 85%. (More information is available in on Thailoil website topic "Sustainability/WE: People's Well-being/Corporate Social Responsibility".)

Sustainability Management in Corporate Governance Aspect

Thailoil and Subsidiaries are determined to conduct a fair, honest, transparent, and auditable business, complying with the corporate governance principles and code of conduct, which form a strong foundation for fostering confidence among investors and all stakeholders, raising business competitiveness, and supporting sustainable growth. Policies, manuals, and guidelines concerning corporate governance of Thailoil and Subsidiaries were drawn up in line with the 2017 Corporate Governance Code (CG Code 2017) for listed companies as well as measures for corporate governance and anti-corruption assessment, laid down by renowned and recognized organizations, such as the Corporate Governance Report of Thai Listed Companies (CGR), Thai Private Sector Collective Action against Corruption (CAC) organized by the Thai Institute of Directors (IOD), NACC Integrity Awards organized by Thailand's National Anti-Corruption Commission, and Dow Jones Sustainability Indices (DJSI) organized by S&P Global, internationally-renowned indices for sustainability assessment.



Corporate Governance and Code of Conduct

Directors, executives, and employees of Thailo and Subsidiaries are required to strictly observe code of conduct concerning procurement, intellectual property, money laundering prevention, application of information technology and communication, among others. Thailo and Subsidiaries stand firm against all forms of fraud, anti-corruption included. The Anti-Fraud Policy was identified and launched for organization-wide implementation. Board directors and executives must act as leaders and role models in performing their duties with honesty, integrity, fairness, transparency, and auditability to make corporate governance a sustainable corporate culture. In 2023, no violation of the corporate governance code or code of business conduct was detected among employees of Thailo and Subsidiaries. (More information is available on Thailo website topic “Sustainability/ I: Our Well-Being/Fight Against Corruption”).



Additional information relating to policies and principles concerning corporate governance of Thailo and Subsidiaries is available on the company's website on the topic 'Corporate Governance'.



Research and Development of Thailoil and Subsidiaries

The year 2023 was filled with multiple challenges and risks, such as wars and geopolitical conflicts in different regions. The volatility of the world financial market and China's economy slowdown, among others, posed risks to business growth. These uncertainties require organizations to adapt and strengthen their strategies. As for the operational guidelines of Thailoil and Subsidiaries, we have adjusted our portfolio to include a variety of businesses, creating new products to meet the needs of existing and new customers through the efficient and coordinated work of many departments. In summary, Thailoil value technological development and the creation of "Innovation," now considered as Corporate Value. This will become even more crucial for the organization to survive amid uncontrollable external risks, and allow the business to grow in the long term.

Research and Development Strategic Plan

Thailoil and Subsidiaries have developed a Research and Development (R&D) plan, which is approved by the Board of Directors and can be divided into six pillars:

- >> Crude Excellence Center;
- >> Catalyst&Adsorbent Excellence Center;
- >> Artificial Intelligence and Robotics Excellence Center (AI/Robotics Solution Provider);
- >> High Value Product/High Value Business Research Center;
- >> Polymers and Olefin Derivatives Research Center;
- >> Sustainability&New Business Research Center

Thailoil and Subsidiaries intend to upgrade all six research centers to become innovation centers, thus

creating benefits and developing new products for the organization in the long term.

R&D Achievements

During the past three years (2021-2023), Thailoil and Subsidiaries' annual expenditure for R&D was THB 28 million, THB 13 million, and THB 17 million, respectively. These exclude the costs associated with the design and construction of the Residue Hydrocracking Unit Pilot Plant (RHC Unit Pilot Plant).

Significant R&D achievements in 2023, categorized into value-added products and research projects, are as follows:

Value-Added Products (High Value Products)

In 2023 the R&D function, value-added product development function, and various functions within Thailoil and Subsidiaries collaborated to create high value products with specifications that meet market demand. Examples of already-distributed value-added products include:

1. Rubber Process Oil (RPO):

This involves adjusting the rubber oil production process to reduce Polycyclic Aromatic Hydrocarbons (PAH) to meet customers' specifications. The crucial steps include (1) selecting appropriate raw materials for rubber oil production; (2) adjusting production conditions to control the levels of PAH; and (3) employing a product-mixing process to obtain Light Residue Aromatic Extract (LRAE) rubber oil with properties specified by customers. In 2023, Thailoil and Subsidiaries have distributed to the RPO to customers, generating a benefit of THB 1.17 million.

2. Hot Transfer Oil:

This involves the development of high value products from LABIX Co., Ltd.'s existing products to possess heat transfer oil properties. The research in collaboration with laboratory agencies focuses on identifying the essential properties and how to enhance them. Test results show thermal stability properties as high as 300 degrees Celsius and a longer service life than other hot transfer oils. In 2023, the hot transfer oil products have been distributed to customers, yielding a benefit of THB 0.6 million.

R&D Projects

In 2023, Thailoil and Subsidiaries' R&D highlights are listed below.

1. RHCU Pilot Plant

RHCU Pilot Plant simulates the actual process of RHCU in the Clean Fuel Project (CFP), which was designed by Thailoil and Subsidiaries' R&D together with the technology owner. The pilot plant is aimed to test and select the suitable crude oil recipes as well as other variants for RHCU process. The test run will be used for production planning to ensure maximum efficiency. The design of the RHCU Pilot Plant processes must be in line with the actual refining and chemical process. It requires 24-hour operation with a team of researchers to test and control the refining results to ensure their accuracy. This project provides several benefits, such as reducing production costs by selecting appropriate and cheaper cost or more efficient catalysts. This can save around 450 million THB per year. Moreover, it can prevent sedimentation risk of the product deviating from the production unit, which can cost approximately 2,000 million THB per incident. The construction and test run of the RHCU Pilot Plant are expected to be completed in Q1/2024.

2. Improvement of the Pilot Plants for Euro 5 Catalysts Testing

Under the collaboration between Thailoil and Subsidiaries and the Petroleum and Petrochemical College at

Chulalongkorn University, there are three pilot plants aimed to test catalysts for low-sulphur Euro 5 diesel. Only one of which is capable of testing Euro 5 catalysts. To support the speed and necessity of the production process, it is deemed crucial to enhance the other two pilot plants' capability of Euro 5 catalyst testing. The enhancement of which is completed in 2023, resulting in a total of three pilot plants capable of Euro 5 catalyst testing, meeting current needs. The benefit of testing Euro 5 catalysts in a pilot plant lies in evaluating catalyst performance under real conditions in the actual production process. This process provides essential information for assessing the properties of catalysts and selecting the best catalysts for practical conditions.

3. Phase Change Material (PCM)

Thailoil and Subsidiaries have partnered with researchers from the Nanotech Center, National Science and Technology Development Agency (NSTDA), to explore three types of TLB slack wax for use as a Phase Change Material (PCM). In 2023, an extensive testing was conducted on the chemical, thermal, and physical properties of TLB slack wax, comparing them with commercial phase change materials. The obtained data served as crucial information for developing TLB slack wax to be PCM in different target applications, including temperature control or cooling in solar cells or batteries to enhance efficiency.

4. Decontamination Chemicals

Thailoil and Subsidiaries, in collaboration with the Petroleum and Petrochemicals College at Chulalongkorn University, are involved in studying and developing prototype chemicals designed to efficiently decontaminate residual hydrocarbon compounds in process equipment and storage tank, and to comply with the Volatile Organic Compounds (VOCs) regulation. In 2024, the VOCs will be adopted in Benzene product storage tanks, with an expected annual reduction in decontamination costs of approximately THB 2.5 million.

5. Ethylene Carbonate and Dimethyl Carbonate (EC/DMC):

Thaioil and Subsidiaries collaborate with Vidyasirimedhi Institute of Technology (VISTEC) to conduct R&D on the production process of EC/DMC from Polyethylene (PE). The resulted innovative process has never been used before in the production of EC/DMC. The research outcomes are likely to earn manufacturing patent for this novel production process. EC/DMC substances are used in battery industries as electrolytes and solvents for electrolytes. However, EC/DMCs are used as stabilizers and are additive in the plastic industry. In the pharmaceutical industry, EC/DMCs are used as an additive, while performing as carriers in the chemical industry.

Innovation Management

At the end of 2022, Thaioil adjusted the organizational values (POSITIVE), upgrading the “I” from “Initiative” to “Innovation” to emphasize its significance in ensuring Thaioil and Subsidiaries’ success as a leading and sustainable organization in the future. In 2023 Thaioil established corporate KPIs to gauge its innovation culture. The focus is on generating new ideas to create positive results for business. The KPI Level 3 aiming for 100

actionable ideas, and Level 5 targeting 100 million THB per year of benefit from bringing those ideas to actions.

The innovation goals are disseminated across all 35 departments, each engaged in brainstorming activities for new ideas. Each department later selected appropriate ideas for further implementation.

Thaioil achieved our organizational goals at Level 5, with 93% of the employees being aware of the innovation culture. Through 43 brainstorming activities, 2,170 new ideas were generated. Some of which have been implemented and posted a potential annual benefit of THB 961 million, including initiatives such as creating an accounting manual for the CFP’s Energy Recovery Unit (ERU) and expediting the commissioning of the HDS-4 Hydro Desulphurization Unit.

Furthermore, Thaioil’s leading culture ‘i-LEAD’ which is Learn with passion, Explore new opportunities, Act with agility, and Dare to change foster a culture of innovation in employees. Thaioil holds an Innovation Award ceremony to recognize outstanding contributors and continuously provides knowledge and information on modern technology to employees.



Project to Promote Innovation Knowledge

Thaioil and Subsidiaries actively encourage employees to be quality innovators and cultivate awareness of the significance of innovation and knowledge for scaling up development and nurture inspiration through the following activities.

 TOP Innovation e-Newsletters	Thaioil and Subsidiaries send a weekly e-Mail to all employees. Designed to promote creativity, encourage thinking outside the box, and instill a growth mindset, this newsletter cultivates various qualities of innovators. Additionally, it emphasizes the significance of innovation at present while providing valuable insights of modern technology. The TOP Innovation e-Newsletter has garnered significant momentum, eliciting remarkable feedback. In 2023 a total of 32 issues reached over 22,978 readers. The overall satisfaction scores for the newsletter were exceptionally high, registering 97 out of 100.
 TOP BCG Updates	The TOP BCG Updates serve as a monthly medium delivered through e-Mail to enhance understanding of the BCG economic model. This model, initiated by the Thai government, promotes three key economic systems: Bio Economy, Circular Economy, and Green Economy. The content covers various aspects including electric vehicles, hydrogen energy, and innovations to reduce global warming. This information has generated considerable interest among employees. In 2023 the overall satisfaction level reached an impressive 97 out of 100, with each activity drawing participation from over 785 employees. This consistently positive response indicates sustained engagement and interest.
 Innovation Talks	The Innovation Talks series involves invitation of external speakers with expertise in innovation to share knowledge with employees. Renowned speakers such as Mr. Jirayut Srupsrisopa (CEO of Bitkub) and Mr. Rawit Hanutsaha (CEO of Srichand) have contributed valuable insights. In 2023 four activities were organized, witnessing a 36-percent increase in employee participation over the previous year. Overall satisfaction also rose from 91 to 93 out of 100, showcasing the growing impact and positive reception of these informative sessions.

Thaioil Innovation Awards 2023

Thaioil and Subsidiaries compiled innovative projects from employees who participated in the Thaioil Innovation Awards Program in 2023. The submissions were categorized into 3 types: Ideas for Innovation, Prototype, and Innovation. Notably, there was a substantial increase, about threefold, in the number of projects submitted, totaling 295. In 2023, a dedicated committee was appointed to evaluate and determine the award recipients. Out of the impressive pool of projects, 49 received the prestigious Thaioil Innovation Awards. To honor and showcase these outstanding innovations, Thaioil and Subsidiaries organized

the Thaioil Innovation and Learning Day 2023 event on September 11, 2023. This event served as a platform to recognize and present Thaioil Innovation Awards to projects that have demonstrated outstanding innovation, uplifting the morale of all contributors. The Best Innovation Award for 2023 was presented to the “OPEX Interactive Dashboard with Power BI” project by Mr. Poomi Keaokao. This innovative solution effectively addressed the challenge of using SAP to view and analyze expenses (OPEX), providing a user-friendly and efficient solution for many employees.

Human Resource and Organization Development



Convinced that employees are the key driver of Thailoil and Subsidiaries toward the vision and a steady as well as sustainable centennial organization, human resources and organization covering manpower planning, people capability development, and people experience have been prepared.

Below are the actions taken:

1. Manpower Planning supports business expansion in both Thailand and overseas.

1.1 Strategic Workforce Planning involves revising workforce plan in consistent with business goals by focusing on workforce productivity competitiveness among peer industries so as to be in the 1st Quartile.

1.2 Proactive Recruitment Strategy involves enhancing staff recruitment capability through Thailoil Energy Services Co., Ltd., by finding effective channels to recruit more employees, improving the recruitment and selection process to be more concise and speedy, and applying digital rechnology through all the process.

2. People Capability Development stresses the importance of human resource development to ensure knowledge and skills to systematically drive existing and future businesses. This includes equipping employees with leadership skills to grow in a secure career path.

2.1 70-20-10 Development encourages employees to take action to acquire actual experiences and promote training, coaching, and constant self-learning through digital platforms.

2.2 Succession Planning Management systematically carries out succession planning of potential successors by reviewing assessment tools. The potential successors shall be groomed and developed under the 70-20-10 principle by enhancing and building experience, knowledge, and skills through various forms of development to excel in becoming a good leader.

2.3 Innovation is one of Thailoil's corporate value POSITIVE, whose I as Initiative has been changed to Innovation to support an environment conducive to innovation within the organization, while indicating "i-LEAD behaviors: Learn with passion, Explore new opportunities, Act with agility, Dare to change." This includes organizing activities that encourage employees' awareness and conduct of appropriate behaviors.

Upgrade Initiative to Innovation

positive



Innovative



Innovation

I-Innovation

Employees are eager to learn, open to new experiences, and are consistently developing themselves to be able to adapt to changes, step out of one's comfort zone by daring to think, present, experiment, and take action on different or new matters, as well as seek and seize new opportunities to enhance skills and performance for personal and organizational growth.

i-LEAD BEHAVIORS



LEARN WITH PASSION

- Eager to learn and open to new experiences.
- Transfer and exchange of knowledge.
- Create an environment and culture that encourages knowledge exchange.



EXPLORE NEW OPPORTUNITIES

- Be creative and Seek out-of-the-box perspectives.
- Find and seize new opportunities in a timely manner.



ACT WITH AGILITY

- Be Flexible and able to adapt quickly to changing situations.
- Step outside one's comfort zone.



DARE TO CHANGE

- Dare to present different things.
- Dare to experiment, take action, and lead change.
- Take mistakes as lessons to create something new.

3. People Experience shall be positive to ensure fair treatment to employees, proper management of benefit and fair remuneration, work safety and promotion of good corporate culture to ensure staff contentment.

3.1 Good Labor Practice: Labor Right and Equality

Commitment to respecting human rights in the workplace and at all Thailoil and Subsidiaries' operating sites is clearly reflected through Thailoil and Subsidiaries' Human Rights Policy and Human Rights Impact Assessment, posted on Thailoil's website (www.thailoilgroup.com) under the topic of "Sustainability/I: Our well-being/Human Rights". Thailoil and Subsidiaries realize their duties and responsibilities for implementing and upholding human rights while playing an important role in driving the Thailoil Value Chain to respect and comply with human rights. To this end, the Human Rights Due Diligence has been developed as a tool to monitor all business activities undertaken by Thailoil and Subsidiaries and its suppliers in the supply chain on a yearly basis, along with a risk assessment carried out every three years. The tool was developed in line with Human Rights Due Diligence Handbook of the International Finance Corporation (IFC), United Nations Guiding Principles, NAP Implementation, and Thailoil's risk management. This is identified as "Thailoil Group Human Rights Impact Assessment and Management Procedure".

In 2023, Thailoil and Subsidiaries focused on organizing activities to promote human rights so as to ensure that executives, employees, and stakeholders clearly understand the policies and regulations. This is to prevent human rights violations in the workplace and partners' engagement in human rights violation in the value chain. The activities were conducted under the "3 Parts for Fulfilling Human Right" guidelines carried out for the fourth consecutive year: 1) communication with all sectors to ensure awareness of human rights; 2) improvement of

employee's well-being; and 3) uplift of "people" as the first priority both in terms of human rights and employee well-being under workplace safety, as well as taking care of employees and those working at Thailoil's operating sites to be safe and un-infected amid the COVID-19 outbreak.

To achieve sustainable business operations and retain capable employees within the organization, Thailoil and Subsidiaries annually reviews to ensure attractive remuneration and welfare for employees for competing with peer industries and leading companies in Thailand. This includes refraining from discrimination and allowing freedom of association to negotiate as a group. Thailoil recorded no significant labor dispute, and as of December 31, 2023, Thailoil registered 394 members to the Union of Thai Oil Refinery Company, representing 75% of its total employees. There has been no protest or strikes and 100% of business transactions have been audited accordingly.

Therefore, in 2023, the aforementioned activities earned Thailoil the Outstanding Role Model for Human Rights Award 2023 for the 4th consecutive year; and the certification of DJSI membership for the 11th consecutive year.

3.2 Employees' Remuneration Excluding Executives

Employees of Thailoil and Subsidiaries receive benefits such as salary, allowance, overtime payment, bonus, and other welfare including medical expenses, housing allowance, children's education support, funeral allowance, and funeral expense. In addition, other benefits such as annual leave, military service leave, maternity leave, and provident fund are also provided. Thailoil is well aware that each employee needs financial security upon retirement. Therefore, a gratuity fund was organized, where a lump sum of money will be awarded to employees, depending on their respective service periods. Employees are allowed to withdraw part of the sum every 10 years, and each month Thailoil contributes to this project.

Remuneration for employees in the fiscal year ending December 31, 2023, is as follows:

Total remuneration for Thailoil employees

Type of Remuneration	Remuneration (THB Million)	
	2023	2022
Salary and Allowance	757.23	858.76
Bonus	345.07	255.35
Contribution to Provident Fund	75.54	81.15
Retirement (Gratuity) Fund	71.41	108.58
Overtime	73.61	77.95
Miscellaneous	358.52	348.67
Total	1,681.38	1,730.46

Total Remuneration of Employees of Thailoil Energy Service Co., Ltd. (TES)

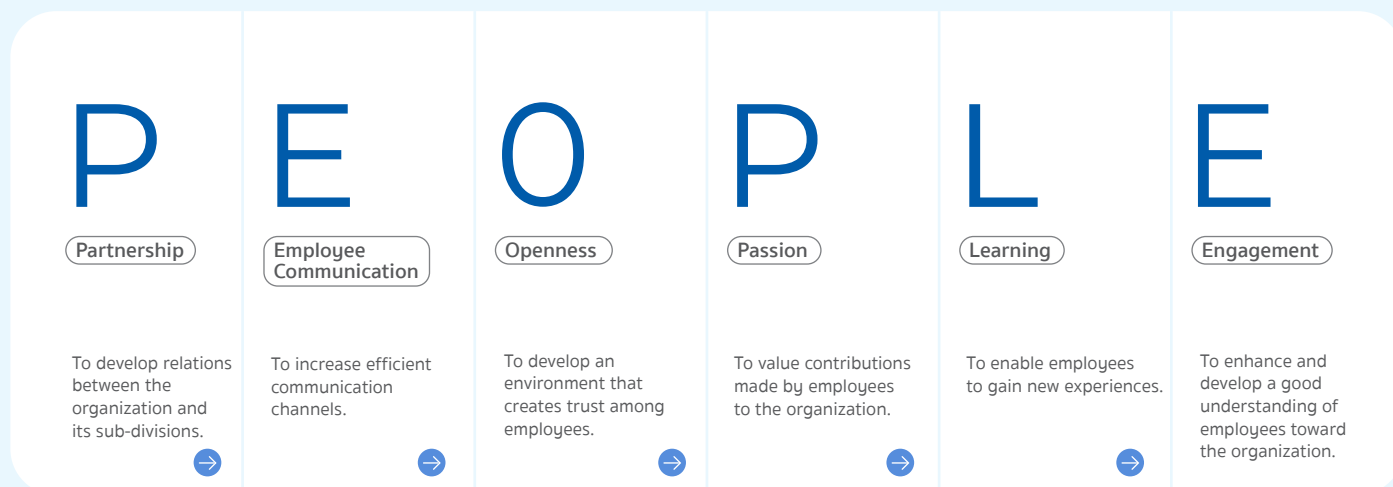
Type of Remuneration	Remuneration (THB Million)	
	2023	2022
Salary and Allowance	1,165.40	1,110.67
Bonus	413.52	296.26
Contribution to Provident Fund	72.28	60.81
Overtime	87.82	90.11
Miscellaneous	219.04	189.36
Total	1,958.06	1,747.21

In addition to the remuneration and welfare described above, Thailoil set up a Provident Fund in 1990 under the Provident Fund Act B.E. 2530 (1987) and has contributed 15% of employees' salary to the fund with options for each employee to contribute 5%-15% of the salary. As of December 31, 2023, 520 Thailoil employees are participating in the fund, representing 96% of the total Thailoil employees and 1,286 TES employees are participating in the fund, representing 94% of the total TES employees.

The management and investment of the Member Companies of Thai Oil Group-Registered Provident Fund is key to stable and sustainable growth. As a result, selecting a fund management company is a crucial duty that the Provident Fund Committee must carefully and prudently consider. A fund management company with records of administrative system that is appropriate, secure, and beneficial for members will be selected. The consideration is based on 1) the administrative system of the fund management company should consist of an investment decision-making process, data used for investment decision, and various services systems, and 2) the stability of the fund management company considered from past performance, experience, expertise, policies, operations, and insurance against possible damages. The committee will give equal weight to both criteria, but appropriate and necessary adjustments can be made. If a new fund management company has been selected, the committee will follow Thailoil and Subsidiaries' procurement policy.

3.3 Employee Satisfaction and Engagement Enhancement

Thailoil and Subsidiaries conduct an employee engagement survey on an annual basis, and utilize the results from the survey to analyze and to formulate strategies and activities that constantly enhance engagement. All line managers are encouraged to organize activities suitable for employees in their respective functions by using the PEOPLE Model, designed to develop good relations within the organization, increase effective communication channels, and develop a work environment that enhances mutual trust. Moreover, employee performance is valued, and employees are given the opportunity to acquire new experience, fostering and developing a good understanding between employees and the organization.



In 2023, Thaioil and Subsidiaries drastically raised the level of employee engagement under the concept of “Happy Employee, Happy Company” focusing on creating a happy work experience for employees in all aspects, both work life and personal life, so that they may deliver their work with maximum efficiency. This is done by supporting employees with a hygienic, relaxed, and fully equipped work environment to meet their needs. It also encourages employees to enhance their knowledge and skills in areas of personal interest through an online learning system called “Thaioil Academy” allowing employees to constantly develop themselves. In addition, Thaioil has announced a Work From Home policy to align with the new lifestyle, which helps employees balance work and personal matters, leading to increased happiness at work and enhancing work efficiency whether working from the office or at home.

3.4 5 Happiness

Thaioil and Subsidiaries are committed to stewardship of employees’ quality of life from the first until the last day of their employment by delivering good work experiences through the 5 Happiness consisting of physical, mental, financial, social, and appreciative happiness. In addition, Thaioil and Subsidiaries enhanced

the happiness of employees through the integrated Employee Well-Being in 2023, which third-party experts share their knowledge about enhancing one’s own well-being so that employees may apply such knowledge to achieve well-being in both work life and personal life. At the same time, Thaioil and Subsidiaries have constantly organized activities for all employees to participate in such as sport activities, travel activities, and music activities, so that employees can maintain and develop good relationships with one another.

3.5 Pandemic Management

Thaioil and Subsidiaries have managed and prevented the spread of COVID-19 through the I-COVID Center by setting policies, measures, and guidelines that cover several aspects. Once the pandemic situation has subsided, Thaioil and Subsidiaries have a Fitness For Work And Return To Work Procedure to ensure that they are in good health and ready to return to work onsite.

Employee Data

Number of employees (excluding executives) of Thailoil and TES.

Key Function	Number of Employees			
	As of December 31, 2023		As of December 31, 2022	
	Thailoil	TES	Thailoil	TES
Corporate Strategic Risk Department	2	9	2	8
Movement Marine and Logistic Department	42	76	48	80
Technology Department	8	45	10	40
Refinery Department	118	173	137	204
Treasury Department	3	24	4	22
Commercial Department	8	42	6	39
Corporate Affairs Department	11	27	10	25
Procurement and Contract Department	5	25	8	22
Quality Management Department	9	25	10	23
Supply Chain Optimization Department	3	23	3	20
Accounting Department	9	39	10	34
Petrochemical and Lube Base Department	5	133	8	141
Business Development Department	2	14	2	13
Asset Development Department	10	27	12	27
Financial Planning Department	3	17	3	16
Commercial Planning Department	4	12	4	12
Engineering Department	74	235	83	206
Efficient Operations Support Department	24	97	27	88
New S-Curve Business Development Department	1	7	2	4
Corporate Resources and Transformation Management Department	3	6	2	6
Digitalization Department	7	20	9	20
Clean Fuel Project	87	160	71	82
Corporate Governance, Compliance, and Legal Department	2	7	2	8
Group Company Secretary and Sustainability Department	7	21	8	19
Corporate Internal Audit Department	2	9	2	7
People and Organization Management Department	17	34	19	32

Key Function	Number of Employees			
	As of December 31, 2023		As of December 31, 2022	
	Thaioil	TES	Thaioil	TES
People and Organization Excellence Department	1	11	2	9
Strategic Planning Function	-	16	-	16
Finance and Accounting Function	6	7	6	7
Manufacturing Function	31	5	30	6
Hydrocarbon Function	-	-	1	-
Operational Excellence Function	-	-	1	-
TOPNEXT International Co., Ltd.	5	38	6	35
Research & Development/High Value Product	7	21	3	12
Petrochemical Business Function	3	4	-	-
Chief Executive Officer and President	1	2	-	-
TOP SPP	1	-	-	-
Total	517	1,411	551	1,283

Remarks:

Under the aforementioned structure, employees can be divided into two groups:

1. Non-Executives consist of juniors, supervisors, seniors, and managers
2. Executives consist of Vice Presidents, Executive Vice Presidents, Senior Executive Vice Presidents, and Chief Executive Officer and President.

Significant changes in the number of employees in the past three years (excluding executives)

Thaioil

- >> As of December 31, 2023, a total of 517 employees
- >> As of December 31, 2022, a total of 551 employees
- >> As of December 31, 2021, a total of 587 employees

TES

- >> As of December 31, 2023, a total of 1,411 employees
- >> As of December 31, 2022, a total of 1,283 employees
- >> As of December 31, 2021, a total of 1,196 employees.

Corporate Governance Policy

Valuing and committed to conduct business with strict adherence to the Corporate Governance (CG) principles, code of conduct, transparency, and accountability, Thailo through the Board of Directors (the Board) has approved and enforced the “Corporate Governance Policy”, assigning the Corporate Governance and Sustainability Committee (CG Committee) to oversee, monitor, and promote the business in compliance with the policy and guidelines for CG and code of conduct. The CG Committee acknowledged the outcomes of CG implementation in 2023, which embraced the revision of the CG policy, principles, and guidelines. To ensure suitability for our business context, the committee compared and adapted our practices to the criteria, announcements the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission, Thailand’s (SEC), and the 2017 CG Code (CG Code 2017) for listed companies, and the CG assessment criteria of international and other entities, including G20/OECD Principles of Corporate Governance (2023), and the ASEAN Corporate Governance Scorecard (ACGS). The committee found that Thailo and Subsidiaries’ policy, principles, and guidelines indeed remained completely up-to-date, suitable, and consistent with various criteria. Thailo’s CG policy and compliance with CG principles:

Policy and Guidelines Relevant to the Board

Nomination and Appointment of the Board

Nomination Criteria

The criteria for Thailo’s Board member nomination were developed in compliance with relevant laws and regulations, as described in the Corporate Governance and Code of Conduct Manual (CG Manual), published on the Thailo website. **Thailo’s nomination criteria stipulate that directors must hold qualifications that comply with**

laws and regulations. The Board set a policy on the diversity of directors by scrutinizing experience, knowledge, and expertise required for the business and responsive to strategies and opened to the gender, race, ethnicity, nationality, or country of origin. Thailo also values directors’ diversity of expertise and has developed a **Board Skill Matrix aligned with Thailo’s business strategy to assist in the selection process. Names of qualified persons are also searched from the State Enterprise Policy Office’s (SEPO) Director’s Pool and the Thai Institute of Directors’ list of professional directors (IOD Chartered Directors).** As of January 31, 2024, eight Board directors were from the 13 names in SEPO’s Director’s Pool.

Independent Directors’ Qualifications

Thailo specifies that Independent Directors must be independent of major shareholders, groups of major shareholders, or Thailo executives, including the terms of office as specified in the CG Manual. An independent director serves not exceed nine consecutive years from the date of the first appointment. To date, none of the independent directors has served on the position longer than nine years.

Roles, Duties, and Responsibility of the Board, Chairman of the Board, and CEO and President

Thailo defined the roles, duties, and responsibility of the Board, Chairman of the Board, and CEO and President to **segregate between the responsibilities of the Board and Company’s executives**, as shown in the CG manual, summarized as follows. The Board of Directors’ key roles and responsibility are to define a business vision, review and endorse key strategies and policies, oversee executives’ performance, and provide suggestions and recommendations for compliance with the laws and regulations as well as transparency, fairness, and

best interests of the Company. The key roles, duties, and responsibility of the Chairman of the Board are to support directors in executing their duties within the scope of authority and responsibility, while ensuring efficient meetings and strengthening cordial relations among directors as well as between directors and executives. The CEO and President is assigned by the Board to manage normal business operations. The CEO and President's key roles, duties, and responsibility are to prepare and present business plans and strategies to the Board, while conforming to those plans and strategies, including the budget as approved by the Board, among others.

Recognizing the value of director's efficient and effective performance, the Board has established a policy that specified a limit of three listed companies on SET where directors can each serve.

Board's Approval Authority

The Board is authorized to grant approvals for various operations within the extent of laws, the Company's Articles of Association (AOA), and resolutions of shareholders' meetings. The approval authority of the Board and that of the executives are clearly defined. The Board's main authorization includes:

- >> Authorization concerning Thaioil's business: for example, considering and granting approval of the vision, mission, values, strategies, financial goals, as well as budgets and plans, and others. The vision, mission, and strategies are to be reviewed at the annual Strategic Thinking Session (STS) meeting. To allow the Board to closely monitor the progress of implemented strategies; executives make progress reports of various project every quarter.
- >> Authorization concerning shareholders: for example, making consideration and agreement to dividend payment, and shareholders' meeting invitation, and others.
- >> Authorization concerning the Board and high-level executives: for example, making consideration and agreement to replacement of directors for cases other than term completion and with over two months remaining before the terms end, appointment of Board-Committee members, consideration and appointment of the CEO and high-level executives (executive vice president and above), and assessment of the CEO's performance, and others.



Directors' Remuneration

The Nomination and Remuneration Committee (NRC) considers directors' annual remuneration by considering factors such as business performance, the Board's and the board committees achievements and responsibility, the nature and complexity of business, and overall economic circumstances, while benchmarking with other companies in the same industry to come up with a comparable and motivating remuneration package. The NRC will then propose these to the Board for endorsement before submitting to the Annual General Meeting of Shareholders (AGM) for consideration and approval.

For 2023, in view of the suitability of various factors mentioned above, the criterion structure and remuneration for the Board were still suitable. Therefore, the remuneration of the same rate as that of 2022 was proposed, with a bonus of THB 50 million for their 2022 performance, which accounted for 0.15% of the net profit and did not exceed the annual maximum limit of THB 50 million. The package has already received approval from the 2023 AGM and was disclosed on the topic of "Directors' Remuneration in 2023" on page 97.

Remuneration Structure

Board's Remuneration ⁽¹⁾

Retainer fee	50,000 Baht/Month
Per-Attendance Fee (for directors who attend the meeting)	40,000 Baht/Meeting

Board-committees' Remuneration ⁽¹⁾

Per-Attendance Fee (for directors who attend the meeting)	45,000 Baht/Meeting
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Special Bonus for the Board	THB 50 million ⁽²⁾
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Other remunerations	-None-
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Remarks:

⁽¹⁾ The Chairman of the Board and the Chairmen of Board-committees received remuneration of 25% higher than other directors.

⁽²⁾ Bonuses for the 2022 company performance were paid to the directors holding the office in 2022, which include the directors who completed their terms or resigned in 2022, prorated due to the duration of office holding. The Chairman of the Board received a bonus of 25% higher than other directors.

Directors' Remuneration in 2023

(THB)

No.	Name-Surname	Petainer Fee	Per-Attendance Fee	Board-Committees				Total Remunerations	Annual Bonus for 2022 Performance ⁽¹⁾ (Paid in April 2023)
				Audit Committee	Corporate Governance and Sustainability Committee	Nomination and Remuneration Committee	Risk Management Committee		
1	Prof. Dr. Supot Teachavorasinskun	700,000.00	750,000.00	-	-	-	-	1,450,000.00	4,122,058.09
2	Mr. Distat Hotrakitya	440,000.00	433,333.33	-	112,500.00	-	-	985,833.33	-
3	Ms. Pannalin Mahawongkikul	560,000.00	600,000.00	-	-	-	371,250.00	1,531,250.00	3,297,646.47
4	Dr. Buranin Rattanasombat	560,000.00	600,000.00	-	-	-	315,000.00	1,475,000.00	3,297,646.47
5	Assoc. Prof. Dr. Pasu Decharin	560,000.00	600,000.00	360,000.00	-	202,500.00	-	1,722,500.00	3,297,646.47
6	Lt. Gen. Apichat Chaiyadar	440,000.00	433,333.33	281,250.00	-	90,000.00	-	1,244,583.33	-
7	Mr. Terdkiat Prommool	560,000.00	600,000.00	-	-	180,000.00	-	1,340,000.00	3,297,646.47
8	Mr. Plakorn Wanglee	560,000.00	600,000.00	360,000.00	135,000.00	-	-	1,655,000.00	3,297,646.47
9	Dr. Sompop Pattanariyankool	560,000.00	600,000.00	-	180,000.00	-	-	1,340,000.00	3,297,646.47
10	Dr. Nattapon Nattasomboon	440,000.00	433,333.33	-	-	-	225,000.00	1,098,333.33	-
11	Pol. Capt. Piya Raksakul	440,000.00	433,333.33	225,000.00	90,000.00	-	-	1,188,333.33	-
12	Mr. Suchat Ramarch	560,000.00	600,000.00	-	135,000.00	-	-	1,295,000.00	3,297,646.47
13	Dr. Veerapat Kiatfuengfuo	480,000.00	550,000.00	-	-	-	180,000.00	1,210,000.00	-
14	Mr. Bandhit Thamprajamchit	560,000.00	600,000.00	-	-	-	315,000.00	1,475,000.00	-
Directors who Complete the Term in 2023 AGM/Resign during the Year 2023									
1	Gen. Kukiat Sinaka	240,000.00	273,333.33	-	90,000.00	-	-	603,333.33	3,297,646.47
2	Mr. Praphaisith Tankeyura	120,000.00	166,666.67	135,000.00	-	-	-	421,666.67	3,297,646.47
3	ACM Suttipong Inseeyong	120,000.00	166,666.67	-	-	112,500.00	-	399,166.67	3,297,646.47
4	Dr. Pailin Chuchottaworn	120,000.00	166,666.67	-	-	-	112,500.00	399,166.67	3,297,646.47
5	Pol. Gen. Aek Angsanaront	120,000.00	166,666.67	168,750.00	56,250.00	-	-	511,666.67	3,297,646.47
6	Mr. Noppadol Pinsupa	-	-	-	-	-	-	-	831,187.62
Directors who Complete the Term in 2022 AGM/Resign during the Year 2022									
1	Dr. Prasert Sinsukprasert	-	-	-	-	-	-	-	3,017,572.41
2	Mr. Wirat Uanarunit	-	-	-	-	-	-	-	2,457,424.24
Total		8,140,000.00	8,773,333.33	1,530,000.00	798,750.00	585,000.00	1,518,750.00	21,345,833.33	50,000,000.00

Remark:

⁽¹⁾ Special Bonus for 2022 Company Performance as resolved by the 2023 Annual General Meeting of Shareholders (AGM) on April 10, 2023 paid on April 28, 2023 to the directors holding the office in 2022, which include the directors who completed their term or resigned in 2022, prorated due to the duration of office holding. The Chairman of the Board shall receive the remuneration of 25 percent higher than the directors.

Board Meeting

Each year, Board meetings are scheduled in advance so that directors can make themselves available to efficiently attend each meeting. The 2023 Board meeting schedule was sent to Board members in November 2022. According to best practices, a meeting invitation together with documents required for the meeting is delivered to all directors at least five business days before the scheduled meeting date, except for urgent matters. The Board sets a policy that requires no less than two-thirds of the directors is required for a quorum. An exception is made for urgent cases which could harm Thaioil's operations, an urgent call for a meeting, or other cases as the Board deems appropriate.

In 2023 a total of 15 Board meetings were held, one Strategic Thinking Session (STS) included. One non-executive directors meeting without executives and one independent directors meeting were also held to allow non-executive directors/independent directors to exchange views freely and suggest various approaches to support of business administration. The outcomes of the meeting were passed on to the executives by the Company Secretary for further actions. The information on the meeting attendance of individual directors is disclosed on the topic of "Meeting Attendance of the Board of Directors, Board-Committees, and Shareholders' Meeting in 2023" on page 99.



Meeting Attendance of the Board of Directors, Board-Committees, and Shareholders' Meeting in 2023

Name-Surname		Board of Directors Meeting (15 times) ^{(2),(3)}		Audit Committee Meeting (8 times)	Nomination and Remuneration Committee Meeting (4 times)	Corporate Governance and Sustainability Committee Meeting (4 times)	Risk Management Committee Meeting (7 times)	Annual General Meeting of Shareholders (AGM) (1 time)	Independent Directors Meeting (1 time)	Non-Executive Directors Meeting (1 time)
		Total	Physical							
1	Prof. Dr. Supot Teachavorasinskun	15/15	14/15	1/15				1/1	1/1	1/1
2	Mr. Distat Hotrakitya ⁽¹⁾	12/12	10/12	2/12		2/3			1/1	1/1
3	Ms. Pannalin Mahawongtikul	15/15	13/15	2/15			7/7	1/1		1/1
4	Dr. Buranin Rattanasombat	15/15	14/15	1/15			7/7	1/1		1/1
5	Assoc. Prof. Dr. Pasu Decharin	15/15	10/15	5/15	4/4			1/1	1/1	1/1
6	Lt. Gen. Apichat Chaiyadar ⁽¹⁾	12/12	11/12	1/12	2/2				1/1	1/1
7	Mr. Terdkiat Prommool	15/15	14/15	1/15	4/4			1/1		1/1
8	Mr. Plakorn Wanglee	15/15	14/15	1/15		3/3		1/1	1/1	1/1
9	Dr. Sompop Pattanariyankool	15/15	13/15	2/15		4/4		1/1		1/1
10	Dr. Nattapon Nattasomboon ⁽¹⁾	12/12	6/12	6/12			5/5		1/1	1/1
11	Pol. Capt. Piya Raksakul ⁽¹⁾	12/12	11/12	1/12		2/2			1/1	1/1
12	Mr. Suchat Ramarch	15/15	12/15	3/15		3/3		1/1		1/1
13	Dr. Veerapat Kiatfuengfoo	13/14	12/14	1/14			4/5	1/1		1/1
14	Mr. Bandhit Thamprajamchit	15/15	15/15	0/15			7/7	1/1		
Directors who Completed the Term in 2023 AGM/Resigned during the Year 2023										
1	Pol. Gen. Aek Angsanant	3/3	2/3	1/3		1/1		1/1		
2	Dr. Pailin Chuchottaworn	3/3	3/3	0/3			2/2	1/1		
3	ACM Suttipong Inseepong	3/3	3/3	0/3	2/2			1/1		
4	Mr. Praphaisith Tankeyura	3/3	2/3	1/3				1/1		
5	Gen. Kukiat Srinaka	6/6	6/6	0/6		2/2		1/1		
Average Meeting Attendance of Board of Directors (Percent)		99.52		100	100	95.24	97.14			

Remarks:

⁽¹⁾ Appointed to the director at the 2023 Annual General Meeting of Shareholders on April 10, 2023.

⁽²⁾ In 2023, Thai Oil Plc arranged the total of 15 meetings, 12 of which were scheduled meetings, and 3 of which were extras to the scheduled meetings. The meetings were organized both physically and online (e-Meeting).

⁽³⁾ The reason for absence from meetings was due to directors' urgent and necessary assignments or the Company's urgent calls for extra meetings. Directors would submit absence letter prior to the meeting.

Board's Performance Assessment

Thaioil annually organizes performance assessment of the Board. In 2023 the CG Committee agreed to have an independent consultant, namely PricewaterhouseCoopers ABAS Ltd., to facilitate the board performance assessment. According to the CG Code 2017, published by the SEC, are suggested that this shall be done at least once every three years. The opinions and recommendations derived from the assessment will be used to develop future Board's performance improvement program. In 2023 the independent consultant has reviewed and improved various issues by referring to principles and good practices, at the national and international levels, while rephrasing questions to make them clear and more appropriate. This included adding more matters that the Board should prioritize, such as Environment, Social, and Governance (ESG) and cybersecurity. The assessment is divided into four types:

1. Board of Directors Assessment
2. Individual Director Assessment (Self-Assessment)
3. Individual Director Assessment (Peer-Assessment)
4. Board-Committees of Directors Assessment
(Board-Committee members evaluate the work of the committee relevant to their positions only).

Board's Performance Assessment Criteria and Process

The CG Committee agreed to the 2023 Board's performance assessment form reviewed by an independent consultant. The assessment forms were sent to each director for assessment and returned to Thaioil for analysis. Thaioil then raised the assessment results together with comments to the CG Committee and the Board respectively for acknowledgment. Suggestions and recommendations from the assessment will be used to identify guidelines to develop and enhance the Board's performance efficiency, for example, consideration of adding training course for the Board.

All forms of performance assessment are divided into 1) roles, duties and responsibility, 2) structure and qualification of the board, 3) meeting preparations, 4) training and self-development. All four forms are calculated as a percentage of the full score of each item. The assessment criteria are:

90-100	means excellent
80-89	means very good
70-79	means good
60-69	means satisfactory
50-59	means pass
Less than 50	means improvement needed.

The 2023 Board's Performance Assessment can be summarized below:

2023 Assessment Results	Percentage	Criteria
Board of Directors Assessment	96.77	Excellent
Individual Director Assessment (Self-Assessment)	98.06	Excellent
Individual Director Assessment (Peer-Assessment)	99.01	Excellent
Board-Committees of Directors Assessment		
- Audit Committee	95.00	Excellent
- Nomination and Remuneration Committee	93.03	Excellent
- Corporate Governance and Sustainability Committee	97.40	Excellent
- Risk Management Committee	96.77	Excellent

Directors' development

The Board encourages all directors to keep on learning as support for their improved performance. An annual visit to the refinery was also arranged to keep directors updated with the progress of key projects and the operations. A list of director's training courses in the year 2023 is shown on page 102.

For new directors, Thaioil has arranged orientation sessions facilitated by high-level executives with knowledge of the business and business directions as well as related laws and regulations and other information required for their performance. A Welcome Package for TOP's New Director, containing essential information, is prepared for each new director before assuming office.

Director's Training Courses in the year 2023 (As of December 31, 2023)

No.	Name-Surname	Training Courses in the year 2023
1	Prof. Dr. Supot Teachavorasinskun	<ul style="list-style-type: none"> >> Role of the Chairman Program (RCP 53/2023) >> IOD Chairman Forum No. 1/2023: Leadership Amidst Volatility and Distrust
2	Mr. Distat Hotrakitya	<ul style="list-style-type: none"> >> Seminar: PTT Group CG Day 2023 "Great of Trust", Asst. Prof. Dr. Torphas Yomanak, Director of the Center for Political Economy Studies Faculty of Economics Chulalongkorn University
3	Ms. Pannalin Mahawongtikul	<ul style="list-style-type: none"> >> TLCA CFO Professional Development Program (TLCA CFO CPD) 2023 Attend seminar topic "Governance System for Fraud Detective" Being a lecturer on the topic "What is the future of the CFO role?" By the Thai Listed Companies Association >> STS Expert Session 2023: <ul style="list-style-type: none"> >> "Global Energy Trends in Net Zero Era", McKinsey & Company >> "Successful SCGJWD Business Expansion through Partnership", SCGJWD Logistics Plc >> "Global & Thailand Economic Outlook", Bangkok Bank Plc
4	Dr. Buranin Rattanasombat	<ul style="list-style-type: none"> >> Thailand Energy Academy Course, Class 17, Thailand Energy Academy
5	Assoc. Prof. Dr. Pasu Decharin	<ul style="list-style-type: none"> >> Subsidiary Governance Program (SGP 5/2023) >> ESG in Board Room (ESG 0/2023) >> STS Expert Session 2023: <ul style="list-style-type: none"> >> "Global Energy Trends in Net Zero Era", McKinsey & Company >> "Global & Thailand Economic Outlook", Bangkok Bank Plc
6	Lt. Gen. Apichat Chaiyadar	<ul style="list-style-type: none"> >> International Seminar: "AI: The New Player in Cyber Security", The Ministry of Defense
7	Mr. Plakorn Wanglee	<ul style="list-style-type: none"> >> STS Expert Session 2023: <ul style="list-style-type: none"> >> "Global Trends in Energy", Boston Consulting Group (BCG) >> Seminar: "The Importance of Audit Committee Towards the Confidence in Thai Capital Market", Stock Exchange of Thailand

No.	Name-Surname	Training Courses in the year 2023
8	Dr. Sompop Pattanariyankool	>> Director Accreditation Program (DAP 204/2023) >> Risk Management Program for Corporate Leaders (RCP 31/2023) >> STS Expert Session 2023: >> “Successful SCGJWD Business Expansion Through Partnership”, SCGJWD Logistics Plc >> Seminar: PTT Group CG Day 2023 “Great of Trust”, Asst. Prof. Dr. Torphas Yomanak, Director of the Center for Political Economy Studies Faculty of Economics Chulalongkorn University >> The Executive Program in Energy Literacy for a Sustainable Future, Class 18, Thailand Energy Academy
9	Dr. Nattapon Nattasomboon	
10	Pol. Capt. Piya Raksakul	>> Director Certification Program (DCP 343/2023) >> Seminar: PTT Group CG Day 2023 “Great of Trust”, Asst. Prof. Dr. Torphas Yomanak, Director of the Center for Political Economy Studies Faculty of Economics Chulalongkorn University >> Training Course on The Rule of Law for Democracy, Class 11, Office of the Constitutional Court >> 2021 PTIT Special Lecture by Khunying Thongtip Ratanarat: “Thailand’s New Government; Must Have A “New Think Through” to Propel the Country’s Economy Forward” >> The Executive Program in Energy Literacy for a Sustainable Future, Class 17, Thailand Energy Academy
11	Mr. Suchat Ramarch	
12	Dr. Veerapat Kiatfuengfoo	>> Director Certification Program (DCP 336/2023) >> The Executive Program in Energy Literacy for a Sustainable Future, Class 18, Thailand Energy Academy
13	Mr. Bandhit Thamprajamchit	>> STS Expert Session 2023: >> “Global Trends in Energy”, Boston Consulting Group (BCG) >> “Global & Thailand Economic Outlook”, Bangkok Bank Plc

Directors who completed their terms and resigned during the year 2023

No.	Name - Surname	Training Course in year 2023
1.	Dr. Pailin Chuchottaworn	>> STS Expert Session 2023: >> “Global Trends in Energy”, Boston Consulting Group (BCG)

Remarks:

- Dr. Pailin Chuchottaworn completed the term in the 2023 Annual General Meeting of Shareholders.

Policies and Guidelines Relating to Stakeholders

Thaioil engages in a fair business with awareness of impacts on stakeholders, while treating all stakeholders equally for sustainable mutual benefit. Guidelines for treating each group of stakeholders have been established in the CG Manual, summarized below:

Shareholders, Investors, and Analysts

Thaioil values the encouragement of shareholders to exercise their rights and treats shareholders equally, major or minor shareholders or institutional investors alike.

The 2023 Annual General Meeting of Shareholders (AGM)

Thaioil held the 2023 AGM on Monday, April 10, 2023 at 14:00 hrs. in the form of an e-AGM, under the criteria and procedures established by the law regarding electronic meetings. Thaioil follows the AGM checklist of the Thai Investors Association, Thai Listed Companies Association, and SEC. For the 2023 AGM, Thaioil earned full 100 marks for meeting arrangement for the eighth successive year, reflecting its determination to hold an AGM of the required standard and with a CG principles applied. This includes:

>> **Allowing shareholders to propose agenda items and qualified directors to the Board** during September 29-December 31, 2022. The criteria and process were announced on the websites of SET and Thaioil. **Thaioil welcomed questions from shareholders before the meeting date**, as stated in the meeting invitation. For the 2023 AGM, none of the shareholders proposed an agenda nor nominated any candidate for director position, which Thaioil disclosed in the AGM invitation notice.

As for the 2024 AGM, scheduled for April 2024, Thaioil again allowed shareholders to propose agenda items and qualified directors during September 29-December 31, 2023.

>> Technology was applied to the AGM, such as **the use of e-Voting** for registration and vote counting to ensure accuracy, convenience, and speed.

>> **Allowing shareholders to be volunteer witnesses in the vote counting and arranging for an independent legal expert to inspect vote counting to ensure voting and vote counting transparency.**

Apart from arranging the AGM, Thaioil held various activities as channels to meet with shareholders, investors, and analysts, as detailed on the topic of 'Investor Relations' on page 106.

Customers

Thaioil conscientiously delivers quality products to meet customers' standards, details of which are available on page 53 on the topic of "Production Process and Development". This includes innovation for product development to better respond to customers' demand. Details of such innovation are revealed in the 2023 Integrated Report on the topic of "Innovation and Customer Stewardship". In addition to making quality products, Thaioil values communication with customers while maintaining good and sustainable relationship with them. The Voice of Customer system has been initiated to receives customers' opinions through various channels, including the website, phone, and e-Mail. Thaioil is well aware of privacy and strives to protect customers' personal data in compliance with the Personal Data Protection Act B.E. 2562 by announcing privacy notices to customers and all stakeholders on Thaioil's website. Moreover, a customer satisfaction survey is held every year whereby the survey results will be brought to relevant agencies for brainstorming workshops for work development and increased customer satisfaction. The 2023 customer engagement survey shows that Thaioil has received an average score of as high as 94%. Details of customer treatment are available in the 2023 Integrated Report on the topic of "Innovation and Customer Stewardship".

Business Partners

Thaioil has established procurement procedures and complies strictly with them. This exhibits our intention to treat all partners fairly, equally, and transparently.

Thaioil's selection process requires business partners to meet certain qualifications. Criteria for assessing business partners' capability have also been clearly defined. We also value the maintenance of good relationship with and development of business partners to raise their potential through various activities, details of which are disclosed on our website on the topic of "Sustainability/WE: People's well-being/Sustainable Supply Chain". Thaioil also promotes "Green Procurement", of which details are disclosed on its website under the topic of "Sustainability/WORLD: Environment well-being/Circular Economy".

Employees

Thaioil is committed to implementing human resource management by complying with various labor laws and regulations. We also observe the international human rights principles to take care of employees, based on fairness and equality, which have been turned into the following practices:

- >> Basing treatment for employees and stakeholders on human rights principles at national and international levels, while strictly observing labor laws and other applicable regulations. Each Thaioil employee is hired under conditions of applicable laws and local practices, with a remuneration package offered without any discrimination. All employees receive training that suit their respective nature of work. We have launched a **"Human Rights Policy in Workplace Policy"** that addresses key issues, including fair treatment of employees, equal pay policy, safety and occupational health policy, union freedom support and negotiation result approval, among others. Information on compliance with human rights principles is disclosed on Thaioil's website under the topic of "Sustainability/I: Our well-being/ Human Rights". In 2023 no complaint about human rights was lodged.
- >> Introducing a **policy on fair compensation and welfare** that is comparable to peer organizations and linked

to the performance of each executive and employee. The pay structure is reviewed every year to ensure that Thaioil's remuneration package is part of the top-quartile companies in the industry and **to align the remuneration scheme with short-term and long-term corporate performances**. Thaioil considered salary adjustment for management and employees once a year using the "Balanced Scorecard", which features three aspects, namely 1) business as usual; 2) strategic initiatives; and 3) strategic enablers and sustainability. The scorecard is used for defining corporate Key Performance Indicators (KPIs), which is then cascaded down to individual KPIs for measuring current individual performance (short term) and ability to respond to long-term strategies. More details about human resource management can be found in "Information about Employees" page 92, disclosed on the Thaioil website under the topic of "Sustainability/I: Our well-being/ Employee".

Creditors

Thaioil conducts business professionally and with discipline by strictly treating creditors in accordance with conditions and guarantee terms while being responsible for various guarantee conditions and making full and timely repayment of loans and interests. Should there be any failure to comply with payment terms and conditions, Thaioil will inform creditors in advance and discuss problem solutions to prevent any possible damages.

Competitors

Thaioil treats all business competitors equally under laws concerning trade competition and within the extent of liberalized international competition. We adhere to fair competition and avoid seeking competitors' confidential information, defaming competitors through slander, and engaging in any agreement with competitors or any party that may lead to reduced competition. No legal case between Thaioil and competitors was filed in 2023.

Communities, society, and environment

Thaioil has adopted policies on quality, security, safety, occupational health, environment, energy management, and social responsibility, including a focus on reducing risks and impacts on communities arising from its work. Thaioil fosters good relationship and raises the quality of life for people in neighboring and distant communities under its Corporate Social Responsibility (CSR) framework, which covers education, energy and natural resources, environmental conservation, and the quality of life. Details about operations and social responsibility can be found in the 2023 Integrated Report on the topic of “Human Health and Safety” and is disclosed on Thaioil’s website under the topic of “Sustainability/WE: People’s well-being/Corporate Social Responsibility”.

Disclosure and Transparency

Information Disclosure

In compliance with various regulations, Thaioil discloses financial and general information to stakeholders in Thai and English. The information is regularly posted on the electronic system of SET, Thaioil’s website, and social media channels, such as Facebook and LINE Official. In addition to material information disclosed in the channels above, Thaioil organizes press conferences, interviews by executives for the media on various issues that is in the public interest, and publications of various performance results through public media, in electronic and printed forms, regularly.

Investor Relations

Thaioil has established the Investor Relations unit to facilitate communication with shareholders, investors, analysts, and regulators. Investor Relations can be reached by e-Mail at ir@thaioilgroup.com or by phone number 0-2797-2961 (direct).

Thaioil’s financial status and other key information are communicated through various channels to shareholders, analysts, and investors, including virtual and conference calls with local and foreign investors, quarterly analysts’ meeting, and organized the 2023 shareholder’s company site-visit. This included activities organized with SET, such as the SET Opportunity Day and SET Digital Roadshow (three times a year).

Review of Policies, Principles, and Guidelines for Corporate Governance

Thaioil reviews its policies, principles, and guidelines for corporate governance annually, consistent with regulations, announcements, and guidelines for corporate governance of SEC and SET, as well as principles and assessment criteria for corporate governance of various institutes, such as G20/OECD Principles of Corporate Governance 2023. However, in some cases, Thaioil deems it necessary to have guidelines that better match our business environment, such as **the Cumulative Voting**, which by the Company’s AOA, director nomination relies on the majority votes by shareholders whose votes equal the number of shares they are holding. However, since Thaioil also values minor shareholders, they are allowed to nominate directors in advance.

Corporate Governance Report

The Corporate Governance and Code of Conduct Manual (CG Manual)

Thaioil developed its first CG manual in 2004. The current version, considered the fifth revised edition, was updated in 2022, in which the Corporate Governance Policy, Corporate Governance principles, Code of Conduct and the Anti-Fraud Policy are featured. The CG manual provides guidelines for directors, executives, and employees to manage an ethical business with honesty and integrity, ensuring transparency and accountability. Executives and employees of Thaioil are required to study the CG Manual and acknowledge it on the electronics CG Reporting system annually as a pledge to adhere to the principles and tangible implement and in 2023 all executives and employees did it. The CG Manual has also been posted on Thaioil's website for easy access by all stakeholders and the public.

Communication and Advocacy of Compliance

To ensure that all directors are well aware of Thaioil's CG principles and code of conduct, the CG Manual was sent to all newly appointed directors. Meanwhile, compliance with business ethics, such as the use of inside information, vested interests, and conflicts of interest, are continually communicated and emphasized in the Board meetings.

As for executives and employees, Thaioil nurtures concepts of CG, code of conduct, use of inside information, conflicts of interest, and anti-fraud from their first day of employment. The concepts are incorporated into each orientation session organized for new employees, while the CG manual is distributed through the CG Reporting system, resulting in all new employees being informed and trained. In addition, to continually remind them and raise awareness, various activities and communication methods were organized this year. These included

Compliance & CG Talk sessions, focusing on the prevention and suppression of money laundering and terrorism financing and featuring lectures by legal experts from the Office of Anti-Money Laundering. Additionally, the GRC in Action activity was conducted during CEO Townhall events for Q2/2023 and Q4/2023, The PTT Group CG Day 2023, themed "Good to Great: CG Empowering for the Future", and communication of the No Gift Policy. Messages regarding corporate governance, code of conduct, use of inside information, conflicts of interest, and anti-fraud were communicated 12 times this year via Akanee (Thaioil's internal magazine), and e-Newsletters were sent directly by e-Mail to all executives and employees. More details are found on Thaioil's website, particularly under the topic of Sustainability/I: Our Well-being/ Fight Against Corruption.

Monitoring Compliance with CG and Code of Conduct

Monitoring of compliance with the Code of Conduct and that of dubious acts was carried out through whistle-blowing measures as well as the internal control process. For any non-compliance or dubious acts discovered, directors, executives, or employees will face strict disciplinary punishment. If it is suspected that they have violated any law, regulation, rule, and requirement laid down by the public sector, they will also be handed to public officials for prosecution. In 2023, there was no case of code of conduct violation nor corruption by directors, executives, and employees.

Supervision of Subsidiaries' Operations

Thaioil formulated a policy known as the "TOP Way of Conduct" to govern operations of Thaioil's subsidiaries. The TOP Way of Conduct contains 23 policies, such as accounting, corporate governance, anti-fraud, and internal-control policies. In addition, Thaioil assigns a

qualified personnel to manage an affiliate to ensure business direction alignment. To govern subsidiaries*, Thaioil assumes its role as the shared service center whereby Accounting Department oversees subsidiaries' financial reports and their related transactions, and Investor Relations Section ensures that subsidiaries disclose all essential information (financial status, operating results, transactions between each subsidiary with connected parties, acquisition and disposition of assets) accurately and timely as required by SET. To ensure that subsidiaries command appropriate and efficient internal control, Thaioil developed a self-assessment form for relevant work units to assess the levels of risks of key processes before the implementation of control measures, followed by assessment of the control measures' efficiency and actions taken under their improvement plans. After conducting the evaluation, the results, along with recommendations, will be compiled and presented to the managing director of the subsidiary. Simultaneously, the managing directors of the subsidiaries and the Executive Committee (EXCOM) will also be informed of the findings.

Remarks: * A subsidiary means a company in which Thaioil directly or indirectly holds more than 50% of the paid-up registered capital.

Connected Transactions or Acquisition or Disposal of Assets

Thaioil has established its Connected Transaction Policy. All transactions must be engaged in on a fair and at arm's length basis in compliance with the rules and regulations of the regulators as well as with accounting and tax standards. **The Audit Committee will provide opinions on the suitability of connected transactions.** For any matters or connected transactions requiring specific expertise, Thaioil will secure opinions from a qualified party. **These opinions will be proposed to the Board or the AGM for case-by-case approval.**

Use of Inside Information

Thaioil recognizes the crucial importance of the use of inside information for every listed company. We have therefore consistently valued the management of such matters to uphold fair treatment of shareholders and prevent undue exploitation of inside information. To this end, the actions taken appear below.

- >> Establishing a "Code of Conduct on Maintaining Confidentiality and the Use of Inside Information", and incorporating it with the CG Manual
- >> Requiring directors and executives, as defined by SEC, to notify their intention to sell Thaioil shares, either the shares of their own, spouse, partner, or minor, to the Company Secretary at least one workday in advance. They are also required to report their shareholding status to SEC when first assuming office and within three workdays with each change (purchase, sale, or transfer) of their shareholding. Shareholding of directors and executives are to also be disclosed in the Annual Report (From 56-1 One Report).
- >> Issuing a policy to prevent the abuse of inside information for buying and selling securities. "Directors, executives, and their close contacts are prohibited from buying, selling, or transferring Thaioil shares or engaging in futures contracts concerning Thaioil shares ahead of Thaioil's performance report filing to SET or until the inside information potentially affecting Thaioil's share price has been publicized, for at least 30-45 days (for the quarterly financial statements and other significant documents) and 45-60 days (for annual financial statements), and at least one day after the information is publicized."
- >> Sending an e-Mail to directors, executives, and employees, reminding them and their close contacts that they are prohibited from buying, selling, or transferring Thaioil shares at least one month before the submission of the quarterly performance report to SET.

>> Regularly reminding directors, executives, and employees of regulations and policies involving the use of inside information through various channels, such as the agenda of matters to be informed by the Chairman at each Board meeting, in Akanee Magazine (Thaioil's internal magazine), and via e-Mail (e-Newsletter) to all executives and employees, which was carried out year-round, as well as on Thaioil's intranet, among other channels. The attempt has resulted in all directors, executives, and employees educated about the careful use of inside information.

During 2023, Thaioil found no abuse of inside information that had not been publicized.

Prevention of Conflicts of Interest

To prevent conflicts between personal interests and those of Thaioil, the Company introduced a "Code of Conduct on Conflicts of Interest" and included it with the CG Manual as guidelines for its personnel. Actions taken include:

- >> Defining policies and guidelines for Board members at Board meetings. Any director involved in matters with possible conflicts of interest must leave the meeting unless the Chairman allows him or her to stay to provide answers to questions from other directors. However, the person must abstain from voting on that item.
- >> Arranging vested interest report form for directors and executives under the specified criteria. A director or an executive is required to submit a report from the first time they took position, as well as on a quarterly and annual basis. The requirement was fulfilled by all directors and executives this year.
- >> Arranging a Conflict of Interest Report form in electronic format. All Thaioil's employees are required to report their conflict of interest via an electronic system on their first day at Thaioil, the yearly report, or each time a suspected conflict exists. In 2023, Thaioil received 100% responses.

>> Providing executives and employees with information concerning conflicts of interest through articles in Akanee Magazine (Thaioil's internal magazine) and by e-Mail in the form of e-Newsletters throughout the year as well as on Thaioil's Intranet. Therefore, all Thaioil executives and employees have learned about conflicts of interest.

During 2023, Thaioil found no abuse of conflict of interest.

Anti-Fraud

Valuing business conduct with fairness, integrity, transparency, Thaioil recognizes that corruption is the main obstacle to all these. A **policy on anti-fraud** was announced for company-wide implementation, and directors, executives, and employees must acknowledge it and act accordingly. The Anti-Fraud Policy is reviewed every year to ensure its currency with the prevailing environment. Thaioil also values the implementation of policies, practices, and anti-fraud measures. The corruption risk assessment is made for high-risk processes with appropriate internal-control measures laid down to prevent and minimize the corruption risk. Performance is monitored and followed up to review and improve the plan accordingly. There is appropriate segregation of duties and organizational structure and communication to provide knowledge about anti-fraud, and the "No Gift Policy" to campaign for refraining from accepting gifts or all gratuities through e-Mail to everyone, video clips and public relations signs installed at various points. More details appear on the website at Sustainability/I: Our well-being/Fight Against Corruption.

To demonstrate Thaioil's commitment to countering corruption, as a listed company it is the Company's responsibility to foster confidence among shareholders and stakeholders. In addition to internal activities, **Thaioil was certified as a member of the Private Sector Collective Action Coalition against Corruption (CAC-certified company) on April 4, 2014.** As the certification is valid

for three years, Thaipol has so far been successful in every re-certification from CAC, including the latest re-certification in the first quarter of 2023. Moreover, Thaipol encourages its business partners to join CAC.

Whistle-blowing Measures

Thaipol commands whistle-blowing measures, which form part of the CG Manual and posted on Thaipol's website to allow stakeholders to monitor the performance of directors, executives, and employees of Thaipol and Subsidiaries to ensure their compliance with laws, regulations, CG principles, and code of conduct, while refraining from engaging in any action potentially leading to fraud and corruption. Those who experience violation of their rights and are affected by Thaipol and Subsidiaries' activities, stakeholders, staff members, relevant authorities,

and external parties coming across or are aware of such activities may file a complaint or report them through the following channels:



Chairman of the Board/
Chairman of Corporate Governance
and Sustainability Committee/
Chairman of Audit Committee/
Chief Executive Officer and President/
Company Secretary

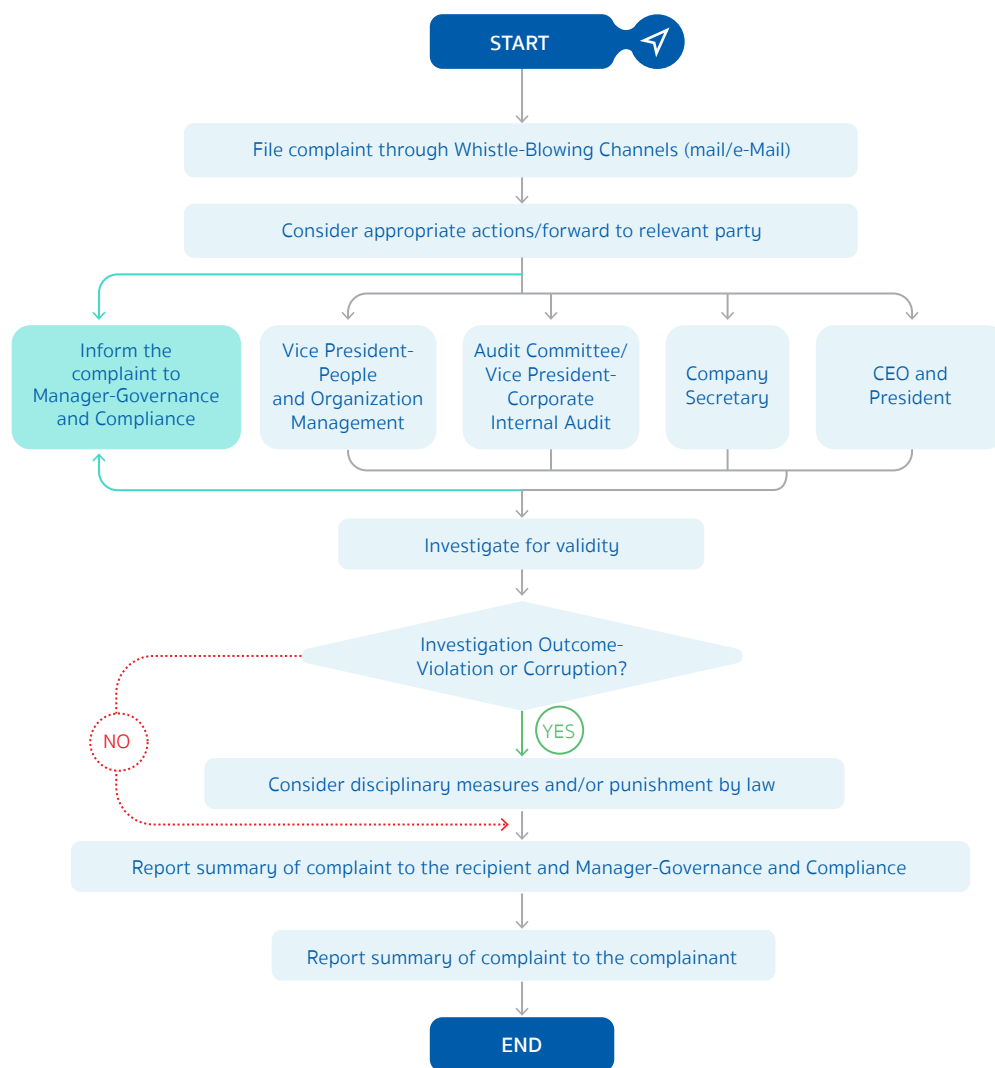
Thaipol Public Company Limited
555/1 Energy Complex Building A, 11th Floor
Vibhavadi Rangsit Road, Chatuchak, Chatuchak,
Bangkok 10900



cgcoordinate@thaipolgroup.com



Whistle-Blowing Process



Responsible Person

Complainant

Recipient ⁽¹⁾

Investigator

Investigator

Investigator

Investigator

Investigator

Recipient ⁽¹⁾

Remark: ⁽¹⁾ Chairman of the Board/Chairman of the Audit Committee/Chairman of Corporate Governance and Sustainability Committee/ CEO and President/Company Secretary

Protection of Whistle-blowers and Related Parties

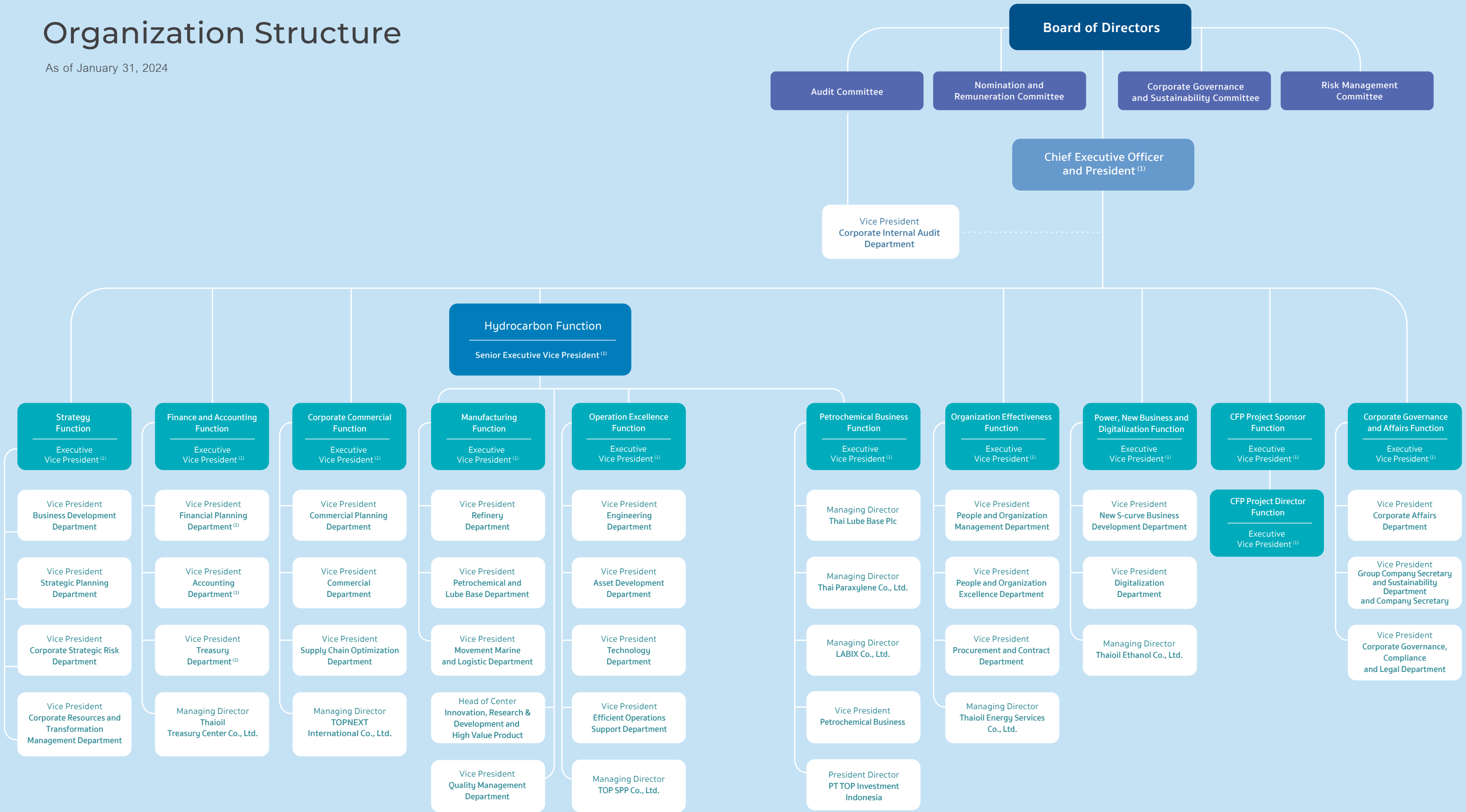
Complainants or whistle-blowers of legal violation or non-compliance are to be duly and fairly protected by Thailo, which means no change in job titles, threats, job interference, dismissal, or any unfair acts. Thailo will keep information about their complaints confidential

and will not disclose it to unrelated parties, except when required by law.

In 2023, Thailo received two complaints through whistle-blowers channels, which are currently being investigated.

Organization Structure

As of January 31, 2024



Remark ⁽¹⁾ The position is considered managerial executives as defined by SEC announcement.

Information of Directors, Executive Officers and Control Executives as of January 31, 2024

Name	Thai Oil Pte. Ltd.	Subsidiaries						Indirect Subsidiaries										Associates				Related Companies		
		Thai Lube Base Pte. Ltd.	Thai Paraxylene Co., Ltd.	Thai Solvent Co., Ltd.	Thailand Energy Services Co., Ltd.	Thailand Ethanol Co., Ltd.	Thailand Treasury Center Co., Ltd.	LABX Co., Ltd.	TOP Next International Co., Ltd.	Sak Chaisithi Co., Ltd.	TOP Solvent (Vietnam) LLC	PT. Tifa Surya Raya	SKem Pte. Ltd.	Saphio Co., Ltd.	Saphio Green Energy Co., Ltd.	TOP Ventures Co., Ltd.	TOP Ventures Hong Kong Ltd.	TOP Ventures America LLC	Global Power Synergy Pte. Ltd.	Ubon Bio Ethanol Pte. Ltd.	PT Digital Solutions Co., Ltd.	PTT Energy Solutions Co., Ltd.	Thai Petroleum Pipeline Co., Ltd.	Sam Pung Social Enterprise Co., Ltd.
1 Prof. Dr. Supot Teachavorasinskun	★																							
2 Mr. Disiat Hotrakitya	★																							
3 Ms. Pannalin Mahawongitkul	★															★								
4 Dr. Buranin Rattanasombat	★																							
5 Assoc. Prof. Dr. Pasu Decharin	★																							
6 Lt. Gen. Apichat Chaiyadar	★																							
7 Mr. Terdkiat Prommool	★																							
8 Mr. Plakom Wanglee	★																							
9 Dr. Sompop Pattananyankool	★																							
10 Dr. Nattapon Nattasomboon	★																							
11 Pol. Capt. Piya Raksakul	★																							
12 Mr. Suchat Ramarch	★																							
13 Mr. Bandhit Thampajamchit	★	★												★										
14 Mr. Surachai Saengsamran	★						★																	
15 Mr. Jeerawat Pattanasomsit	★				★									★			★			★				
16 Mr. Chatapong Wungtanagorn	★																						★	
17 Ms. Chanamas Sasanand	★	★												★										
18 Mr. Charlee Balmongkol	★					★																		
19 Mr. Rathakorn Kampanathsanyakorn	★																							
20 Ms. Rungnapa Janchookiat	★	★	★																					
21 Mr. Virroj Wongsathirayakhun	★																							
22 Mr. Santi Wasenasiri	★	★	★																					
23 Ms. Korapat Limpaphayom	★																							
24 Mr. Khwanchai Chaiyarek	★																							
25 Ms. Konarat Yamsiri																								
26 Ms. Jariya Oonmeechai	★																							
27 Ms. Jidepa Soonthiratrpong	★																							
28 Mr. Jumpon Thapanapong	★																							
29 Mr. Chatchai Siriwit	★																							
30 Mr. Chet Prongchit	★																							
31 Mr. Narongsak Chavengpob	★																							
32 Mr. Nattapong Tumsaraj	★																							
33 Mr. Nuttapol Nopparatwong	★																							
34 Mr. Nuttapon Meerit	★	★																						
35 Ms. Danusa Sanguamnoi	★																							

Information of Directors, Executive Officers and Control Executives as of January 31, 2024

Name	Subsidiaries										Indirect Subsidiaries										Associates				Related Companies	
	Thai Lube Base Pte Co., Ltd.	Thai Paraxylene Co., Ltd.	Thai Solvent Co., Ltd.	Thai Oil Investment Indonesia (P)	TOP SPP Co., Ltd.	Thai Oil Energy Services Co., Ltd.	Thai Oil Ethanol Co., Ltd.	Thai Oil Treasury Center Co., Ltd.	LABX Co., Ltd. (P)	TOP Next International Co., Ltd. (P)	Sak Chaisidhi Co., Ltd. (P)	TOP Solvent (Vietnam) LLC. (P)	PT. Tetra Surya Raya (P)	JSKern Pte Ltd. (P)	Sapthip Co., Ltd. (P)	Sapthip Green Energy Co., Ltd. (P)	TOP Ventures Co., Ltd. (P)	TOP Ventures Hong Kong Ltd. (P)	TOP Ventures America LLC. (P)	Global Power Synergy Pte (P)	Ubon Bio Ethanol Pte (P)	PTT Digital Solutions Co., Ltd. (P)	PTT Energy Solutions Co., Ltd. (P)	Thai Petroleum Pipeline Co., Ltd. (P)	Sam Pajung Social Enterprise Co., Ltd. (P)	
36 Ms. Duangporn Teerapabpaisit	✳																									
37 Mr. Thirayoot Limanond	✳																									
38 Ms. Torsang Chaipravat	✳											✳														
39 Mr. Thanalarp Osathananda													✳													
40 Ms. Tarika Devahastin	✳		✳					✳			✳															
41 Ms. Prapin Thongnium	✳																									
42 Mrs. Prapatti Hanchanlert																										
43 Mr. Preedayos Chutikomol																✳										
44 Ms. Pimchanok Sakolwaree	✳																									
45 Mr. Phumchit Tatsanaprasert	✳																									
46 Mr. Mongkol Janchookiat	✳																									
47 Ms. Rungtlip Maneesarachun	✳																									
48 Mr. Luck Saraya																										
49 Mr. Worachart Ruangragool	✳																									
50 Ms. Wanwisa Yanchinda	✳																									
51 Mr. Vivat Wongnirund	✳																									
52 Mr. Visit Thangpakorn																										
53 Mr. Sarunyu Limwongse	✳																									
54 Mr. Seksan Rojsirikulchai																										
55 Mr. Somborn Chauyokblop *	✳																									
56 Ms. Somporn Bunluesriuang	✳																									
57 Mr. Semsak Nuntapong	✳																									
58 Ms. Suchada Deechaiya	✳																									
59 Mr. Anawat Chansaksoong	✳																									
60 Ms. Arkhanin Ruang-Art	✳																									
61 Ms. Acharee Tiyaoborn	✳	✳																								
62 Mr. Udom Wongsirinnopphakun	✳																									

Notes: * = Chairman

⬢ = Director

⬢ = Chief Executive Officer or Managing Director

⬢ = Executive Officer

(1) PT TOP Investment Indonesia, is a subsidiary of Thai Oil Pte. Co., Ltd. (TOP), in which TOP holds 100% of shares.

(2) LABX Co., Ltd. is a subsidiary of Thai Paraxylene Co., Ltd. (TPX), in which TPX holds 75% of shares.

(3) TOPNext International Co., Ltd. (TX), previously TOP Solvent Co., Ltd. and name changed on October 3, 2022, is a subsidiary of Thai Oil Solvent Co., Ltd. (TOS), in which TOS holds 100% of shares.

(4) Sak Chaisidhi Co., Ltd. is a subsidiary of TOPNext International Co., Ltd. (TX), in which TX holds 80.52% of shares.

(5) TOP Solvent Vietnam LLC, is a subsidiary of TOPNext International Co., Ltd. (TX), in which TX holds 100% of shares.

(6) PT Tria Surya Raya is a subsidiary of TOPNext International Co., Ltd. (TX), in which TX holds 77.7% of shares.

(7) JSKEM Private Limited is a subsidiary of TOPNext International Co., Ltd. (TX), in which TX holds 60% of shares.

(8) Sapthip Co., Ltd. is a subsidiary of Thai Oil Ethanol Co., Ltd. (TET), in which TET holds 50% of shares.

(9) Sapthip Green Energy Co., Ltd. is a subsidiary of Sapthip Co., Ltd. (SAP), in which SAP holds 100% of shares.

* To be appointed as Director of SAP/SGE on February 5, 2024

(10) TOP Ventures Co., Ltd. is a subsidiary of Thai Oil Treasury Center Co., Ltd. (TTC), in which TTC holds 100% of shares.

(11) TOP Ventures Hong Kong Ltd. is a subsidiary of Thai Oil Treasury Center Co., Ltd. (TTC), in which TTC holds 100% of shares.

(12) TOP Ventures America LLC, is a subsidiary of TOP Ventures Hong Kong Ltd. (TVHK), in which TVHK holds 100% of shares.

(13) Global Power Synergy has become public company limited since 27 November 2014.

(14) Ubon Bio Ethanol Pte. is an associate company of Thai Oil Ethanol Co., Ltd. (TET) and become Pte. on April 23, 2018, in which TET holds 12.39% of shares.

(15) PTT Digital Solutions Co., Ltd. is an associate company of Thai Oil Pte. Co., Ltd. (TOP), in which TOP holds 20% of shares.

(16) PTT Energy Solutions Co., Ltd. is an associate company of Thai Oil Pte. Co., Ltd. (TOP), in which TOP holds 20% of shares.

The company, however, is on process of closing down business.

(17) Thai Petroleum Pipeline is a related company of Thai Oil Pte. Co., Ltd. (TOP), in which TOP holds 9.19% of shares

(18) Sam Pajung Social Enterprise Co., Ltd. is a related company of Thai Oil Pte. Co., Ltd. (TOP), in which TOP holds 15% of shares.

Board of Directors

As of January 31, 2024



Professor Dr. Supot Teachavorasinskun

**Independent Director (Non-Executive)
and Chairman of the Board**

Age 59 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on November 25, 2020 and effective from December 1, 2020: 4 months)
- >> Independent Director (Non-Executive) (Re-elected on April 7, 2021: 2 years 8 months)
- >> Chairman of the Board and Independent Director (Non-Executive) (Elected on December 22, 2020: 3 years 1 month)

Board-Committee Term

-None-

Education

- >> Bachelor of Engineering (Civil Engineering), Chulalongkorn University
- >> Master of Engineering (Civil Engineering), University of Tokyo
- >> Doctor of Engineering (Civil Engineering), University of Tokyo

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 269/2019)
- >> Financial Statements for Director (FSD 32/2019)
- >> Director Leadership Certification Program (DLCP 2/2021)
- >> Role of the Chairman Program (RCP 53/2023)

Other Trainings

- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 10, Thailand Energy Academy
- >> Special Lecture by Dr. Prinya Hom-Anek, Special Consultant to National Cyber Security Committee: "Cybersecurity in the Boardroom"
- >> IOD National Director Conference 2021: "Leadership Behind Closed Door"
- >> STS Expert Session 2021:
 - >> "Business Transformation and Innovation" by The Siam Cement Plc (SCG)
 - >> "How H & R as a specialty marketer and refiner with primarily Group I refinery technology is planning to adapt to the changing refinery landscape" by Hansen and Rosenthal Group (H&R Group)
 - >> "Strategy and Business Direction Towards Quality and Sustainable Growth" by PTG Energy Plc
- >> Trade and Development Regional Forum 2021: "Recharging Asia: Inclusive Growth and Sustainable Development amidst Post Pandemic World" by International Institute for Trade and Development
- >> Conference Call on Q4/2021 Outlook: "Navigating a Vulnerable Recovery" by Standard Chartered Bank (Thai) Plc

- >> Director's Briefing No.14/2021: "The Choices of Dispute Resolution in the time of COVID-19" by IOD and Thailand Arbitration Center
- >> 2021 PTIT Special Lecture by Khunying Thongtip Ratanarat: "Thailand's Destiny in the Next 30 Years; Must Have A "New Think Through" to Propel the Country's Economy Forward"
- >> Capital Market Academy Leader Program, Class 32, Capital Market Academy
- >> IOD National Director Conference 2022:
 - "Wisdom for Future: Harmonizing the Diverse Boards"
- >> IOD Chairman Forum No. 1/2022: "Charing the Unknown Future"
- >> IOD Chairman Forum No. 1/2023: "Leadership Amidst Volatility and Distrust"

Working Experience in the 5 Preceding Years

July 2016-Present Dean, Faculty of Engineering, Chulalongkorn University

Board Industry Experience & Expertise

Possesses educational qualification, knowledge, and expertise on engineering (civil engineering field), which would be useful for advising and commenting on the company's construction in many projects. The director also possesses the experience on research development and innovation, which are one of the company's key strategies.

Current Positions

1. **Listed Company (1)**
 - >> Independent Director and Chairman of the Board, Thai Oil Plc
 2. **Public Company** -None-
 3. **Limited Company** -None-
 4. **Other Organizations/Institutions (1)**
 - >> Dean, Faculty of Engineering, Chulalongkorn University
 5. **State Enterprise** -None-
- % of Shareholding in Thaioil -None-
- Conflict of Interest -None-
- Family Relation with Other Directors -None-
- Dispute in the 10 Preceding Years -None-



Mr. Distat Hotrakitya

Independent Director (Non-Executive)
and Chairman of the Corporate Governance
and Sustainability Committee
Age 65 Yrs.

Director Term

>> Independent Director (Non-Executive) (Appointed on April 10, 2023: 9 months)

Board-Committee Term

>> Member of the Corporate Governance and Sustainability Committee
(Appointed on April 10, 2023)
>> Chairman of the Corporate Governance and Sustainability Committee
(Elected on June 14, 2023)

Education

>> Bachelor of Laws (Honours), Chulalongkorn University
>> Master of Laws, D.E.A. de DROIT PUBLIC, Strasbourg III
(Robert Schuman) University, France
>> Diplôme de Droit Comparé (premier cycle), Strasbourg III
(Robert Schuman) University, France
>> ENA Brevet d'Administration Publique, France

Director Training Courses of Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 94/2007)

Other Trainings

>> The National Defense Course of the National Defense College, Class 53,
National Defence College
>> Certificate in Rule of Law for Democracy, Class 3/2558,
The Constitutional Court
>> Certificate in Good Governance for the Development of National Higher
Education 2010, Knowledge Network Institute of Thailand (UGP)
>> The Civil Service Executive Development Program:
Visionary and Moral Leadership, Class 47, Office of the Civil Service Commission
>> Seminar: PTT Group CG Day 2023 "Great of Trust",
Asst. Prof. Dr. Torphas Yomanak, Director of the Center for Political Economy
Studies, Faculty of Economics, Chulalongkorn University

Working Experience in the 5 Preceding Years

July 2019-Dec 15, 2022	Secretary-General to the Prime Minister
Dec 16, 2022-Aug 22, 2023	Advisor to The Prime Minister
Aug 23, 2022-Present	Council of State

Board Industry Experience & Expertise

Possesses knowledgeable, skillful and has long experience in legal field,
which is one of the key qualifications of the Board of Directors.

Current Positions

1. Listed Company (1)

>> Independent Director and Chairman of the Corporate Governance
and Sustainability Committee, Thai Oil Plc

2. Public Company

-None-

3. Limited Company

-None-

4. Other Organizations/Institutions (1)

>> Council of State

5. State Enterprise

-None-

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Ms. Pannalin Mahawongtikul

**Director (Non-Executive)
and Chairman of the Risk Management Committee**
Authorized Directors
Age 59 Yrs.

Director Term

- >> Director (Non-Executive) (Appointed on September 28, 2018 and effective from October 1, 2018: 2 years 8 months)
- >> Director (Non-Executive) (Re-elected on June 10, 2020: 2 years 10 months)
- >> Director (Non-Executive) (Re-elected on April 10, 2023: 9 months)

Board-Committee Term

- >> Member of the Risk Management Committee
(Appointed on September 28, 2018, effective from October 1, 2018 and completed the term in the 2020 Annual General Meeting of Shareholders)
- >> Member of the Risk Management Committee (Appointed on June 23, 2020 and completed the term in the 2023 Annual General Meeting of Shareholders)
- >> Member of the Risk Management Committee (Appointed on April 10, 2023)
- >> Chairman of the Risk Management Committee (Elected on May 15, 2023)

Education

- >> Bachelor of Science in Accounting, Thammasat University
- >> Master of Business Administration, Thammasat University

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Corporate Governance: Regulation and Disclosure (CG PTTEP/2017) (PTTEP In-house Course)
- >> Director Certification Program (DCP 279/2019)
- >> Strategic Board Master Class (SBM 9/2020)
- >> Risk Management Program for Corporate Leaders (RCL 28/2022)

Other Trainings

- >> Executive Development Program (EDP), Class 2, Thai Listed Companies Association
- >> PTT-HBS Leadership Development Program II, Harvard Business School, USA
- >> NIDA-Wharton Executive Leadership Program (ELP), The Wharton School, University of Pennsylvania, USA
- >> Leadership Development Program (LDP) III, PTT Leadership and Learning Institute (PLLI)
- >> CMA-Greater Mekong Subregion (CMA-GMS), Class 1, Capital Market Academy
- >> Leadership Succession Program (LSP), Class 6, Institute of Research and Development for Public Enterprises
- >> Executive Program for Senior Management (EX-PSM), Class 3, Fiscal Policy Research Institute Foundation
- >> Capital Market Academy Leader Program, Class 24, Capital Market Academy
- >> The TIJ Executive Program on the Rule of Law and Development (ROLD) 2020: The Resilient Leader, Thailand Institute of Justice

- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 15, Thailand Energy Academy
- >> TLCA CFO Professional Development Program (TLCA CFO CPD) 2023, Thai Listed Companies Association
- >> STS Expert Session 2023:
 - >> "Global Energy Trends in Net Zero Era", McKinsey & Company
 - >> "Successful SCGJWD Business Expansion Through Partnership", SCGJWD Logistics Plc
 - >> "Global & Thailand Economic Outlook", Bangkok Bank Plc

Working Experience in the 5 Preceding Years

Oct 2018- Present Chief Financial Officer, PTT Plc

Board Industry Experience & Expertise

Possesses experience, knowledge and expertise on energy and accounting and finance in the energy industry. The director has work experience working for PTT Plc, resulting in the ability to provide useful advice and comments on the company's strategic planning and business directions through PTT Group overview.

Current Positions

1. Listed Company (3)

- >> Director and Chairman of the Risk Management Committee, Thai Oil Plc
- >> Director, Global Power Synergy Plc
- >> Chief Financial Officer, PTT Plc

2. Public Company

-None-

3. Limited Company

-None-

4. Other Organizations/Institutions (7)

- >> Executive Director, Thailand Energy Academy
- >> Club President, Thai Investor Relations Club
- >> Member of Council, Vidyasirimedhi Institute of Science and Technology (VISTEC)
- >> Member of Executive Committee, VISTEC
- >> Chairman of Finance and Budget Sub-Committee, VISTEC
- >> Director and Member of the Audit Committee, Thai Listed Companies Association (TLCA)
- >> Director, Lotus Pharmaceutical Co Ltd. (Listed Company in Taiwan)

5. State Enterprise

-None-

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Dr. Buranin Rattanasombat

Director (Non-Executive)
and Member of the Risk Management Committee
Authorized Directors
Age 56 Yrs.

Director Term

- >> Director (Non-Executive) (Appointed on September 18, 2020: 1 year 6 months)
- >> Director (Non-Executive) (Re-elected on April 7, 2022: 1 year 9 months)

Board-Committee Term

- >> Member of the Nomination and Remuneration Committee
(Appointed on September 18, 2020 and vacated from April 23, 2021)
- >> Member of the Risk Management Committee (Appointed on April 23, 2021 and completed the term in the 2022 Annual General Meeting of Shareholders)
- >> Chairman of the Risk Management Committee (Elected on May 19, 2021 and completed the term in the 2022 Annual General Meeting of Shareholders)
- >> Member of the Risk Management Committee (Appointed on April 29, 2022)

Education

- >> Bachelor of Science, Prince of Songkhla University
- >> Master of Business Administration, Chulalongkorn University
- >> Ph.D. (Management), Silpakorn University

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Company Secretary Program (CSP 40/2011)
- >> Director Certification Program (DCP 174/2013)
- >> Director Leadership Certification Program (DLCP 4/2022)

Other Trainings

- >> Capital Market Academy Leader Program, Class 30, Capital Market Academy
- >> Advanced Security Management Program, Class 10, The Association of National Defence College of Thailand Under The Royal Patronage of His Majesty The King
- >> Senior Executive Education Program, School of Management, MIT
- >> CMA-GMS International Program 2016, Capital Market Academy
- >> Foreign Affairs Executives Programme, Class 7, Devawongse Varopakarn Institute of Foreign Affairs, Ministry of Foreign Affairs
- >> PTT Leadership Development Program, Harvard Business School, Harvard University, USA
- >> Advanced Certificate Course in Public Administration and Law for Executives, Class 12, King Prajadhipok's Institute
- >> Executive Development Program (EDP), Thai Listed Companies Association
- >> National Defence Course, Class 64, National Defence College
- >> Thailand Energy Academy Course, TEA 17, Thailand Energy Academy

Working Experience in the 5 Preceding Years

2019-May 2020	Senior Executive Vice President, Corporate Strategy, Innovation and Sustainability Chief Transformation Officer (CTO) PTT Oil and Retail Business Plc
Jun 2020-Sep 2021	Senior Executive Vice President, Downstream Business Group Alignment, PTT Plc
Oct 2021-Sep 2022	Senior Executive Vice President, Innovation and New Ventures, PTT Plc
Oct 2022-Present	Chief New Business and Infrastructure Officer, PTT Plc

Board Industry Experience & Expertise

Possesses experience, knowledge and expertise on energy, strategies, risk management and innovation in the energy industry. The director has work experience working for PTT Plc, resulting in the ability to provide useful advice and comments on the company's strategic planning and business directions through PTT Group overview. The director is interested and usually follows the new business and change of world trend, which highly benefit the company's strategic planning and business directions.

Current Positions

1. Listed Company (3)

- >> Director and Member of the Risk Management Committee, Thai Oil Plc
- >> Director and Member of the Risk Management Committee, PTT Oil and Retail Business Plc
- >> Chief New Business and Infrastructure Officer, PTT Plc

2. Public Company

-None-

3. Limited Company (3)

- >> Director and Chairman of the Board, Innobic (Asia) Co., Ltd.
- >> Director and Chairman of the Board, Nuovo Plus Co., Ltd.
- >> Director and Chairman of the Board, Horizon Plus Co., Ltd.

4. Other Organizations/Institutions (6)

- >> Advisory, Synchrotron Light Research Institute Committee
- >> Board of Directors, National Metal and Materials Technology Center
- >> Board of Directors, The Federation of Thai Industries
- >> President, Marketing Association of Thailand
- >> Board of Director, Thailand Energy Academy
- >> Board of Director, Small and Medium Enterprise Promotion Committee

5. State Enterprise

-None-

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Associate Professor Dr. Pasu Decharin

Independent Director (Non-Executive),
Chairman of the Nomination and Remuneration Committee,
and Member of the Audit Committee
Age 55 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on April 11, 2018: 3 years)
- >> Independent Director (Non-Executive) (Re-elected on April 7, 2021: 2 years 9 months)

Board-Committee Term

- >> Member of the Audit Committee (Appointed on April 27, 2018 and completed the term in the 2021 Annual General Meeting of Shareholders)
- >> Member of the Nomination and Remuneration Committee (Appointed on August 30, 2019, effective from September 20, 2019 and completed the term in the 2021 Annual General Meeting of Shareholders)
- >> Member of the Audit Committee (Appointed on April 7, 2021)
- >> Member of the Nomination and Remuneration Committee (Appointed on April 7, 2021)
- >> Chairman of the Nomination and Remuneration Committee (Elected on July 12, 2023)

Education

- >> Bachelor of Business Administration (Management), Faculty of Commerce and Accountancy, Chulalongkorn University
- >> Master of Business Administration (General Management), University of Colorado (Boulder), USA
- >> Ph. D. in Management of Technology, School of Management, Asian Institute of Technology

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Accreditation Program (DAP 121/2015)
- >> Director Certification Program (DCP 280/2019)
- >> Director Leadership Certification Program (DLCP 0/2020)
- >> Ethical Leadership Program (ELP 23/2021)
- >> Advanced Audit Committee Program (AACP 44/2022)
- >> Subsidiary Governance Program (SGP 5/2023)
- >> ESG in Board Room (ESG 0/2023)

Other Trainings

- >> Executive Development Program (EDP), Class 3, Thai Listed Companies Association (TLCA)
- >> Leadership Development Program (LDP), Class 6, Thai Listed Companies Association (TLCA)
- >> STS Expert Session 2023:
 - >> "Global Energy Trends in Net Zero Era", McKinsey & Company
 - >> "Global & Thailand Economic Outlook", Bangkok Bank Plc

Working Experience in the 5 Preceding Years

1993-Present Lecturer, Faculty of Commerce and Accountancy, Chulalongkorn University

Board Industry Experience & Expertise

Possesses the leading knowledge, expertise and experience on management and administration in national level as well as holds the position of the managing director of the leading management curricular. The director also composes writings in the leading newspapers and magazines, as well as gives lecture for Thai Institute of Directors. Moreover, the director is interested and usually follows the new business and change of world trend, which highly benefit the company's strategic planning, risk management and business directions.

Current Positions

1. Listed Company (3)

- >> Independent Director, Chairman of the Nomination and Remuneration Committee, and Member of the Audit Committee, Thai Oil Plc
- >> Independent Director, Chairman of the Audit Committee, and Member of the Governance and Nomination Committee, The Siam Cement Plc
- >> Independent Director and Chairman of the Board, Warrix Sports Plc

2. Public Company (2)

- >> Independent Director and Chairman of the Board, Aksorn Education Plc
- >> Independent Director, Member of the Audit Committee, and Member of the Risk Oversight Committee, Siam Commercial Bank Plc

3. Limited Company

-None-

4. Other Organizations/Institutions (4)

- >> Lecturer, Faculty of Commerce and Accountancy, Chulalongkorn University
- >> Director, Vice-President and Chairman of the Curriculum and Lecturer Committee, Thai Institute of Directors Association (IOD)
- >> Member of Advisor Team to the Minister of Commerce
- >> Member and Chair of Audit Sub-committee of the Board of Small and Medium Enterprises Promotion

5. State Enterprise (1)

- >> Board of Director and Chairman of the Audit Committee, National Science Museum Thailand

% of Shareholding in Thai oil	-None-
Conflict of Interest	-None-
Family Relation with Other Directors	-None-
Dispute in the 10 Preceding Years	-None-



Lt. Gen. Apichat Chaigadar

Independent Director (Non-Executive),
Chairman of the Audit Committee,
and Member of the Nomination and Remuneration Committee
Age 55 Yrs.

Director Term

>> Independent Director (Non-Executive) (Appointed on April 10, 2023: 9 months)

Board-Committee Term

- >> Member of the Audit Committee (Appointed on April 10, 2023)
- >> Member of the Nomination and Remuneration Committee (Appointed on April 10, 2023)
- >> Chairman of the Audit Committee (Elected on May 10, 2023)

Education

- >> Bachelor of Science, Chulachomkiao Royal Military Academy
- >> Master of Arts (International Relations), Chulalongkorn University

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 249/2017)

Other Trainings

- >> National Defence Course (NDC), Class 65, Thailand National Defence College
- >> Diploma, Command and General Staff Office Course Command and General Staff College, USA
- >> Seminar: "AI: The New Player in Cyber Security", the Ministry of Defense

Working Experience in the 5 Preceding Years

2019-Sep 2020	Deputy Director-General, Defence Energy Department, Office of the Permanent Secretary for Defence, Ministry of Defence
2020-Sep 2022	Chief, Military Affairs Coordination Officers to the Ministry of Foreign Affairs, Officer of Policy and Planning, Office of the Permanent Secretary for Defence, Ministry of Defence
Oct 2022-Present	Director-General Defence Energy Department, Office of the Permanent Secretary for Defence, Ministry of Defence

Board Industry Experience & Expertise

Possesses knowledges and plenty of experiences on national security and energy field, which are directly related to the core business of the Company. Lt. Gen. Apichat will be able to provide opinions and suggestions which will be beneficial to the business operations of the Company.

Current Positions

1. Listed Company (1)

- >> Independent Director, Chairman of the Audit Committee, and Member of the Nomination and Remuneration Committee, Thai Oil Plc

2. Public Company

-None-

3. Limited Company

-None-

4. Other Organizations/Institutions (1)

- >> Director-General Defence Energy Department,
Office of the Permanent Secretary for Defence, Ministry of Defence

5. State Enterprise

-None-

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Mr. Terdkiat Prommool

Director (Non-Executive)
and Member of the Nomination and Remuneration Committee
Authorized Directors
Age 58 Yrs.

Director Term

- >> Director (Non-Executive) (Appointed on September 18, 2020 and effective from October 1, 2020: 1 year 6 months)
- >> Director (Non-Executive) (Re-elected April 7, 2022: 1 year 9 months)

Board-Committee Term

- >> Member of the Nomination and Remuneration Committee (Appointed on April 23, 2021 and completed the term in the 2022 Annual General Meeting of Shareholders)
- >> Member of the Nomination and Remuneration Committee (Appointed on April 29, 2022)

Education

- >> Bachelor of Engineering (Chemical Engineering), Chulalongkorn University
- >> Master of Engineering (Industrial & Manufacturing Systems Engineering), University of Missouri-Columbia, USA

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 223/2016)

Other Trainings

- >> Leadership Succession Program (LSP), Class 10, Institute of Research and Development for Public Enterprises

Working Experience in the 5 Preceding Years

2018 - 2020	Managing Director, PTT Digital Solutions Co., Ltd.
2020 - 2021	Senior Executive Vice President, Organization Management and Sustainability, PTT Plc
2021 - Present	Senior Executive Vice President, Corporate Strategy and Sustainability, PTT Plc

Board Industry Experience & Expertise

Possesses experience, knowledge and expertise on digital, personnel management and mega project management in the energy industry. The director has long work experience working for PTT Plc, resulting in the ability to provide useful advice and comments which benefit the company's strategic planning and business directions through PTT Group overview.

Current Positions

1. Listed Company (3)

- >> Director and Member of the Nomination and Remuneration Committee, Thai Oil Plc
- >> Director and Director of the Nomination and Remuneration Committee, PTT Oil and Retail Business Plc
- >> Senior Executive Vice President, Corporate Strategy and Sustainability, PTT Plc

2. Public Company

-None-

3. Limited Company (1)

- >> Chairman, PTT Digital Solutions Co., Ltd.

4. Other Organizations/Institutions (4)

- >> Chairman of the Management Committee, Thailand Energy Academy
- >> Vice President and Board Member, UN Global Compact Network Thailand
- >> Executive Committee, Vidyasirimedhi Institute of Science and Technology (VISTEC)
- >> Secretary-General, Chulalongkorn University Alumni Association under The Royal Patronage of His Majesty the King

5. State Enterprise

-None-

% of Shareholding in Thairoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Mr. Plakorn Wanglee

Independent Director (Non-Executive),
Member of the Audit Committee,
and Member of the Corporate Governance
and Sustainability Committee
Age 57 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on October 22, 2020 and effective from November 1, 2020: 1 year 5 months)
- >> Independent Director (Non-Executive) (Re-elected on April 7, 2022: 1 year 9 months)

Board-Committee Term

- >> Member of the Audit Committee (Appointed on October 22, 2020, effective from November 1, 2020 and completed the term in the 2022 Annual General Meeting of Shareholders)
- >> Member of the Audit Committee (Appointed on April 29, 2022)
- >> Member of the Corporate Governance and Sustainability Committee (Appointed on April 10, 2023)

Education

- >> Bachelor of Accounting, Chulalongkorn University
- >> Master of Business Administration (Finance), University of San Francisco, USA

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 229/2016)
- >> Advanced Audit Committee Program (AACP 44/2022)

Other Trainings

- >> National Defence Course, Class 62, National Defence College
- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 8, Thailand Energy Academy
- >> Training Course on Good Governance for Directors and Executives of State-Owned Enterprises and Public Organization, Class 14, King Prajadhipok's Institute
- >> Capital Market Academy Leader Program, Class 10, Capital Market Academy
- >> The Programme for Senior Executives on Justice Administration, Batch 25, Judicial Training Institute, National Justice Academy
- >> STS Expert Session 2022:
 - >> "Oil and Petrochemical Industry Outlook", Boston Consulting Group (BCG)
 - >> "Energy Industry Trend", Facts Global Energy (FGE)
- >> IOD National Director Conference 2022: "Wisdom for Future: Harmonizing the Diverse Boards"
- >> PTT Group AC Forum 2022: "Rising to the Challenge"
- >> STS Expert Session 2023:
 - >> "Global Trends in Energy", Boston Consulting Group (BCG)
- >> Seminar: "The Importance of Audit Committee Towards the Confidence in Thai Capital Market", Stock Exchange of Thailand

Working Experience in the 5 Preceding Years

- | | |
|--------------|---------------------------------------------------------------------------------------------------------------------|
| 2016-Present | President and Chief Executive Officer,
Standard Chartered Bank (Thai) Plc
Thailand and Representative Offices |
|--------------|---------------------------------------------------------------------------------------------------------------------|

Board Industry Experience & Expertise

Possesses experience, knowledge and expertise on accounting and finance, as well as holds the executive positions in leading companies with extensive experience in mergers and acquisitions, debt, equity and market transactions for Thai and international corporations.

Current Positions

1. Listed Company (2)

- >> Independent Director, Member of the Audit Committee, and Member of the Corporate Governance and Sustainability Committee, Thai Oil Plc
- >> Independent Director, Member of the Audit Committee, and Member of the Nomination and Remuneration Committee, Rabbit Holdings Plc

2. Public Company (1)

- >> President and Chief Executive Officer, Standard Chartered Bank (Thai) Plc Thailand and Representative Offices

3. Limited Company (1)

- >> Independent Director, Thanathip Co., Ltd.

4. Other Organizations/Institutions

-None-

5. State Enterprise

-None-

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Dr. Sompop Pattanariyankool

Director (Non-Executive)
and Member of the Corporate Governance
and Sustainability Committee
Age 45 Yrs.

Director Term

>> Director (Non-Executive) (Appointed on April 7, 2021: 2 years 9 months)

Board-Committee Term

>> Member of the Corporate Governance and Sustainability Committee
(Appointed on December 22, 2022)

Education

- >> Bachelor of Economics (1st Class Honors), Chulalongkorn University
- >> Master of Science in Economic and Policy, Department of Economics, University of Surrey, UK.
- >> Ph. D. in Economics, Tepper School of Business, Carnegie Mellon University, USA

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 309/2021)
- >> Financial Statements for Directors (FSD 45/2022)
- >> Director Accreditation Program (DAP 204/2023)
- >> Risk Management Program for Corporate Leaders (RCL 31/2023)

Other Trainings

- >> Civil Service Executive Program: Visionary and Moral Leadership, Office of the Civil Service Commission
- >> Advance Certificate Course in Public Administration and Law for Executives, King Prajadhipok's Institute
- >> Course for Ministry Spokesman, The Government Public Relation Department
- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 16, Thailand Energy Academy
- >> Leadership Development Program II (LDP II), PTT Leadership and Learning Institute (PLLI)
- >> Advanced Training Course on Energy for Executives, Ministry of Energy
- >> The New Wave Leader Development Program in Thai Civil Service, Office of the Civil Service Commission
- >> IOD National Director Conference 2021: "Leadership Behind Closed Door"
- >> STS Expert Session 2022:
 - >> "Oil and Petrochemical Industry Outlook", Boston Consulting Group (BCG)
 - >> "Successful Thai Union's Business Transformation Pathway", Thai Union Group Plc
- >> STS Expert Session 2023:
 - >> "Successful SCGJWD Business Expansion Through Partnership", SCGJWD Logistics Plc
- >> Seminar: PTT Group CG Day 2023 "Great of Trust", Asst. Prof. Dr. Torphas Yomanak, Director of the Center for Political Economy Studies, Faculty of Economics, Chulalongkorn University

Working Experience in the 5 Preceding Years

2018-2020	Director, Strategy and Planning Division, Ministry of Energy
2020-Mar 17, 2023	Assistant Permanent Secretary, Ministry of Energy
Mar 18, 2023-Jan 2, 2024	Inspector-General, Ministry of Energy
Jan 3, 2024-Present	Deputy Permanent Secretary, Office of the Permanent Secretary, Ministry of Energy

Board Industry Experience & Expertise

Possesses knowledge, expertise and experience on energy as well as strategic and energy business planning. The director also possesses knowledge and understanding on public policy which benefits the company's business operation.

Current Positions

1. Listed Company (1)	
>> Director and Member of the Corporate Governance and Sustainability Committee, Thai Oil Plc	
2. Public Company	-None-
3. Limited Company	-None-
4. Other Organizations/Institutions (1)	
>> Deputy Permanent Secretary, Office of the Permanent Secretary, Ministry of Energy	
5. State Enterprise	-None-
% of Shareholding in Thaioil	-None-
Conflict of Interest	-None-
Family Relation with Other Directors	-None-
Dispute in the 10 Preceding Years	-None-



Dr. Nattapon Nattasomboon

Independent Director (Non-Executive)
and Member of the Risk Management Committee
Age 58 Yrs.

Director Term

>> Independent Director (Non-Executive) (Appointed on April 10, 2023: 9 months)

Board-Committee Term

>> Member of the Risk Management Committee (Appointed on April 10, 2023)

Education

- >> Bachelor of Engineering (Civil Engineering), Chulalongkorn University
- >> Master of Science (Civil Engineering), Oregon State University, USA
- >> Ph.D. (Industrial Engineering), Oregon State University, USA

Director Training Courses of Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 316/2022)

Other Trainings

- >> The Civil Service Executive Development Program: Visionary and Moral Leadership, Class 38, Office of the Civil Service Commission
- >> Politics and Governance in Democratic Systems for Executives, Class 16, King Prajadhipok's Institute
- >> Senior Budget Executive Program, Class 2, Bureau of the Budget
- >> Justice Administration Advanced Course, Class 7, Ministry of Justice
- >> The National Defense Course of the National Defense College, Class 57, National Defence College
- >> Corporate Governance Program for Directors and Executives of State Enterprises and Public Organizations, Class 19, King Prajadhipok's Institute
- >> Digital CEO, Class 5, Digital Economy Promotion Agency
- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 18, Thailand Energy Academy

Working Experience in the 5 Preceding Years

Nov 2019-Dec 2020	Chief Inspector General, Ministry of Industry
Dec 2020-Feb 2022	Director General, Thai Meteorological Department, Ministry of Digital Economy and Society
Feb 2022-Present	Deputy Permanent Secretary, Ministry of Digital Economy and Society

Board Industry Experience & Expertise

Possesses knowledgeable, skillful and has plenty of experience in Thailand's industrial sector. In addition, he currently has responsibilities relating to digital technology, information technology, and cybersecurity management, which is the topic that the Company is focusing.

Current Positions

1. Listed Company (1)

>> Independent Director and Member of the Risk Management Committee, Thai Oil Plc

2. Public Company

-None-

3. Limited Company

-None-

4. Other Organizations/Institutions (1)

>> Deputy Permanent Secretary, Ministry of Digital Economy and Society

5. State Enterprise (2)

>> Director and Chairman of the Board, National Telecom Plc

>> Director, Thailand Post Co., Ltd.

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Police Captain Piya Raksakul

Independent Director (Non-Executive),
Member of the Audit Committee,
and Member of Corporate Governance
and Sustainability Committee
Age 55 Yrs.

Director Term

>> Independent Director (Non-Executive) (Appointed on April 10, 2023: 9 months)

Board-Committee Term

>> Member of the Audit Committee (Appointed on April 10, 2023)
>> Member of Corporate Governance and Sustainability Committee
(Appointed on August 25, 2023)

Education

>> Bachelor of Laws, Sripatum University
>> Master of Arts (Political Science-Justice Administration),
Kasetsart University

Director Training Courses of Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 343/2023)

Other Trainings

>> Advanced Certificate Course in Public Economic Management for Executives,
Class 5, King Prajadhipok's Institute
>> Provincial Chief Prosecutor's Training Program, Class 34, Public Prosecution
Official Training Institute, Office of the Attorney-General
>> Advanced Police Management Course, Class 41, Police College,
Police Education Bureau, Royal Thai Police
>> Training Course on Environmental Governance for Executive Officers, Class 5,
Department of Environmental Quality Promotion
>> Training Course on Justice Administration for High Level Justice Officials,
Class 10, Office of Justice Affairs
>> Training Course on Advanced Politics and Election Development, Class 10,
Office of the Election Commission
>> Civil Service Executive Development Program: Visionary and Moral Leadership,
Class 92, Office of the Civil Service Commission
>> Seminar: PTT Group CG Day 2023 "Great of Trust",
Asst. Prof. Dr. Torphas Yomanak, Director of the Center for
Political Economy Studies Faculty of Economics Chulalongkorn University
>> Training Course on The Rule of Law for Democracy, Class 11,
Office of the Constitutional Court
>> 2021 PTIT Special Lecture by Khunying Thongtip Ratanarat:
"Thailand's New Government; Must Have A "New Think Through"
to Propel the Country's Economy Forward"

Working Experience in the 5 Preceding Years

Nov 17, 2017-Dec 26, 2021 Director, Bureau of Special Case Management,
Department of Special Investigation
Nov 27, 2021-Sep 23, 2022 Director, Bureau of Financial,
Banking and Money Laundering Crime,
Department of Special Investigation
Sep 23, 2022-Present Deputy Director-General,
Department of Special Investigation

Board Industry Experience & Expertise

Possesses knowledgeable, skillful and has long experience in legal field,
which is one of the key qualifications of the Board of Directors, which highly
benefit the company's risk management and corporate governance.

Current Positions

1. Listed Company (1)

>> Independent Director, Member of the Audit Committee,
and Member of Corporate Governance and Sustainability Committee,
Thai Oil Plc

2. Public Company

-None-

3. Limited Company

-None-

4. Other Organizations/Institutions (2)

>> Deputy Director-General, Department of Special Investigation
>> Director, Metropolitan Waterworks Authority

5. State Enterprise

-None-

% of Shareholding in Thaioil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Mr. Suchat Ramarch

Director (Non-Executive)
and Member of the Corporate Governance
and Sustainability Committee
Age 55 Yrs.

Director Term

- >> Director (Non-Executive) (Appointed on September 29, 2021 and effective from October 1, 2021: 6 months)
- >> Director (Non-Executive) (Re-elected on April 7, 2022: 1 year 9 months)

Board-Committee Term

- >> Member of the Corporate Governance and Sustainability Committee (Appointed on April 10, 2023)

Education

- >> Bachelor of Engineering (Mechanical Engineering), Rajamangala University of Technology Krungthep
- >> Master of Arts (Social Development Administration), National Institute of Development Administration

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 176/2017)

Other Trainings

- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 17, Thailand Energy Academy
- >> National Defence Course, Class 64, National Defence College
- >> Corporate Governance for Directors and Senior Executives of Regulator, State Enterprises and Public Organizations, Class 22, King Prajadhipok's Institute
- >> Capital Market Academy Leader Program, Class 28, Capital Market Academy
- >> Leadership Development Program (LDP) III, 2019 PTT Leadership and Learning Institute (PLLI)
- >> Advanced Certificate Course in Public Administration and Law for Executives, Class 13, King Prajadhipok's Institute
- >> Advance Management Program II, 2013 PTT Leadership and Learning Institute (PLLI)
- >> Management Development Program (MDP) III, 2013 PTT Leadership and Learning Institute (PLLI)
- >> Executive Development Program (EDP), 2011 Thai Listed Companies Association

Working Experience in the 5 Preceding Years

2019-Sep 2021	Senior Executive Vice President, Non-oil Retail Business, PTT Oil and Retail Business Plc
Oct 2021- Sep 2022	Senior Executive Vice President, Organization Effectiveness and Corporate Governance, PTT Plc
Oct 2022-Present	Senior Executive Vice President of Chief Operating Officer, Downstream Petroleum Business Group, PTT Plc, secondment as President, PTT Oil and Retail Business Plc

Board Industry Experience & Expertise

Possesses experience, knowledge and expertise on energy and marketing in the energy industry. The director has long work experience at PTT Plc and companies in PTT Group, resulting in the ability to provide useful advice and comments which benefit the company's marketing planning and business directions through PTT Group overview.

Current Positions

1. Listed Company (3)

- >> Director and Member of the Corporate Governance and Sustainability Committee, Thai Oil Plc
- >> Senior Executive Vice President of Chief Operating Officer, Downstream Petroleum Business Group, PTT Plc
- >> President, PTT Oil and Retail Business Plc

2. Public Company

-None-

3. Limited Company (2)

- >> Chairman of the Board, PTT Retail Management Co., Ltd.
- >> Director and Chairman of the Board, Business Services Alliance Co., Ltd.

4. Other Organizations/Institutions (2)

- >> Ethics Committee of The Secretariat of the Prime Minister
- >> Member of Business Matching Committee and Member of Retail Committee, The Thai Chamber of Commerce and Board of Trade of Thailand

5. State Enterprise

-None-

% of Shareholding in Thailoil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



Mr. Bandhit Thamprajamchit

Director (Executive),
Member of the Risk Management Committee,
Chief Executive Officer and President,
and the Secretary to the Board of Directors
Authorized Directors
Age 53 Yrs.

Director Term

>> Director (Executive) (Appointed on December 20, 2022
and effective from January 1, 2023: 1 year 1 month)

Board-Committee Term

>> Member of the Risk Management Committee
(Appointed on December 20, 2022 and effective from January 1, 2023)

Education

>> Bachelor of Engineering (Chemical Engineering)
(1st Class Honours, Gold Medal), Chulalongkorn University
>> M.Sc. in Advanced Chemical Engineering (Distinction), Imperial College,
University of London, United Kingdom
>> Master of Business Administration (Executive), Sasin Graduate Institute of
Business Administration of Chulalongkorn University

Director Training Courses of Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 187/2014)
>> Ethical Leadership Program (ELP 27/2022)
>> Role of the Chairman Program (RCP 52/2022)

Other Trainings

>> National Defence Course, Class 63, The National Defence College of Thailand
>> The Executive Program in Energy Literacy for a Sustainable Future, Class 14,
Thailand Energy Academy
>> Capital Market Academy Leader Program, Class 27, Capital Market Academy
>> Leadership Development Program III (LDP III), Class 4,
PTT Leadership and Learning Institute (PLLI)
>> Leadership Development Program II (LDP II with INSEAD)
Thailand & Singapore, PTT Leadership and Learning Institute (PLLI)
>> The Young Executive Program in Energy Literacy for a Sustainable Future,
Class 2, Thailand Energy Academy
>> Executive Development Program (EDP), Thai Listed Companies Association
>> Executive Development Program, Fiscal Policy Research Institute Foundation,
Thailand
>> STS Expert Session 2023:
>> "Global Trends in Energy", Boston Consulting Group (BCG)
>> "Global & Thailand Economic Outlook", Bangkok Bank Plc

Working Experience in the 5 Preceding Years

Oct 2018-Jan 2020	Senior Executive Vice President-Petroleum & Petrochemical and Acting Executive Vice President-Operation Excellence, Thai Oil Plc
Feb-Dec 2020	Senior Executive Vice President-Petroleum & Petrochemical, Thai Oil Plc
Jan 2021-Dec 2022	Senior Executive Vice President-Hydrocarbon and Acting Executive Vice President-Manufacturing, Thai Oil Plc
Jan-Mar 2023	Acting Managing Director, LABIX Co., Ltd.
Jan-Sep 2023	Acting Senior Executive Vice President-Hydrocarbon and Acting Executive Vice President-Manufacturing, Thai Oil Plc
Jan-Dec 2023	Chief Executive Officer and President, Thai Oil Plc

Jan 2024-Present	Chief Executive Officer and President and Acting Executive Vice President-Corporate Governance and Affairs, Thai Oil Plc
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Board Industry Experience & Expertise

Possesses knowledge and expertise in energy business, petroleum, and petrochemical industries for more than 32 years, as well as various skills and experiences in policy determination, strategic planning and business practices at corporate level, security strategic plan, environment governance, innovation management, key business decisions eg. project approval, final investment decision, risk management, and management of mega project in energy industry. Also holds the position of Chairman of Petroleum Refining Industry Club, The Federation of Thai Industries. This benefits the management of the Company and enables the achievement of the Company's vision and mission.

Current Positions

1. Listed Company (3)

>> Director, Member of the Risk Management Committee,
Chief Executive Officer and President,
and the Secretary to the Board of Directors, Thai Oil Plc
>> Director, Global Power Synergy Plc
>> Senior Executive Vice President, PTT Plc

2. Public Company

-None-

3. Limited Company (4)

>> Director and Chairman of the Board, Thai Paraxylene Co., Ltd.
>> Director and Chairman of the Board, LABIX Co., Ltd.
>> Director, Sapthip Co., Ltd.
>> Director and Chairman of the Board, TOPNEXT International Co., Ltd.

4. Other Organizations/Institutions (12)

>> Directors, The Federation of Thai Industries
>> Subcommittee on Fuel and Greenhouse Gases Impact Assessment from
EV Measures, The National EV Policy Committee, Ministry of Energy
>> Chairman, Petroleum Refining Industry Club,
The Federation of Thai Industries
>> Vice Chairman, Petrochemical Cluster, The Federation of Thai Industries
>> Committee, Industrial Promotion and Support Department,
The Federation of Thai Industries
>> Committee, The Institute of Industrial Energy,
The Federation of Thai Industries
>> Council of Trustees, Petroleum Institute of Thailand
>> Director, Thai Listed Companies Association
>> Committee, Chulalongkorn University Alumni Association under the
Royal Patronage of His Majesty the King
>> Vice President, Thailand Swimming Association
>> Executive Director, Thailand Energy Academy
>> Council Member of Thailand Business Council for Sustainable Development

5. State Enterprise

-None-

% of Shareholding in Thailoil	2,400 shares equivalent to 0.00011%
Conflict of Interest	-None-
Family Relation with Other Directors	-None-
Dispute in the 10 Preceding Years	-None-



Police General Aek Angsanantont

**Independent Director (Non-Executive),
Chairman of the Audit Committee,
and Chairman of the Corporate Governance
and Sustainability Committee**
(Completed the Term in the 2023 Annual General Meeting of Shareholders)
Age 67 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on April 7, 2017: 3 years 2 months)
- >> Independent Director (Non-Executive) (Re-elected on June 10, 2022: 2 years 10 months)

Board-Committee Term

- >> Member of the Corporate Governance Committee (Appointed on May 26, 2017 and completed the term in the 2020 Annual General Meeting of Shareholders)
- >> Chairman of the Corporate Governance Committee (Elected on June 21, 2017 and completed the term in the 2020 Annual General Meeting of Shareholders)
- >> Member of the Corporate Governance Committee* (Appointed on June 23, 2020)
- >> Member of the Audit Committee (Appointed on June 23, 2020)
- >> Chairman of the Corporate Governance Committee* (Elected on September 10, 2020)
- >> Chairman of the Audit Committee (Elected on September 18, 2020)

Remark*:

The Board of Directors, in the meeting No. 8/2022 has approved the amendment of Corporate Governance Committee Charter which changed the Committee's name from "Corporate Governance Committee" to "Corporate Governance and Sustainability Committee"

Education

- >> Bachelor of Law (1st Class Honor), Ramkhamhaeng University
- >> Master of Law, Chulalongkorn University
- >> Barrister-at-Law, The Institute of Legal Education, Thai Bar Association
- >> Certificate of Senior Police Command, Police College Bramshill, United Kingdom

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 111/2008)
- >> Board Matters and Trends (BMT 4/2017)
- >> Role of the Chairman Program (RCP 42/2018)
- >> Ethical Leadership Program (ELP 16/2019)
- >> Corporate Governance for Capital Market Intermediaries (CGI 22/2019)

Other Trainings

- >> The Joint State-Private Sector Course, Class 4414, National Defence College
- >> Capital Market Academy Leader Program, Class 7, Capital Market Academy
- >> The Program for Senior Executives on Justice Administration, Batch 8, Judicial Training Institute, National Justice Academy
- >> Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives, Class 7, King Prajadhipok's Institute

- >> Training Course on Good Governance for Directors and Executives of State-Owned Enterprises and Public Organization, Class 3, King Prajadhipok's Institute
- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 1, Thailand Energy Academy
- >> Training Course on Administrative Justice for Executives, Class 3, Office of the Administration Courts of Thailand
- >> Top Executive Program in Commerce and Trade (TEPCoT), Class 3, Commerce Academy, University of the Thai Chamber of Commerce
- >> The Rule of Law for Democracy, Class 1, College of the Constitutional Court
- >> PTT Group AC Forum 2022: "Rising to the Challenge"

Working Experience in the 5 Preceding Year

2015-2016 Permanent Secretary, Office of the Permanent Secretary, The Prime Minister's Office

Board Industry Experience & Expertise

Possesses educational qualification as well as knowledge and experience in legal field, which are required by the company.

Current Positions

1. Listed Company (2)

- >> Independent Director and Member of the Audit Committee, Royal Orchid Hotel (Thailand) Plc
- >> Independent Director and Chairman of the Board, Nex Point Plc

2. Public Company (2)

- >> Independent Director and Chairman of the Board, Big C Supercenter Plc
- >> Director and Chairman of Nomination and Remuneration Committee, Glow Energy Plc

3. Limited Company (1)

- >> Director and Member of the Audit Committee, BJC Logistics and Warehouse, Co., Ltd.

4. Other Organizations/Institutions (2)

- >> Member of Committee of Property Management Office, Thai Red Cross Society
- >> Member of King Mongkut's Institute of Technology Ladkrabang Council

5. State Enterprise

% of Shareholding in Thaioil	-None-
Conflict of Interest	-None-
Family Relation with Other Directors	-None-
Dispute in the 10 Preceding Years	-None-



Dr. Pailin Chuchottaworn

**Independent Director (Non-Executive)
and Chairman of the Risk Management Committee**
(Completed the Term in the 2023 Annual General Meeting of Shareholders)
Age 67 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on April 23, 2021 and effective from May 1, 2021: 1 year 11 months)

Board-Committee Term

- >> Member of the Risk Management Committee (Appointed on April 29, 2022)
- >> Chairman of the Risk Management Committee (Elected on June 27, 2022)

Education

- >> Bachelor of Engineering (Chemical Engineering) (1st Class Honor), Chulalongkorn University
- >> Master of Engineering (Chemical Engineering), Tokyo Institute of Technology, Japan (Japanese Government Scholarship)
- >> Doctor of Engineering (Chemical Engineering), Tokyo Institute of Technology, Japan (Japanese Government Scholarship)

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 51/2004)
- >> Director Accreditation Program (DAP 24/2004)
- >> Finance for Non-Finance Director (FND 14/2004)
- >> Diploma Examination (Exam 15/2005)
- >> Anti-Corruption for Executive Program (ACEP 4/2012)
- >> Role of the Chairman Program (RCP 37/2015)
- >> Boards that Make a Difference (BMD 2/2016)

Other Trainings

- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 1, Thailand Energy Academy
- >> Corporate Governance for Directors and Senior Executives of State Enterprises and Public Organization, Class 7, King Prajadhipok's Institute
- >> The Joint State-Private Sector Course, Class 22, National Defence College
- >> Top Executive Program, Class 8, Capital Market Academy
- >> Top Executive Program in Commerce and Trade (TEPCoT), Class 1, Commerce Academy, University of the Thai Chamber of Commerce
- >> Industrial Liaison Program (ILP) 2005, Massachusetts Institute of Technology, USA
- >> NIDA-Wharton Executive Leadership Program 2007, Wharton, University of Pennsylvania, USA
- >> PTT-GE Executive Leadership Program 2008, GE Crotonville, USA
- >> IOD National Director Conference 2021: "Leadership Behind Closed Door"
- >> STS Expert Session 2021:
 - >> "How H & R as a specialty marketer and refiner with primarily Group I refinery technology is planning to adapt to the changing refinery landscape", Hansen and Rosenthal Group (H & R Group)
- >> STS Expert Session 2022:
 - >> "Oil and Petrochemical Industry Outlook", Boston Consulting Group (BCG)
 - >> "Net Zero GHG Emission Pathway", Shell Plc
- >> IOD National Director Conference 2022: "Wisdom for Future: Harmonizing the diverse boards"
- >> STS Expert Session 2023:
 - >> "Global Trends in Energy", Boston Consulting Group (BCG)

Working Experience in the 5 Preceding Years

- 2017-Jul 15, 2019 Deputy Minister of Transport
- Mar 11-Jul 15, 2019 Advisor to the Prime Minister

Board Industry Experience & Expertise

Possesses knowledge and expertise on energy business, petroleum and petrochemical, which highly benefit the company. The director also has experience and expertise in many fields; for example, science, digital technology, and innovation, which fully support the company's strategies and benefit the business operation facing the challenge of emerging of electric vehicles possibly replacing the use of fossil fuel.

Current Positions

- Listed Company (2)**
 - >> Independent Director and Chairman of the Board, Global Power Synergy Plc
 - >> Independent Director, Chairman of the Technology Committee and Member of the Executive Committee, SCBX Plc
- Public Company** -None-
- Limited Company (5)**
 - >> Director, SCB 10X Co., Ltd.
 - >> Director and Chairman of the Board, SCB TECH X Co., Ltd.
 - >> Director and Chairman of the Board, SCB Data X Co., Ltd.
 - >> Director and Chairman of the Board, VISUP Co., Ltd.
 - >> Director and Chairman of the Board, VISAI Co., Ltd.
- Other Organizations/Institutions (10)**
 - >> Chairman of the Council, Vidyasirimedhi Institute of Science and Technology (VISTEC)
 - >> Chairman of the Governing Board, Kamnoetvidya Science Academy
 - >> Chairman, Committee on Economic Steering
 - >> Member of the Executive Board, Office of National Higher Education Science Research and Innovation Policy Council
 - >> Member, the Board of Investment of Thailand
 - >> Advisor to the Prime Minister
 - >> Advisory Board, Devawongse Varopakarn Institute of Foreign Affairs, Ministry of Foreign Affairs
 - >> Senior Expert, National for the Development of Special Economic Zones, The Office of the National Economic and Social Development Council
 - >> Member of Public Sector Audit Evaluation Committee and Chairman of the Public Sector Audit Evaluation Subcommittee, the Office of the Public Sector Development Commission
 - >> Senior Expert acting as Chairman of the Nomination Committee for High Skilled Civil Service Placement, Office of the Civil Service Commission
- State Enterprise** -None-
 - % of Shareholding in Thaioil 43,399 shares equivalent to 0.00194%
 - Conflict of Interest -None-
 - Family Relation with Other Directors -None-
 - Dispute in the 10 Preceding Years -None-



Air Chief Marshal Suttipong Inseepong

Independent Director (Non-Executive)
and Chairman of the Nomination and Remuneration Committee
(Completed the Term in the 2023 Annual General Meeting of Shareholders)
Age 66 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on January 22, 2016 and effective from February 1, 2016: 1 year 2 months)
- >> Independent Director (Non-Executive) (Re-elected on April 7, 2017: 3 years 2 months)
- >> Independent Director (Non-Executive) (Re-elected on June 10, 2020: 2 years 10 months)

Board-Committee Term

- >> Member of the Corporate Governance Committee (Appointed on April 27, 2016 and completed the term in the 2017 Annual General Meeting of Shareholders)
- >> Chairman of the Corporate Governance Committee (Elected on November 21, 2016 and completed the term in the 2017 Annual General Meeting of Shareholders)
- >> Member of the Nomination and Remuneration Committee (Appointed on April 28, 2017 and completed the term in the 2020 Annual General Meeting of Shareholders)
- >> Chairman of the Nomination and Remuneration Committee (Elected on May 17, 2017 and completed the term in the 2020 Annual General Meeting of Shareholders)
- >> Member of the Nomination and Remuneration Committee (Appointed on June 10, 2020)
- >> Chairman of the Nomination and Remuneration Committee (Elected on June 16, 2020)

Education

- >> Bachelor of Science in Aeronautical Engineering, The Royal Thai Air Force Academy
- >> Bachelor of Political Science Program in International Relations and Comparative Government and Politics, Sukhothai Thammarat Open University

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Accreditation Program (DAP 114/2015)
- >> Financial Statements for Directors (FSD 37/2018)
- >> Advanced Audit Committee Program (AACP 31/2018)
- >> Director Certification Program (DCP 267/2018)
- >> IT Governance and Cyber Resilience Program (ITG 14/2020)
- >> Director Leadership Certification Program (DLCP 4/2022)

Other Trainings

- >> Pilot Training Course, Flying Training School, The Royal Thai Air Force
- >> Flight Safety Course, The Royal Thai Air Force
- >> Air Command and Staff College Course, The Royal Thai Air Force
- >> National Defence Course, Class 52, National Defence College
- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 13, Thailand Energy Academy
- >> Advanced Master of Management (AMM), Class 3, Graduate School of Public Administration, National Institute of Development Administration
- >> Independent Director Forum 1/2019: "Tips and Tricks for Dealing with Questions in AGM"
- >> Special Lecture by Dr. Prinya Hom-Anek, Special Consultant to National Cyber Security Committee: "Cybersecurity in the Boardroom"
- >> IOD National Director Conference 2021: "Leadership Behind Closed Door"
- >> IOD National Director Conference 2022: "Wisdom for Future: Harmonizing the diverse boards"

Working Experience in the 5 Preceding Years

Oct 2017-Sep 2018 Deputy Chief of Defence Forces,
The Royal Thai Armed Forces

Board Industry Experience & Expertise

Possesses experience, knowledge and understanding on public policies and security strategic plans, which benefit the company's business operation since the refinery is considered the critical stronghold which requires robust security administration.

Current Positions

- | | |
|-------------------------------------|--------|
| 1. Listed Company | -None- |
| 2. Public Company | -None- |
| 3. Limited Company | -None- |
| 4. Other Organizations/Institutions | -None- |
| 5. State Enterprise | -None- |

- | | |
|--------------------------------------|--------|
| % of Shareholding in Thailoil | -None- |
| Conflict of Interest | -None- |
| Family Relation with Other Directors | -None- |
| Dispute in the 10 Preceding Years | -None- |



Mr. Praphaisith Tankeyura

Independent Director (Non-Executive) and Member of the Audit Committee

(Completed the Term in the 2023 Annual General Meeting of Shareholders)
Age 69 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on August 30, 2019 and effective from September 1, 2019: 9 months)
- >> Independent Director (Non-Executive) (Re-elected on June 10, 2020: 2 years 10 months)

Board-Committee Term

- >> Member of the Audit Committee (Appointed on August 30, 2019, effective from September 20, 2019 and completed the term in the 2020 Annual General Meeting of Shareholders)
- >> Member of the Audit Committee (Appointed on June 23, 2020)

Education

- >> Bachelor of Statistics (Applied Statistics for Business), Faculty of Commerce and Accountancy, Chulalongkorn University
- >> Master of Business Administration (Finance), Florida State University, USA

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 249/2017)
- >> Advanced Audit Committee Program (AACP 29/2018)
- >> Role of the Chairman Program (RCP 43/2018)
- >> Board Matters and Trends (BMT 7/2019)
- >> Board Nomination and Compensation Program (BNCP 7/2019)
- >> Successful Formulation & Execution of Strategy (SFE 33/2020)
- >> Director Leadership Certification Program (DLCP 1/2021)
- >> Ethical Leadership Program (ELP 23/2021)

Other Trainings

- >> Cyber Resilience Leadership, Class 3/6, Bank of Thailand
- >> Corporate Governance for Directors and Senior Executives of Regulator, State Enterprises and Public Organizations, Class 18, King Prajadhipok's Institute
- >> Special Lecture by Dr. Prinya Hom-Anek, Special Consultant to National Cyber Security Committee: "Cybersecurity in the Boardroom"
- >> IOD National Director Conference 2021: "Leadership Behind Closed Door"
- >> STS Expert Session 2022:
 - >> "Oil and Petrochemical Industry Outlook", Boston Consulting Group (BCG)
- >> IOD National Director Conference 2022:
 - "Wisdom for Future: Harmonizing the Diverse Boards"
- >> PTT Group AC Forum 2022: "Rising to the Challenge"

Working Experience in the 5 Preceding Years

- 2014-2022 Chairman of Advisory Board, JWS Construction Co., Ltd.
- 2005-Present Managing Director, Boathouse Hua Hin Co., Ltd.

Board Industry Experience & Expertise

Possesses experience, knowledge and understanding on finance and accounting which are required by the company.

Current Positions

1. Listed Company (2)

- >> Independent Director, Chairman of the Audit Committee, Corporate Governance and Corporate Social Responsibilities, and Member of Nomination and Remuneration Committee, Krungthai Card Plc
- >> Independent Director, Chairman of the Audit Committee, and Member of Risk Management Committee, Ratch Group Plc

2. Public Company

-None-

3. Limited Company (1)

- >> Managing Director, Boathouse Hua Hin Co., Ltd.

4. Other Organizations/Institutions

-None-

5. State Enterprise

-None-

% of Shareholding in Thaioil

-None-

Conflict of Interest

-None-

Family Relation with Other Directors

-None-

Dispute in the 10 Preceding Years

-None-



General Kukiatt Srinaka

Independent Director (Non-Executive)
and Member of the Corporate Governance
and Sustainability Committee
(Resigned from Directorship : June 15, 2023)
Age 63 Yrs.

Director Term

- >> Independent Director (Non-Executive) (Appointed on November 23, 2018 and effective from January 1, 2019: 3 months)
- >> Independent Director (Non-Executive) (Re-elected on April 10, 2019: 3 years)
- >> Independent Director (Non-Executive) (Re-elected on April 7, 2022: 1 years 2 months)

Board-Committee Term

- >> Member of the Audit Committee (Appointed on July 19, 2019 and vacated on September 20, 2019)
- >> Member of the Corporate Governance Committee (Appointed on August 30, 2019, effective from September 20, 2019 and completed the term in the 2022 Annual General Meeting of Shareholders)
- >> Member of the Corporate Governance Committee* (Appointed on April 29, 2022)

Remark*:

The Board of Directors, in the meeting No. 8/2022 has approved the amendment of Corporate Governance Committee Charter which changed the Committee's name from "Corporate Governance Committee" to "Corporate Governance and Sustainability Committee"

Education

- >> Bachelor of Science, Chulachomklao Royal Military Academy
- >> Master of Public Administration, Burapha University

Director Training Courses of Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 275/2019)
- >> Director Accreditation Program (DAP 185/2021)
- >> Boardroom Success through Financing and Investment (BFI 10/2021)

Other Trainings

- >> Thailand National Defence College, Class 57
- >> Joint Staff College, Class 48
- >> The Executive Program in Energy Literacy for a Sustainable Future, Class 15, Thailand Energy Academy

Working Experience in the 5 Preceding Years

2019-2020 Deputy Permanent Secretary for Defence, Ministry of Defence

Board Industry Experience & Expertise

Possesses experience, knowledge and understanding on security strategic plans, which benefit the company's business operation since the refinery is considered the critical stronghold which requires robust security administration.

Current Positions

1. Listed Company (1)	
>> Independent Director and Vice Chairman of the Board, Nirvana Daii Plc	
2. Public Company	-None-
3. Limited Company	-None-
4. Other Organizations/Institutions	-None-
5. State Enterprise	-None-
% of Shareholding in Thailoil	-None-
Conflict of Interest	-None-
Family Relation with Other Directors	-None-
Dispute in the 10 Preceding Years	-None-



Dr. Veerapat Kiatfuengfoo

**Director (Non-Executive)
and Member of the Risk Management Committee**
(Resigned from Directorship : January 4, 2024)
Age 51 Yrs.

Director Term

>> Director (Non-Executive) (Appointed on January 27, 2023
and effective from February 1, 2023: 11 months)

Board-Committee Term

>> Member of the Risk Management Committee (Appointed on April 10, 2023)

Education

>> Bachelor of Business Administration in Finance, Kasetsart University
>> Master of Arts in Economic Development, Vanderbilt University, USA
>> Doctor of Philosophy in Development Studies, University of Melbourne,
Australia

Director Training Courses of Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 336/2023)

Other Trainings

>> The Civil Service Executive Program (Additional Program), Class 13,
Office of the Civil Service Commission
>> Executive Development Program, Class 10, The Ministry of Education
>> Executive Development Program, Class 13, The Ministry of Finance
>> Executive Development Program, Class 10, The Ministry of Energy
>> Financing South East Asia Energy Transition, UK Foreign and
Commonwealth Office, European Climate Foundation and
Growald Family Fund, Wilton Park, Sussex, United Kingdom
>> Public Sector Strategic Management Course, Class 1/2017,
Chulalongkorn University
>> Meeting Southeast Asia's Energy Needs: Fueling the Future under
the Singapore-Norway Third Country Training Program, The Governments of
Republic of Singapore and Norway
>> Leadership Development Program, Office of the Civil Service Commission
>> International Oil and Gas Law: Negotiation and Contracting Course,
Chulalongkorn University
>> International Oil and Gas Law: History, Technology,
Policy and Economics, Chulalongkorn University
>> Highly Performance and Potential System, Class 2,
Office of the Civil Service Commission
>> The Executive Program in Energy Literacy for a Sustainable Future, Class 18,
Thailand Energy Academy

Working Experience in the 5 Preceding Years

2018-2021	Executive Director, Power Policy Division, Energy Policy and Planning Office, Ministry of Energy
2021-Mar 17, 2023	Deputy Director General, Energy Policy and Planning Office, Ministry of Energy
Mar 18, 2023-Jan 2, 2024	Deputy Permanent Secretary, Ministry of Energy

Board Industry Experience & Expertise

Possesses long working experience in energy sector, strategic and energy
policy planning for Thailand, which benefit for providing comments and
suggestions on the company's business.

Current Positions

1. Listed Company	-None-
2. Public Company	-None-
3. Limited Company	-None-
4. Other Organizations/Institutions (1)	
>> Deputy Permanent Secretary, Ministry of Energy (Until 2 Jan 2024)	
5. State Enterprise	-None-
% of Shareholding in Thai oil	-None-
Conflict of Interest	-None-
Family Relation with Other Directors	-None-
Dispute in the 10 Preceding Years	-None-

Management Structure

Thai Oil Plc's management structure comprises:

- The Board of Directors (the Board)
- Four Board-committees appointed by the Board to oversee significant matters, namely the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainability Committee, and the Risk Management Committee
- Executives, with the Chief Executive Officer and President (CEO) as the highest level executive.

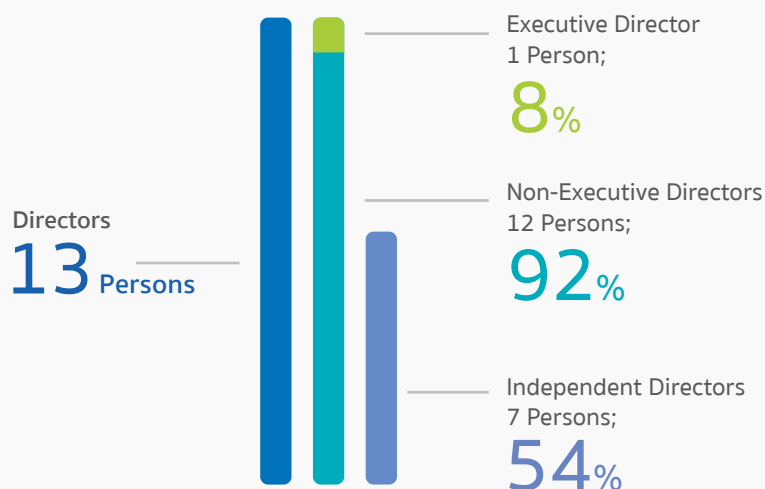
The Board of Directors (as of January 31, 2024)

The Board of Directors is made up of 13 members:

- 12 non-executive directors, seven (7) of whom are independent directors
- One executive director, namely the CEO and President.

Board Composition

By the Company's Articles of Association (AOA), the number of Board members shall consist at least five (5) but not more than fifteen (15) member, all of whom must be proficient and widely recognized. Directors are elected by the shareholders at the Annual General Meeting of Shareholders (AGM). Each year a certain number of directors complete their terms as required by the Company's articles of association; however, those who vacate their positions may be re-nominated and re-elected on an individual basis upon receiving majority votes from the shareholders who attend the meeting and cast their votes. Thailoil has established a policy on Board Diversity. As specified in the criteria for selecting and appointing directors on page 94, a Board Skill Matrix was developed for mapping out skills, knowledge, and expertise required for the business, consistent with strategies, such as energy, petroleum and petrochemicals, accounting and finance, information technology and digital, and innovation and environment. At least three of them must possess knowledge about Thailoil's business, at least one person on legal matters and at least one person on finance and accounting. Moreover, the Board must consist of independent directors, at least one-third of all Board member and number must be at least three. The current Board composition is shown in the diagram on page 136.



Genders



Female

1 Person



Male

12 Persons

Ratio

Independent Directors:
All Directors

7 : 13

Non-Executive Directors:
All Directors

12 : 13



The Tenure of Directors



Average

2.59 years



Board Expertise

Energy/Petroleum/
Petrochemicals



8 Persons

Engineering



5 Persons

Accounting/Finance



3 Persons

Laws



2 Persons

Economics



1 Person

Political Science/
Social Science



3 Persons

Security



2 Persons

Information
Technology/Digital



3 Persons

Business Management/
Organizational
Management/
Corporate Governance



13 Persons

Science/Innovation/
Environment



5 Persons

Remark: Information as of January 31, 2024

Shareholding Report of the Board of Directors in 2023
(Inclusive of Spouse, Unmarried Partner, and Minor)
Information as of January 31, 2024

No.	Name-Surname	No. of Share (Shares)			Remark
		as of January 31, 2024	as of February 1, 2023	Addition/(Reduction) During the Year (Shares)	
1	Prof. Dr. Supot Teachavorasinskun	-None-	-None-	-No Change-	-
2	Mr. Distat Hotrakitya	-None-	-None- ⁽¹⁾	-No Change-	Effective on April 10, 2023
3	Ms. Pannalin Mahawongtikul	-None-	-None-	-No Change-	-
4	Dr. Buranin Rattanasombat	-None-	-None-	-No Change-	-
5	Assoc. Prof. Dr. Pasu Decharin	-None-	-None-	-No Change-	-
6	Lt. Gen. Apichat Chaiyadar	-None-	-None- ⁽¹⁾	-No Change-	Effective on April 10, 2023
7	Mr. Terdkiat Prommool	-None-	-None-	-No Change-	-
8	Mr. Plakorn Wanglee	-None-	-None-	-No Change-	-
9	Dr. Sompop Pattanariyankool	-None-	-None-	-No Change-	-
10	Dr. Nattapon Nattasomboon	-None-	-None- ⁽¹⁾	-No Change-	Effective on April 10, 2023
11	Pol. Capt. Piya Raksakul	-None-	-None- ⁽¹⁾	-No Change-	Effective on April 10, 2023
12	Mr. Suchat Ramarch	-None-	-None-	-No Change-	-
13	Mr. Bandhit Thamprajamchit	2,400	2,400	-No Change-	-
Remark: ⁽¹⁾ As of the effective date					

Directors who Resigned during the Year 2023

No.	Name-Surname	No. of Share (Shares)			Remark
		as of Date of Resignation/ Term Completed	as of February 1, 2023	Addition/(Reduction) During the Year (Shares)	
1	Pol. Gen. Aek Angsanant	-None-	-None-	-No Change-	Completed the Term in the 2023 Annual General Meeting of Shareholders (Not holding any share of the Company during his directorship in year 2023)
2	Dr. Pailin Chuchottaworn	43,399	43,399	-No Change-	Completed the Term in the 2023 Annual General Meeting of Shareholders (No trading transactions of Company shares during the year 2023)
3	ACM Suttipong Inseeyong	-None-	-None-	-No Change-	Completed the Term in the 2023 Annual General Meeting of Shareholders (Not holding any share of the Company during his directorship in year 2023)
4	Mr. Praphaisith Tankeyura	-None-	-None-	-No Change-	Completed the Term in the 2023 Annual General Meeting of Shareholders (Not holding any share of the Company during his directorship in year 2023)
5	Gen. Kukiat Srinaka	-None-	-None-	-No Change-	Resigned on June 15, 2023 (Not holding any share of the Company during his directorship in year 2023)
6	Dr. Veerapat Kiatfuengfoo	-None-	-None-	-No Change-	Resigned on January 4, 2024 (Not holding any share of the Company during his directorship in year 2023)

Authorized directors

According to the Company's Articles of Association, 1) the Chief Executive Officer or 2) Two (2) authorized directors shall sign with affixation of the Company's seal to represent the Company. The Board of Directors has the right to prescribe and rectify the list of the Company's authorized directors.

In the Board of Directors Meeting No. 12/2022 on Tuesday, December 20, 2022, the Board of Directors resolved to approve directors and the number of directors, authorized to sign on behalf of the Company: namely, Mr. Bandhit Thamprajamchit, CEO, signing with affixation of the Company's seal; or, Mr. Terdkiat Prommool, Ms. Pannalin Mahawongtikul, and Mr. Buranin Rattanasombat, any two of the three representative directors jointly sign together with the affixation of the Company's seal. This is effective as of January 1, 2023.

Information on Board-Committees

The Board appoints Board-Committees to scrutinize specific issues. The charters of these Committees define each Committee's qualifications, tenures, and roles and responsibility. The Charters are available on Thailoil's website for studying and downloading.

1) **The Audit Committee** consists of fully qualified members with a minimum of three independent directors, at least one of whom must possess sufficient knowledge and experience for reviewing the credibility of financial statements. The committee is tasked with reviewing financial statements, internal-control system, and connected transactions; considering, selecting, nominating, re-nominating, and terminating external auditors; considering the independence of internal auditors; and endorsing appointment, transfer, and evaluation of the Vice President-Corporate Internal Audit's annual performance. Ms. Rungtip Maneesarachun, Vice President-Corporate Internal Audit, serves as secretary to the committee.

The Audit Committee, as of January 31, 2024, consisted of four independent directors:

Name	Position
1. Lt. Gen. Apichat Chaiyadar	Chairman of the Audit Committee (Independent)
2. Assoc. Prof. Dr. Pasu Decharin ⁽¹⁾	Member of the Audit Committee (Independent)
3. Mr. Plakorn Wanglee ⁽¹⁾	Member of the Audit Committee (Independent), <u>an Accounting Graduate</u>
4. Pol. Capt. Piya Raksakul	Member of the Audit Committee (Independent)

Remarks:

⁽¹⁾ Directors with sufficient knowledge and accounting experience for reviewing the credibility of financial statements

In 2023, the Audit Committee performed its duties as detailed in the Audit Committee Report on page 14.

2) **The Nomination and Remuneration Committee** consists of at least three non-executive directors, most of whom must be independent directors and possess qualifications stated in its charter to perform recruiting duties. The committee considers the composition and qualifications of the Board, both overall and individual, to ensure suitability to serve as directors and CEO and President as well as reviewing the succession plan for CEO and President. The Committee reviews and proposes remuneration packages and criteria to suit the Board's roles and responsibility, while seeking approval from shareholders at the AGM. Also, it conducts annual assessment of CEO and President's performance and considers adjustment of remuneration before proposing to the Board for approval. Ms. Korapat Limpaphayom, Vice President-Group Company Secretary and Sustainability, serves as secretary to the committee.

The Nomination and Remuneration Committee, as of January 31, 2024, consisted of three directors:

Name	Position
1. Assoc. Prof. Dr. Pasu Decharin	Chairman of the Nomination and Remuneration Committee (Independent)
2. Lt. Gen. Apichat Chaiyadar	Member of the Nomination and Remuneration Committee (Independent)
3. Mr. Terdkiat Prommool	Member of the Nomination and Remuneration Committee

In 2023, the Nomination and Remuneration Committee performed its duties as detailed in the Nomination and Remuneration Committee Report on page 18.

3) The Corporate Governance and Sustainability Committee

consists of at least three non-executive members, the majority of whom are independent directors with qualifications stated in its charter. Key roles include formulating and reviewing policies and guidelines for corporate governance, the code of conduct, and the Anti-Fraud Policy as well as defining sustainability strategies, plans, and goals. The committee also oversees, monitors, and assesses corporate governance and sustainable development appropriate to operating conditions while conforming to international laws and best practices and recommendations of various institutes. Ms. Korapat Limpaphayom, Vice President-Group Company Secretary and Sustainability, serves as secretary to the committee.

The Corporate Governance and Sustainability Committee, as of January 31, 2024, consisted of five directors:

Name	Position
1. Mr. Distat Hotrakitya	Chairman of the Corporate Governance and Sustainability Committee (Independent)
2. Mr. Suchat Ramarch	Member of the Corporate Governance and Sustainability Committee
3. Dr. Sompop Pattanariyankool	Member of the Corporate Governance and Sustainability Committee
4. Mr. Plakorn Wanglee	Member of the Corporate Governance and Sustainability Committee (Independent)
5. Pol. Capt. Piya Raksakul	Member of the Corporate Governance and Sustainability Committee (Independent)

In 2023, the committee performed its duties as detailed in the Corporate Governance and Sustainability Committee Report on page 20.

4) The Risk Management Committee consists of at least three members with qualifications stated in its charter, one of whom must be the CEO. The committee defines and reviews the risk management framework, risk management policies and processes, and proposes guidelines for managing risks to Thaioil's operations. The committee also supports and develops risk management, while promoting the corporate culture on risk management. It also oversees, monitors, and reviews key risk management plans and reports. Mr. Rathakorn Kampanathsanyakorn, Executive Vice President-Strategy, serves as secretary to the committee.

The Risk Management Committee, as of January 31, 2024, consisted of four directors:

Name	Position
1. Ms. Pannalin Mahawongtikul	Chairman of the Risk Management Committee
2. Mr. Buranin Rattanasombat	Member of the Risk Management Committee
3. Dr. Nattapon Nattasomboon	Member of the Risk Management Committee (Independent)
4. Mr. Bandhit Thamprajamchit	Member of the Risk Management Committee/CEO

In 2023, the Risk Management Committee performed its duties as detailed in the Risk Management Committee Report on page 16.



Executives

As of January 31, 2024



Mr. Bandhit Thamprajamchit

Chief Executive Officer and President,
Acting Executive Vice President-
Corporate Governance and Affairs



Mr. Surachai Saengsamran

Acting Senior Executive Vice President-
Hydrocarbon, Executive Vice President-
CFP Project Sponsor



Mr. Jeerawat Pattanasomsit

Executive Vice President-Power,
New Business and Digitalization
Acting Vice President-Digitalization



Mr. Chatapong Wungtanagorn

Executive Vice President-
Corporate Commercial



Mrs. Chanamas Sasnanand

Executive Vice President-Finance
and Accounting



Mr. Charlee Balmongkol

Executive Vice President-
CFP Project Director



Mr. Rathakorn Kampanathsanyakorn

Executive Vice President-
Strategy



Mrs. Rungnapa Janchookiat

Executive Vice President-
Manufacturing



Mr. Viroj Wongsathirayakhun

Executive Vice President-
Organization Effectiveness



Mr. Santi Wasanasiri

Executive Vice President-
Petrochemical Business,
Acting Executive Vice President-
Operation Excellence,
Vice President-
assigned as Managing Director,
Thai Lube Base Plc.
and Thai Paraxylene Co., Ltd.



Miss Korapat Limpaphayom

Vice President-
Group Company Secretary
and Sustainability
and Company Secretary



Mr. Chet Prongchit

Vice President-
assigned as Managing Director,
LABIX Co., Ltd.



Mr. Sermsak Nuntapong

Acting Vice President-
Quality Management



Miss Jariya Oonmeechai

Vice President-
Special Assignment



Miss Jidapa Soontraratpong

Vice President-
Technology



Mr. Jumpon Thapanapong

Vice President-
Asset Development



Mr. Chatchai Siriwit

Vice President-
Strategic Planning



Mr. Narongsak Chaviengpob

Vice President-
Engineering



Mr. Nattapong Tumsaroj

Vice President-
assigned as Managing Director,
TOPNEXT International Co., Ltd.



Mr. Nuttapol Nopparatwong

Vice President-
Commercial Planning



Mr. Nuttapon Meerit

Vice President-
People and Organization Management
and Vice President-
assigned as Managing Director,
Thaioil Energy Services Co., Ltd.



Miss Danusa Sanguanno

Vice President-
New S-Curve Business Development



Miss Duangporn Teerapabpaisit

Head Of Innovation,
Research & Development
and High Value Business



Mr. Thirayoot Limanond

Vice President-
Corporate Affairs



Miss Torsang Chaipravat

Vice President-
Financial Planning



Mrs. Tarika Devahastin

Vice President-Treasury
and Vice President-
assigned as Managing Director,
Thaioil Treasury Center Co., Ltd.



Mrs. Prapin Thongnium

Vice President-
Procurement and Contract



Miss Pimchanok Sakolwaree

Vice President-
Commercial



Mr. Phumchit Tatsanaprasert

Vice President-
Petrochemical and Lube Base



Mr. Mongkol Janchookiat

Vice President-Corporate Resources
& Transformation Management



Miss Rungtip Maneesarachun

Vice President-
Corporate Internal Audit



Mr. Worrachart Ruangtragool

Vice President-
Corporate Strategic Risk



Miss Wanwisa Yanchinda

Vice President-
Accounting



Mr. Vivat Wongnirund

Vice President-
Supply Chain Optimization



Mr. Sarunu Limwongse

Vice President-
Refinery



Mr. Somboon Chuaykoblap

Vice President-
assigned as Managing Director,
Thaioil Ethanol Co., Ltd.



Miss Somporn Bunluesriruang

Vice President-
Movement Marine and Logistic



Mrs. Suchada Deechaiya

Vice President-
Efficient Operations Support



Mr. Anawat Chansaksoong

Vice President-Petrochemical Business
and Vice President-
assigned as President Director,
PT TOP Investment Indonesia



Miss Arkhanin Ruang-Art

Acting Vice President-
Corporate Governance,
Compliance and Legal



Miss Acharee Tiabhorn

Vice President-
Business Development



Mr. Udom Wongsirinopphakhun

Vice President-
People and Organization Excellence
and Vice President-
assigned as Managing Director,
TOP SPP Co., Ltd.



Ms. Wanida Boonpiraks

Executive Vice President-
Finance and Accounting
(End of secondment
as of November 30, 2023)



Mr. Viroj Meenaphant

Executive Vice President-
Corporate Governance and Affairs,
Acting Vice President-
Corporate Governance,
Compliance and Legal,
and Company Secretary
(Retired on December 31, 2023)

Shareholding Report of Company's High-Level Executives (as defined by SEC) in 2023
(Inclusive of Spouse, Unmarried Partner, and Minor)
Information as of January 31, 2024

No.	Name-Surname Of High-Level Executives, and Finance & Accounting Executive	No. of Share (Shares)			Remark
		as of January 31, 2024	as of February 1, 2023	Addition/(Reduction) During the Year (Shares)	
1	Mr. Bandhit Thamprajamchit	2,400	2,400	-No Change-	-
2	Mr. Surachai Saengsamran	107,000	107,000	-No Change-	-
3	Mr. Jeerawat Pattanasomsit	-None-	-None-	-No Change-	-
4	Mr. Chatapong Wungtanagorn	105,676	105,676	-No Change-	-
5	Mr. Charlee Balmongkol	-None-	-None-	-No Change-	-
6	Mrs. Chanamas Sasnanand	-None-	-None- ⁽¹⁾	-No Change-	Effective on December 1, 2023
7	Mr. Rathakorn Kampanathsanyakorn	-None-	-None-	-No Change-	-
8	Mrs. Runnapa Janchookiat	-None-	-None-	-No Change-	-
	By Spouse, Unmarried Partner, and Minor	100	100	-No Change-	-
9	Mr. Viroj Wongsathirayakhun	23,600	23,600	-No Change-	-
10	Mr. Santi Wasanasiri	10,976	10,976	-No Change-	-
	By Spouse, Unmarried Partner, and Minor	55,600	55,600	-No Change-	-
11	Miss Torsang Chaipravat	-None-	-None-	-No Change-	-
12	Mrs. Tarika Devahastin	-None-	-None-	-No Change-	-
13	Miss Wanwisa Yanchinda	5,424	5,424	-No Change-	-
Remark: ⁽¹⁾ As of the effective date					

High-Level Executives who Resigned during the Year 2023

No.	Name-Surname Of High-Level Executives, and Finance & Accounting Executive	No. of Share (Shares)			Remark
		as of Date of Ended Their Duties	as of February 1, 2023	Addition/(Reduction) During the Year (Shares)	
1	Mrs. Wanida Boonpiraks	6,585	6,585	-No Change-	Ended Their Duties on November 30, 2023
2	Mr. Viroj Meenaphant	-None-	-None-	-No Change-	Ended Their Duties on December 31, 2023

Recruitment and Appointment of the CEO and Succession Plan

To recruit and nominate the Chief Executive Officer and President (CEO) to fill in the vacant position, the Nomination and Remuneration Committee, selecting on those with professional experience and qualified persons, bases its consideration on professional experience and specific qualifications necessary and beneficial for Thailoil's operations as planned and align with promotion, expansion, and growth strategies while attempting to pursue new business opportunities. Candidates shall possess knowledge, business administration, and related experience such as energy, petroleum, and petrochemicals on top of their leadership and experience in organization management. They must also be well recognized by organizations involved, taking into account possible conflicts of interest with Thailoil. The committee will finally raise its nomination to the Board for consideration and approval.

Thailoil also values the development of executives for internal rotation and high-level executive succession. Their performance will be assessed so that the succession plan can be properly designed to ensure that candidates are developed and groomed for future succession, and only the right persons will be considered. Succession plans

are revised annually to assure shareholders and investors of business continuity.

As for the CEO's position holding outside Thailoil and Subsidiaries, the Board developed the 'Guidelines for its Executives and Personnel that are Invited to serve in Other Companies, Agencies, or Organizations', which is included in the Corporate Governance and Code of Conduct Manual (CG Manual). The CEO must inform the Board for acknowledgment or endorsement (as applicable). However, the CEO can serve as director of Thailoil's subsidiaries to ensure that Thailoil's business and those of subsidiaries are aligned and mutually support one another.

CEO's Performance Assessment

Thailoil arranges the assessment of CEO's performance on an annual basis. The Nomination and Remuneration Committee takes charge of the assessment, which bases it on two aspects with different weighting:

Part 1-Assessment of Corporate KPIs

Part 2-Assessment of Leadership Competency

The results of the performance assessment would be used to identify CEO remuneration, which will be presented to the Board for consideration and approval.

CEO's Remuneration

The criteria for the CEO's remuneration are explicitly defined and agreed in advance. The Nomination and Remuneration Committee first assesses the CEO's performance annually and proposes for the Board to consider. The Chairman of the Board will inform the CEO of the outcome of the outcome of Board consideration. Thaioil has a policy on the CEO's remuneration should be consistent with his current performance (short-term) and performance against Thaioil's strategies (long-term). This is to ensure that the remuneration package for the CEO is a foundation for growth and proves attractive as well as comparable to industry peers under clear and transparent criteria. A Balanced Scorecard, featuring three assessment aspects, namely Business as Usual, Strategic Initiatives, and Strategic Enablers and Sustainability, is used for defining Corporate KPIs and is considered part of the performance assessment criteria.

Executives' Remuneration

At the end of the fiscal year (December 31, 2023), the total remuneration for 38 executives amounted to THB 321.52 million, comprising of salary and allowance of THB 191.24 million, bonus of THB 94.30 million, contribution to the provident fund of THB 23.04 million, retirement benefit of THB 7.91 million, and THB 5.03 million for other items.

Remarks: Remuneration for 38 management team members as of December 31, 2023 excluded these secondees:

Mr. Chet Prongchit

Mr. Worrachart Ruangtragool

Mr. Anawat Chansaksoong

Mr. Bandhit Thamprajamchit
(proportional to the secondment period at a Thaioil subsidiary)

Ms. Suchada Deechaiya
(proportional to the secondment period at a Thaioil subsidiary)

Mr. Viroj Wongsathirayakhun
(proportional to the secondment period at a Thaioil subsidiary)

Mr. Santi Wasanasiri
(proportional to the secondment period at a Thaioil subsidiary)

Ms. Tarika Devahastin
(proportional to the secondment period at a Thaioil subsidiary)

Mr. Udom Wongsirinopphakhun
(proportional to the secondment period at a Thaioil subsidiary)

Executive Biography (Disclosure Required by Law)

As of January 31, 2024

Mr. Surachai Saengsamran

Acting Senior Executive Vice President-Hydrocarbon

(Appointed on October 1, 2023)

and Executive Vice President-CFP Project Sponsor

(Appointed on October 22, 2018)

Age 57 Yrs.

Education

>> Bachelor of Engineering, Chulalongkorn University

Working Experience in the 5 Preceding Years

22 Oct 2018-Sep 2023 Executive Vice President-

CFP Project Sponsor

Oct 2023-Present

Acting Senior Executive

Vice President-Hydrocarbon

and Executive Vice President-

CFP Project Sponsor

Training

Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 238/2017)

Other Institutes

>> Executive Socialization Program-Full program

>> You are Top Group 'Great Leader'

>> Work Process Design&Improvement

>> LDP: Leadership Greatness/Financial Secret/

The Speed of Trust/Bold Change

% of Shareholding in Thailoil 107,000 Shares

(equivalent to 0.004790%)

Family Relation with Directors and Executives -None-

Mr. Jeerawat Pattanasomsit

Executive Vice President-Power, New Business

and Digitalization (Appointed on January 1, 2021)

and Acting Vice President-Digitalization

Age 50 Yrs.

Education

>> Bachelor of Engineering, Kasetsart University

>> Master of Science, The Petroleum and

Petrochemical College, Chulalongkorn University

Working Experience in the 5 Preceding Years

Oct 2018-Apr 2019 Executive Vice President-

Manufacturing (Act.) and

Vice President-Refinery

Apr 2019-Dec 2020

Executive Vice President-

Manufacturing and

Vice President-Refinery (Act.)

Jan 2021-Sep 2022

Executive Vice President-Power,

New Business and Digitalization and

Vice President-New S-curve Business

Development (Act.)

Oct 2022-Dec 2023

Executive Vice President-Power,

New Business and Digitalization

Jan 2024-Present

Executive Vice President-Power,

New Business and Digitalization and

Vice President-Digitalization

Training

Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 186/2014)

>> Diploma Examination (Exam)

>> IT Governance and Cyber Resilience Program (ITG 16/2021)

>> Director Refreshment Training Program (DRP 3/2021)

Other Institutes

- >> Executive Development Program (EDP),
Thai Listed Companies Association
- >> PTT-Harvard Business School Leadership Development
Program
- >> Entrepreneurship
- >> Leadership Development Program (LDP)
- >> Geo-Informatics Technology for Executives 9/2022,
Geo-Informatics and Space Technology Development
Agency (Public Organization) (GISTDA)

% of Shareholding in Thailoil -None-

Family Relation with Directors and Executives -None-

Mr. Chatapong Wungtanagorn

Executive Vice President-Corporate Commercial
(Appointed on October 1, 2015)

Age 58 Yrs.

Education

- >> Bachelor of Engineering,
King Mongkut's University of Technology Thonburi
- >> Master of Advanced Chemical Engineering,
The Imperial College of Science, Technology and Medicine,
London, United Kingdom
- >> Master of Management, College of Management,
Mahidol University

Working Experience in the 5 Preceding Years

- Jan 2019-Dec 2021 Executive Vice President-
Corporate Commercial and
Vice President-Commercial Planning
(Act.)
- Jan 2022-Present Executive Vice President-
Corporate Commercial

Training

Thai Institute of Directors Association (IOD)

- >> Role of the Chairman (RCP)
- >> Director Certification Program (DCP)
- >> The Board's Role in Mergers and Acquisitions (BMA)
- >> Strategic Board Master Class (SBM)

Other Institutes

- >> The Executive Program in Energy Literacy
for a Sustainable Future (TEA)
- >> Advanced Certificate Course in Politics and
Governance in Democratic Systems for Executives,
King Prajadhipok's Institute
- >> Leadership Development Program (LDP) II
- >> Leadership Development Program (LDP) III
- >> Executive Development Program (EDP),
Thai Listed Companies Association

% of Shareholding in Thailoil 105,676 Shares
(equivalent to 0.004731%)

Family Relation with Directors and Executives -None-

Mrs. Chanamas Sasnanand

Executive Vice President-Finance and Accounting

(Appointed December 1, 2023)

(Person Taking the Highest Responsibility in Finance and Accounting and Person Supervising Accounting)

Age 54 Yrs.

Education

- >> Bachelor of Administration, Chulalongkorn University
- >> Master of Business Administration, University of South Carolina, USA

Working Experience in the 5 Preceding Years

Jan 2019-Dec 2020	Senior Vice President-Finance Division, PTT Exploration and Production Plc
Jan 2021-Nov 2023	Senior Vice President-Finance Division, PTT Exploration and Production Plc, working on a secondment as Executive Vice President-Group Corporate Finance and Strategy, PTT Plc
Dec 2023-Present	Executive Vice President-Finance and Accounting, Thai Oil Plc

Training

Thai Listed Companies Association (IOD)

- >> TLCA Executive Development Program

Other Institutes

- >> Leadership Development Program II (LDP II), PTT Leadership and Learning Institute
- >> EP LEAD III Leadership Development Program, IMD
- >> Senior Executive Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- >> Audit Report Process, Federation of Accounting Professions Under The Royals Patronage of His Majesty The King
- >> Audit process, Federation of Accounting Professions Under The Royals Patronage of His Majesty The King
- >> Financial & Fiscal, Management Program For Senior Executive (FME)
- >> Advance Master of Management Program (AMM)
- >> e-Learning CFO's Orientation Course for New IPOs (Complete the course by March 2024)

% of Shareholding in Thairoil	-None-
Family Relation with Directors and Executives	-None-

Mr. Charlee Balmongkol

Executive Vice President-CFP Project Director

(Appointed on April 22, 2019)

Age 53 Yrs.

Education

- >> Bachelor of Engineering, Chulalongkorn University
- >> Master of Advanced Mechanical Engineering, Imperial College, University of London, England

Working Experience in the 5 Preceding Years

22 Oct 2018-21 Apr 2019	Executive Vice President-CFP Project Director (Act.)
22 Apr 2019-Present	Executive Vice President-CFP Project Director

Training

Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 209/2015)

Other Institutes

- >> PTT - Harvard Business School Leadership Program
- >> Leadership Development Program (LDP)
- >> Leadership For Customer (LFC), GE Crotonville

% of Shareholding in Thairoil	-None-
Family Relation with Directors and Executives	-None-

Mr. Rathakorn Kampanathsanyakorn**Executive Vice President-Strategy****(Appointed on October 1, 2021)**

Age 52 Yrs.

Education

- >> Bachelor of Engineering, Chulalongkorn University
- >> Master of Science, Chemical Engineering, Imperial College London, England
- >> Master of Science, International Management, King College London, England

Working Experience in the 5 Preceding Years

- | | |
|----------------------|----------------------------------------------------------------------|
| 16 Nov 2018-Sep 2021 | Executive Vice President-Downstream Business Group Planning, PTT Plc |
| Oct 2021-Present | Executive Vice President-Strategy, Thai Oil Plc |

Training**Thai Institute of Directors Association (IOD)**

- >> Director Certification Program (DCP) 324/2022

Other Institutes

- >> Leadership Development Program (LDP) I 2013, PTT Leadership and Learning Institute
- >> Advanced Management Program 2015, PTT Leadership and Learning Institute
- >> Management Development Program (MDP) III 2015, PTT Leadership and Learning Institute
- >> Leadership Development Program (LDP) II 2018, PTT Leadership and Learning Institute
- >> Leadership Development Program (LDP) III 2019, PTT Leadership and Learning Institute
- >> Director Development Program (DDP PTT 1/2019), (PTTEP In-house Course)

% of Shareholding in Thairoil	-None-
Family Relation with Directors and Executives	-None-

Mrs. Rungnapa Janchookiat**Executive Vice President-Manufacturing****(Appointed on October 1, 2023)**

Age 51 Yrs.

Education

- >> Bachelor of Engineering, Chulalongkorn University
- >> Bachelor of Engineering, Strathclyde University, United Kingdom

Working Experience in the 5 Preceding Years

- | | |
|-------------------|------------------------------------------------------------------------------------|
| Jan 2014-Jan 2020 | Vice President-Technology |
| Feb-Jun 2020 | Executive Vice President-Operation Excellence (Act.) |
| Jul 2020-Dec 2021 | Executive Vice President-Operation Excellence and Vice President-Technology (Act.) |
| Jan 2022-Sep 2023 | Executive Vice President-Operation Excellence |
| Oct 2023-Present | Executive Vice President-Manufacturing |

Training**Thai Institute of Directors Association (IOD)**

- >> Director Certification Program (DCP 307/2021)
- >> Strategic Board Master Class (SBM 13/2023)

Other Institutes

- >> Leadership Development Program (LDP) I 2013, PTT Leadership and Learning Institute
- >> The Executive Program in Energy Literacy for a Sustainable Future (TEA) 2018, Class 6
- >> Executive Development Program (EDP) 2020, Thai Listed Companies Association

% of Shareholding in Thairoil	100 Shares (equivalent to 0.000004%)
Family Relation with Directors and Executives	(By Spouse, Unmarried Partner, and Minor) -None-

Mr. Viroj Wongsathirayakhun

Executive Vice President-Organization Effectiveness

(Appointed on October 1, 2018)

Age 59 Yrs.

Education

- >> Bachelor of Science, Silpakorn University
- >> Master of Public Administration,
National Institute of Development Administration (NIDA)

Working Experience in the 5 Preceding Years

Feb 2015-Sep 2018	Senior Vice President-People and Organization Management, Thai Oil Plc. and Managing Director, Thaioil Energy Services Co., Ltd.
Oct 2018-Mar 2019	Executive Vice President- Organization Effectiveness (Act.), Vice President-People and Organization Management, Thai Oil Plc. and Managing Director, Thaioil Energy Services Co., Ltd.
Apr 2019-Mar 2023	Executive Vice President- Organization Effectiveness, Vice President-People and Organization Management (Act.), Thai Oil Plc and Managing Director, Thaioil Energy Services Co., Ltd.
Mar-Dec 2023	Executive Vice President- Organization Effectiveness, Vice President-People and Organization Management (Act.), Thai Oil Plc
Jan 2024-Present	Executive Vice President- Organization Effectiveness

Training

Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 209/2015)

Other Institutes

- >> Digital Economy for Management (DE4M)
- >> Leadership Succession Program (LSP) 7
- >> Leadership Development Program (LDP):
Leading Bold Change
- >> Management Development Program (MDP)
- >> Advanced Certificate Course in Politics and
Governance in Democratic Systems for Executives,
Class 24, King Prajadhipok's Institute

% of Shareholding in Thaioil	23,600 Shares (equivalent to 0.001056%)
Family Relation with Directors and Executives	-None-

Mr. Santi Wasanasiri**Executive Vice President-Petrochemical Business****(Appointed on July 1,2022)****Acting Executive Vice President-Operation Excellence****(Appointed on October 1, 2023)**

Age 58 Yrs.

Education

>> Bachelor of Engineering, Chulalongkorn University

Working Experience in the 5 Preceding Years

Jul 2020-Jun 2022	Managing Director, Thai Lube Base Plc and Thai Paraxylene Co., Ltd.
Jul-Dec 2022	Executive Vice President- Petrochemical Business (Act.), Thai Oil Plc and Managing Director, Thai Lube Base Plc and Thai Paraxylene Co., Ltd.
Jan-Sep 2023	Executive Vice President- Petrochemical Business, Thai Oil Plc and Managing Director, Thai Lube Base Plc and Thai Paraxylene Co., Ltd.
Oct 2023-Present	Executive Vice President- Petrochemical Business, Executive Vice President- Operation Excellence (Act.), Thai Oil Plc and Managing Director, Thai Lube Base Plc and Thai Paraxylene Co., Ltd.

Training**Thai Institute of Directors Association (IOD)**

>> Director Certification Program (DCP 152/2011)

>> Boardroom Success through Financing and Investment
(BFI 9/2020)**Other Institutes**

>> EX-PSM5 Executive P20 G203 For Senior Management

>> Executive Development Program, Class 17,
Thai Listed Companies Association

>> Leadership Development Program II (LDPII)

>> The Executive Program in Energy Literacy for a
Sustainable Future, TEA, Class 17

% of Shareholding in Thairoil	10,976 Shares (equivalent to 0.000491%)
	55,600 Shares (equivalent to 0.002489%)
	(By Spouse, Unmarried Partner, and Minor)
Family Relation with Directors and Executives	-None-

Mr. Bandhit Thamprajamchit**Executive Vice President-****Corporate Governance and Affairs (Act.)****(Appointed on January 1, 2024)**Mr. Bandhit's Biography disclosed in the topic
"Board of Directors"

Miss Korapat Limpaphayom

Vice President-Group Company Secretary and Sustainability
(Appointed on January 1, 2023)

Company Secretary

(Appointed on January 1, 2024)

Age 44 Yrs.

The Board of Directors (the Board) appointed the Company Secretary to take responsibilities in providing advices to the Board and executives regarding the applicable laws and regulations that the Board must recognize and act upon, the corporate governance policies as well as the arrangement of the Board meetings and the Meeting of Shareholders. The Company Secretary must monitor and coordinate to ensure that the Board and shareholders' resolutions are thoroughly executed. The Company Secretary is also assigned to keep the Company's important documents as required by the laws. In the Board of Directors Meeting No. 12/2023 held on December 15, 2023, the Board resolved to appoint Miss Korapat Limpaphayom as the Company Secretary, effective from January 1, 2024.

Education

- >> Bachelor of Business Administration (Finance and Banking) (Second Class Honor), Chulalongkorn University
- >> Master of Arts (Applied Economics),
The University of Michigan, Ann Arbor, USA

Working Experience in the 5 Preceding Years

Sep 2017-Dec 2022	Manager, Office of President, PTT Plc.
Jan-Dec 2023	Vice President, PTT Plc. working on seconment as Vice President- Group Company Secretary and Sustainability, Thai Oil Plc.
Jan 2024-Present	Vice President, PTT Plc, working on seconment as Vice President- Group Company Secretary and Sustainability, Thai Oil Plc. and Company Secretary

Training

Thai Institute of Directors Association (IOD)

- >> Effective Minute Taking (EMT 36/2016)
- >> Board Reporting Program (BRP 33/2020)
- >> Refreshment Training Program (RFP 10/2023)

Other Institutes

- >> Fundamental Practice for Corporate Secretary (FPCS 27/2013), Advances for Corporate Secretaries (2013), Thai Listed Companies Association
- >> Thai Intelligent Investors Program (TIIP-19), Thai Investors Association (2018)
- >> Advanced Management Program 1 (AMP 1) (Business Management),
PTT Public Company Limited (2018)
- >> Leadership Development Program (LDP10),
PTT Public Company Limited (2021)
- >> Sustainability Forum 2023,
Thailand Management Association (TMA)
- >> Trends, Opportunities and Challenges in ESG,
Thai Listed Companies Association (2023)

% of Shareholding in Thaioil

-None-

Family Relation with Directors and Executives

-None-

Ms. Arkhanin Ruang-Art

Acting Vice President-Corporate Governance,

Compliance and Legal

(January 1, 2024)

(Chief of the Compliance)

Age 56 Yrs.

Thaioil also established Compliance Section to support Thaioil and Subsidiaries' business operations, in accordance with the law, regulations, announcements, as well as systematically monitoring the changes in government policies and newly issued laws.

Education

>> Bachelor of Laws, Chulalongkorn University

>> Master of Laws (International Law), Chulalongkorn University

Working Experience in the 5 Preceding Years

Jan 2019-Dec 2023 Legal Manager

Jan 2024-Present Vice President-Corporate Governance,
Compliance and Legal (Act.)

Training

Thai Institute of Directors Association (IOD)

-None-

Other Institutes

>> Intensive Leadership Development Workshop

>> Thailand Data Protection Guidelines 2.0 (TDPG 2.0)

>> LDP: Development Journey For Leader

% of Shareholding in Thaioil

-None-

Family Relation with Directors and Executives

-None-

Ms. Wanwisa Yanchinda

Vice President-Accounting

(Appointed on October 1, 2020)

(Person Supervising Accounting)

51 Yrs.

Education

>> Bachelor of Accountancy, Bangkok University

>> Master of Business Administration,
Ramkhamhaeng University

Others

>> Certified public accountant

Working Experience in the 5 Preceding Years

Apr-Sep 2020 Vice President-Accounting (Act.)

Oct 2020-Present Vice President-Accounting

Training

Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 299/2020)

Other Institutes

>> Modern Banking Executive Development Program (MOBEX)

>> Chief Financial Officer Certification Program, Class 4,
the Federation of Accounting Professions under
the Royal Patronage of His Majesty the King

>> Strategic CFO in Capital Markets Program,

>> Finance Transformation

>> Leadership Development Program (LDP) I & II, Thai Oil Plc.

>> Certificate of Tax Law, Class 1

>> IT Governance & IT Risk Management 4.0, Class 1/64,
the Federation of Accounting Professions under
the Royal Patronage of His Majesty the King

>> Accounting for assets of interest (TAS16,36,38)
of Accounting Professions

>> Code of Ethics for Professional Accountants

>> TFRS 16 summary of accounting and tax differences

>> The process of closing financial statements correctly and timely

>> How to manage business money easily Accountants
should know

% of Shareholding in Thaioil

5,424 Shares

(equivalent to 0.000243%)

Family Relation with Directors and Executives

-None-

Person taking the highest responsibility in finance and accounting and person supervising accounting are qualified as required by Securities and Exchange Commission, Thailand and Stock Exchange of Thailand, with education and experience relating to finance and/or accounting, and the continuous participation in training courses on accounting at least 6 hours per year.

Ms. Rungtip Maneesarachun
Vice President-Corporate Internal Audit
(Appointed on December 15, 2020)
(Chief of the Internal Audit)

Age 50 Yrs.

The appointment, removal, and replacement of the Chief of the Internal Audit Unit must be considered and approved by the Audit Committee. The Committee also assesses the performance of the Chief of the Internal Audit against the responsibilities indicated in the Audit Committee Charter.

In the Audit Committee Meeting no. 7/2020 on December 15, 2020, the Committee appointed Mr. Rungtip Maneesarachun (effective on January 1, 2021) as the Chief of the Internal Audit Unit due to qualified knowledge, competency, experience, and continuous improvement through various trainings.

Education

- >> Bachelor of Accountancy, Thammasat University
- >> Graduate Certificate in Auditing, Thammasat University
- >> Bachelor of Laws, Sukhothai Thammathirat Open University
- >> Master of Business Administration Program, Thammasat University
- >> Master of Arts Program in English for Careers, Thammasat University

Working Experience in the 5 Preceding Years

Jul 2017-Dec 2020 Vice President-Treasury

Jan 2021-Present Vice President-Corporate Internal Audit

Training

Thai Institute of Directors Association (IOD)

- >> Director Certification Program (DCP 245/2017)
- >> Ethical Leadership Program (ELP 9/2017)
- >> Anti-Corruption: The Practical Guide (ACPG 42/2017)
- >> Advance Audit Committee Program (AACP 49/2023)

Other Institutes

- >> Management Development Program (MDP), Class 22, Thailand Management Association
- >> Leadership Development Program (LDP) 1, Class 2, PTT Plc
- >> Financial Executive Development Program (FINEX), Class 27, Thai Banking Academy
- >> COSO Internal Control-Integrated Framework (2013), the Federation of Accounting Professions under the Royal Patronage of His Majesty the King
- >> Certified Professional Internal Audit of Thailand (CPIAT), Class 65, The Institute of Internal Auditors of Thailand
- >> Young Executive Program in Energy Literacy for Sustainable Future (YTEA), Class 8, Thailand Energy Academy
- >> Chief Audit Executive Professional Leadership (CAE 3), Thailand Federation of Accounting Professions

% of Shareholding in Thaioil -None-

Family Relation with Directors and Executives -None-

Other important information

Investor Relations Manager

>> Ms. Chuleeyon Leangreunrom
Manager-Investor Relations
(Appointed on January 1, 2023)

Manager-Investor Relations



Thai Oil Plc

Investor Relations

555/1 Energy Complex Building A, 11th floor,
Vibhavadi Rangsit Road, Chatuchak,
Chatuchak, Bangkok 10900, Thailand



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ext. 42060-42063 and 42069

Mrs. Wanida Boonpiraks

Executive Vice President-Finance and Accounting

(Appointed on January 1, 2021)

Age 57 Yrs. (end of secondment on November 30, 2023)

Education

>> Bachelor of Accountancy, Chulalongkorn University
>> Master of Business Administration (Finance),
University of St. Thomas, USA

Training

Thai Institute of Directors Association (IOD)

>> Director Certification Program (DCP 195/2014)

Other Institutes

>> Executive Development Program (EDP), Class 9,
Thai Listed Companies Association
>> Chief Financial Officer Certification Program, Class 19,
the Federation of Accounting Professions under
the Royal Patronage of His Majesty the King
>> Leadership Development Program (LDP) II,
PTT Leadership and Learning Institute
>> Orchestrating Winning Program (OWP) 2018,
IMD Business School, Switzerland
>> Leadership Development Program (LDP) III,
IMD Business School, Singapore
>> The Executive Program in Energy Literacy
for a Sustainable Future, TEA
>> TLCA CFO Professional Development Program
(TLCA CFO CPD) 1/2023 "Economic Update for CFO"
>> TLCA CFO CPD 2/2023 "Risk Management for CFO"
>> TLCA CFO CPD 3/2023 "Fintech: Online Technology"
>> TLCA CFO CPD 4/2023 "Green Assets:
Opportunities for Sustainable Development"

Working Experience in the 5 Preceding Years

Feb 2018-Mar 2020	Executive Vice President Finance and Accounting, Global Power Synergy Plc
Apr-Dec 2020	Chief Financial Officer, Global Power Synergy Plc
Jan 2021-30 Nov 2023	Executive Vice President-Finance and Accounting, Thai Oil Plc
1 Dec 2023-Present	Executive Vice President, Group Corporate Finance and Strategy, PTT Plc

% of Shareholding in Thailoil 6,585 Shares
(equivalent to 0.000295%)

Family Relation with Directors and Executives -None-

Mr. Viroj Meenaphant

Executive Vice President-Corporate Governance and Affairs
(Appointed on July 1, 2019),
Vice President-Corporate Governance, Compliance and Legal (Act.) (Chief of the Compliance),
(Appointed on February 1, 2023)
and Company Secretary
Age 60 Yrs. (Retired on December 31, 2023)

Education

>> Bachelor of Engineering, Chulalongkorn University

Training

Thai Institute of Directors Association (IOD)

- >> Company Secretary Program (CSP 31/2009)
- >> Director Certification Program (DCP 185/2014)
- >> Thailand's 10th National Conference on Collective Action against Corruption
- >> Company Secretary Forum 2019: Role of the Company Secretary in Shaping Corporate Culture

Other Institutes

- >> Leadership Development Program (LDP) II, 2018
- >> Development Program (EDP),
Thai Listed Companies Association
- >> ACSN 2nd Webinar 2020, Board of the Future:
"How will the role of the Company Secretary evolve"
- >> Special Lecture by Dr. Prinya Hom-Anek,
Special Consultant to National Cyber Security Committee:
"Cybersecurity in the Boardroom"
- >> STS Expert Session 2022:
 - >> "Oil and Petrochemical Industry Outlook"
Boston Consulting Group (BCG)
 - >> "Energy Industry Trend", Facts Global Energy (FGE)
 - >> "Global&Thailand Economic Outlook",
Kiatnakin Phatra Financial Group
- >> The Program for Senior Executives on Justice Administration, Batch 26, Judicial Training Institute, National Justice Academy
- >> Knowledge Sharing "Geopolitics and Climate Change& Its Implication" By Dr. Pailin Chuchottaworn,
Chairman of the Board, Global Power Synergy Plc
- >> Seminar: Regulatory Framework and Incentives for Low Carbon Future Society, Petroleum Institute of Thailand

- >> NBI Think Tank Lecture: “Geopolitics: New World Order and Investment Strategies of Thailand and PTT Group”, New Business and Infrastructure, PTT Plc
- >> Lecture: “Market Outlook Session”, Facts Global Energy (FGE)
- >> Knowledge Sharing: “Global Energy Transition & Future Energy Pathway Towards Net Zero”, PTT Plc and Wood Mackenzie

Working Experience in the 5 Preceding Years

Jan 2019	Executive Vice President- Corporate Governance and Affairs (Act.), and Company Secretary
Feb-June 2019	Executive Vice President- Corporate Governance and Affairs (Act.), Vice President-Corporate Affairs (Act.), and Company Secretary
Jul 2019-Dec 2021	Executive Vice President- Corporate Governance and Affairs, Vice President-Corporate Affairs (Act.), and Company Secretary
Jan 2022-Jan 2023	Executive Vice President- Corporate Governance and Affairs, and Company Secretary
Feb-31 Dec 2023	Executive Vice President- Corporate Governance and Affairs, Vice President-Corporate Governance, Compliance and Legal (Act.), and Company Secretary
% of Shareholding in Thaioil	-None-
Family Relation with Directors and Executives	-None-

Assets and Shareholders Information

Registered and Paid-up Capitals

Ordinary Shares

On the share registration book closing date as of September 8, 2023, Thailoil's registered capital was THB 22,338,355,660 and the paid up capital was THB 22,338,355,660, comprised of 2,233,835,566 shares at the par value of THB 10 per share.

Shareholders

As of September 8, 2023, the major shareholders (holding 0.50% and more of paid up capital) are as follows:

Major Shareholders	Number of Shares	Shareholding Percentage
1. PTT PUBLIC COMPANY LIMITED ⁽¹⁾	1,005,920,239	45.031 %
2. THAI NVDR COMPANY LIMITED ⁽²⁾	273,905,675	12.262 %
3. SIAM MANAGEMENT HOLDING COMPANY LIMITED	66,400,499	2.972 %
4. SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	51,916,000	2.324 %
5. STATE STREET EUROPE LIMITED	50,087,542	2.242 %
6. CITIBANK NOMINEES SINGAPORE PTE LTD-A/C GIC C	41,683,415	1.866 %
7. THE BANK OF NEW YORK MELLON	30,451,625	1.363 %
8. TISCO MASTER POOLED REGISTERED PROVIDENT FUND	21,191,700	0.949 %
9. SOCIAL SECURITY OFFICE	21,188,310	0.949 %
Total	1,562,745,005	69.958 %

Remarks:

⁽¹⁾ As a major shareholder of Thailoil, PTT Plc (PTT), whose major shareholder is Ministry of Finance, participates in formulating the Company's management and operational policies via Directors nominated to Thailoil's Board of Directors and casting their votes in Board meetings. As of January 31, 2024, there are 5 directors from a total of 13 who are also holding position as PTT's executives.

⁽²⁾ Thai NVDR Co., Ltd., a subsidiary of the Stock Exchange of Thailand with the objective of promoting investor's investment, particularly foreign investors, in order to invest in common stock of listed companies without being restricted by the foreign shareholding limit which does not have the rights to vote at meetings of listed companies.

Issuance of Other Financial Instruments

Debentures

As of December 31, 2023, Thailoil and Subsidiaries had issued seven sets of denomination in US dollars totalling USD 3,065 million. All of them senior unsecured bond, as detailed below:

Table 1: Debentures with denomination in US dollars issued by Thai Oil Plc

Debenture Set No.	Type of Instrument	Issuance Date	Maturity	Coupon Rate (Percent per annum)	Value (USD Million)	Credit Rating (S&P's/Moody's)
1.	Rule 144 A/ Regulation S	January 23, 2013	2043	4.875	172	BBB+/Baa1
Total value					172	

Table 2: Debentures with denomination in US dollars issued by Thailoil Treasury Center Co., Ltd.

(Guaranteed by Thai Oil Plc)

Debenture Set No.	Type of Instrument	Issuance Date	Maturity	Coupon Rate (Percent per annum)	Value (USD Million)	Credit Rating (S&P's/Moody's)
1.	Rule 144A/ Regulation	April 10, 2018	2043	4.875	328	BBB+/Baa1
2.		November 20, 2018	2028	4.625	400	BBB+/Baa1
3.			2048	5.375	600	
4.		October 17, 2019	2049	3.500	565	BBB+/Baa1
5.		June 18, 2020	2030	2.500	400	BBB+/Baa2
6.			2050	3.750	600	
				Total value	2,893	

Thaioil also issued eleven other sets of debentures, also senior unsecured bond, with denomination in Thai baht totalling THB 36,500 million as detailed below:

Debenture Set No.	Type of Instrument	Issuance Date	Maturity	Coupon Rate (Percent per annum)	Value (THB Million)	Credit Rating (Fitch)
1.	II/HNW	March 12, 2014	2024	4.840	7,000	AA- (Stable Outlook)
2.		March 23, 2012	2027	5.050	7,500	
3.		November 11, 2022	2025	2.990	1,400	A+ (Negative Outlook)
4.			2027	3.640	600	
5.			2029	4.130	2,000	
6.			2032	4.490	1,700	
7.			2034	4.790	3,100	
8.			2037	5.090	3,200	
9.		May 3, 2023	2028	3.320	2,800	A+ (Negative Outlook)
10.			2033	3.840	2,300	
11.			2038	4.240	4,900	
Total value					36,500	

The proceeds from the debentures issuance were used for long-term investment, business expansion, debt repayment, and/or working capital as well as for other purposes of Thaioil Group.

Dividend Policy

The Company's dividend payout policy is to pay at least 25% of the consolidated net profit after deductions of all categories of reserves as specified in applicable laws and the Company's Article of Association. Each year, the dividend payments are subjected to Thaioil and Subsidiaries' cash flows and investment plans and other necessities and factors the Board of Directors (the Board) deems appropriate. The Board may consider paying the annual dividend with approval from the Annual General Meeting of Shareholders (AGM), except to the payment of interim dividend, which the Board has

the authority to approve periodically when the Company's profit deems appropriate. The interim dividend payment shall be reported at the following AGM.

The Dividend Policy for Subsidiaries of Thaioil shall be considered by the Board of each subsidiary, and later proposed to each subsidiary's AGM for approval each year. Consideration shall be made on investment plans and other requirements, such as adequacy of cash flow of each company after deducting reserve funds in compliance with the law.

Dividend Payout Information

Year	2017	2018	2019	2020	2021	2022
Earnings (Baht per share)	12.18	4.97	3.08	(1.62)	6.17	15.63
Dividend (Baht per share)	5.25	2.65	1.50	0.70	2.60	3.70
Dividend Payout (Percent)	43.0	53.0	49.0	N/A	42.0	23.7*

*In 2022, there was an equity offering of 193,807,693 shares resulted in a change in the number of shares. Therefore, based on the amount of dividend paid (in Baht) compared to net profit for the year 2022 (in Baht), it resulted in a Dividend Payout ratio at 25.5%.

Legal disputes

As of December 31, 2023, Thailoil and Subsidiaries were not parties to any litigation that may negatively affect Thailoil's or Subsidiaries' assets of over 5% of shareholders' equity at the last day of the latest fiscal year, nor were they parties to any litigation that may cause significant impacts on the business, nor were they parties to any litigation that did not arise from the course of normal business operations of Thailoil and Subsidiaries.

Relationship with Major Shareholders' Business Groups

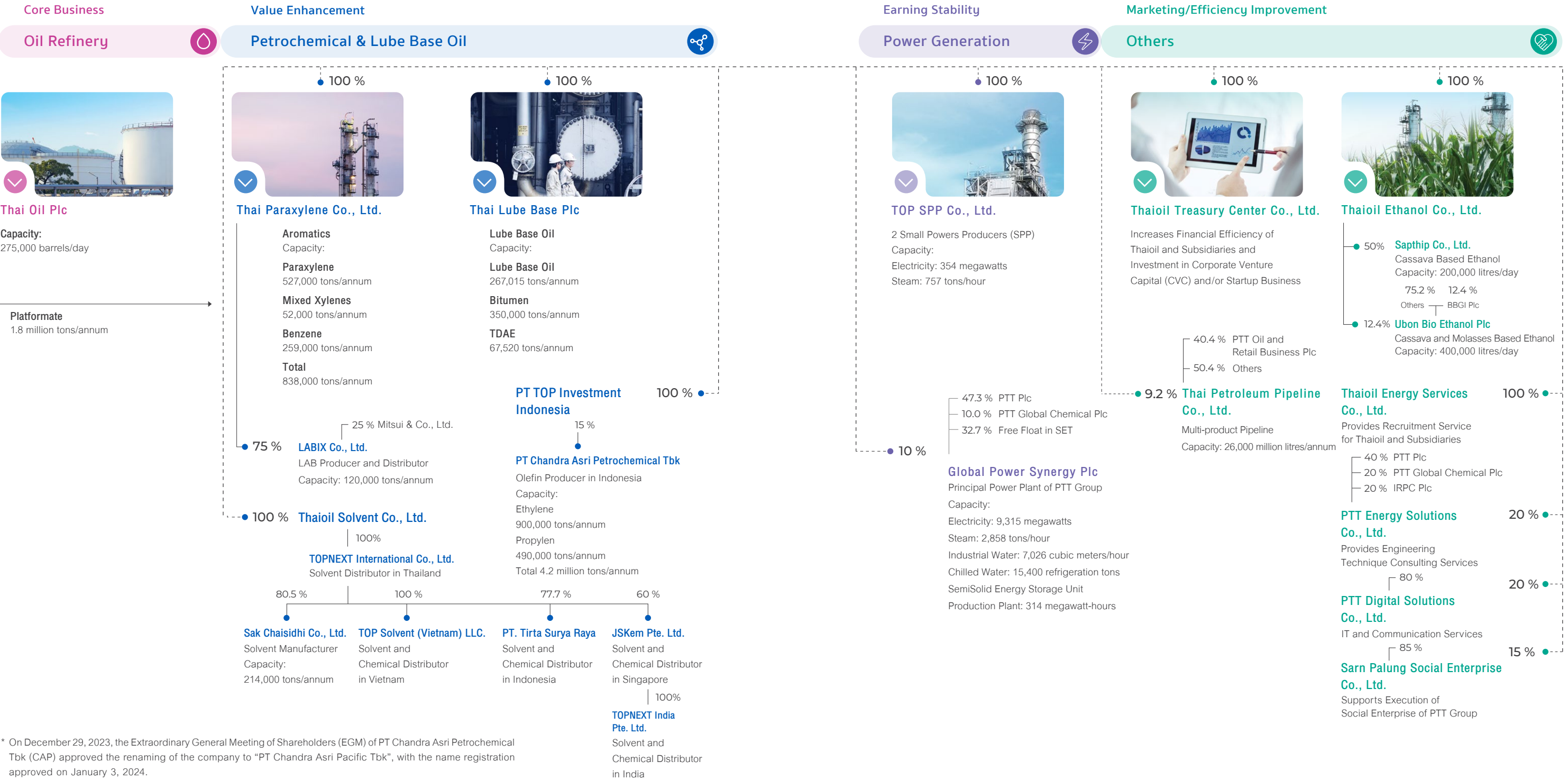
PTT Plc (PTT), Thailo's major shareholder, is a national energy company engaging in upstream to downstream petroleum and petrochemical businesses. PTT currently holds major shares in three companies running local oil refineries, namely 48.00% in Thailo (inclusive of 2.97% held by Siam Management Holding Company, PTT's wholly-owned subsidiary), 45.18% in PTT Global Chemical Plc, and 45.05% in IRPC Plc.

The transactions and business cooperation Thailo has carried out with PTT and its affiliates include trading of raw materials, feedstock, and products; the price of which follows market price and the volume identification follows terms and conditions indicated in the agreed contract.



Thaioil and Subsidiaries' Business Structure

Thaioil is Thailand's largest refinery and supplier of petroleum products. Founded in 1961, we operate one of the leading efficient refineries in Asia Pacific with the current capacity of 275,000 barrels per day. Thaioil operates under the Operational Excellence principle, as an integrated group of businesses in oil refinery, petrochemicals and lube base with supporting businesses, e.g. power generation, solvents and chemicals, pipeline transportation, renewable energy generation, olefins, LAB: an intermediate in the production of surfactants, business in the area of International Business Center and Treasury Center, as well as recruitment services for Thaioil and Subsidiaries. Thaioil leads the Thai refinery industry through a well-planned and integrated production process, yielding optimum efficiency and low-cost products. The product quality is high, rated in the top quartile of refineries in Asia Pacific, giving Thaioil production cost advantage and enhancing Thaioil's recognized competitiveness.



General Information

Thai Oil Public Company Limited

Monogram	TOP
Registration Number	0107547000711
Business	<p>Thaioil is Thailand's largest operator and supplier of petroleum products. Founded in 1961, it operates one of the leading complex refineries in Asia Pacific with the current capacity of 275,000 barrels per day.</p> <p>Thaioil operates under the Operational Excellence system as an integrated group of companies running oil refinery, petrochemicals-aromatics and lube base oil with supporting businesses, including power generation, solvents and chemicals, pipeline transportation, renewable-energy generation, petrochemicals-olefins business, LAB (an intermediate in the production of cleaning agents), recruitment services for Thaioil and Subsidiaries, as well as Treasury Center to enhance Thaioil and Subsidiaries' capability of financial management. Thaioil leads the domestic refining industry through a well-planned and integrated production process, yielding optimal efficiency and low-cost products, while maintaining the high quality of product at the top quartile of refineries in Asia Pacific, giving it production cost advantages while enhancing its competitiveness.</p>
Registered Capital	<p>THB 22,338,355,660</p> <p>Comprising 2,233,835,566 paid-up common shares of 10 Baht per share</p>
Address	<p>Bangkok Office</p> <p>555/1 Energy Complex Building A, 11th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand</p> <p>Telephone : +66(0) -2797-2999, +66(0) -2797-2900, +66(0) -2299-0000</p> <p>Sriracha Office and Refinery</p> <p>42/1 Moo 1, Sukhumvit Road Km.124, Tungsukla, Sriracha, Chonburi 20230, Thailand</p> <p>Telephone : +66(0) -3840-8500, +66(0) -3835-9000, +66(0) -3849-8900</p>
Website	www.thaioilgroup.com
Investor Relations	<p>Telephone : +66(0) -2797-2961, +66(0) -2797-2999 ext. 42060-42063 and 42069</p> <p>e-Mail : ir@thaioilgroup.com</p>

General Information of the Subsidiaries

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
Lube Base Oil Business Thai Lube Base Public Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2970	0107539000090	Lube base oil manufacturer and distributor	1,757,890,730	Common	175,789,073	10	100
Petrochemical Business Thai Paraxylene Company Limited 105/12 Moo 2, Sukhumvit Road, Tungskula, Sriracha, Chonburi 20230, Thailand Tel : +66(0) -3835-1317-9, +66(0) -3835-1878 Fax : +66(0) -3835-1320	0105539103288	Upstream petrochemical manufacturer and distributor	2,572,414,160	Common	257,241,416	10	100
LABIX Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2974	0105556110246	LAB (an intermediate in the production of surfactants such as detergents) manufacturer and distributor	4,654,965,000	Common	465,496,500	10	75 (Shareholding through Thai Paraxylene Co., Ltd.)
Thaioil Solvent Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2970	0105551116050	Investment in solvent and petrochemical manufacturing and distributor business	1,250,000,000	Common	125,000,000	10	100

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
TOPNEXT International Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2983	0105551116491	Solvent and petrochemical products distributor	1,200,000,000	Common	120,000,000	10	100 (Shareholding through Thairoil Solvent Co., Ltd.)
Sak Chaisidhi Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0003, +66(0) -2797-2993 Fax : +66(0) -2797-2983	0105527011880	Hydrocarbon solvent manufacturer and distributor	180,000,000	Common	1,800,000	100	80.52 (Shareholding through TOPNEXT International Co., Ltd.)
TOP Solvent (Vietnam) Liability Limited Company Go Dau Industrial Zones, Long Thanh District, Dong Nai Province, Vietnam Tel : +84-83827-9030-4 Fax : +84-83827-9035	472043000745 (Registered in Vietnam)	Solvent and petrochemical product distributor in Vietnam	373,520,000,000 VND	Common	-	-	100 (Shareholding through TOPNEXT International Co., Ltd.)
PT. Tirta Surya Raya Synergy Building Lt. 12 Unit 09 Jl. Jalur Sutera Barat No.17, Kel. Panunggangan Timur, Kec. Pinang, Kota Tangerang, Banten Province, Indonesia 15325 Tel : +62-21808-21308 Fax : +62-21808-21307	9120102163812 (Registered in Indonesia)	Solvent and petrochemical product distributor in Indonesia	23,000,000,000 IDR	Common	23,000	1,000,000 IDR per share	77.71 (Shareholding through TOPNEXT International Co., Ltd.)

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
JSKem Private Limited 24, Sin Ming Lane, #06-97 Midview City, Singapore 573970 Tel : +65-6659-1073 Fax : +65-6659-1075	201311162C (Registered in Singapore)	Solvent and petrochemical product distributor in Singapore	100,000 SGD	Common	100,000	1 SGD per share	60 (Shareholding through TOPNEXT International Co., Ltd.)
TOPNEXT India Private Limited* Ram Nivas, Room No. 4, Tilak Nagar, Aarey Road, Goregaon East, Mumbai, Bandra Suburban, Maharashtra, India 400063	U11100MH2021 FTC354985 (Registered in India)	Solvent and petrochemical product distributor in India	100,000 INR	Common	10,000	10 INR per share	99.99 (Shareholding through JSKem Pte. Ltd.)
* TSCHEM India Private Limited has changed name to TOPNEXT India Private Limited since 26 May 2023.							
Olefin PT TOP Investment Indonesia Gedung Synergy Lt. 12 Unit 08 Jl. Jalur Sutera Barat No. 17, Kel. Panungangan Timur, Kec. Pinang, Kota Tangerang, Banten Province, Indonesia 15325 Tel : 0812-9566-6171	429914021416000 (Registered in Indonesia)	Investment in petrochemical business	10,000,000,000 IDR (equivalent to 700,000 USD) 12,332,250,000,000 IDR (equivalent to 913,500,000 USD)	Common	1,000 9,135,000	10,000,000 IDR per share (equivalent to 700 USD per share) 1,350,000 IDR per share (equivalent to 100 USD per share)	100
PT Chandra Asri Petrochemical Tbk Wisma Barito Pacific Tower A, 7 th floor, Jl. Let. Jend. S. Parman Kav. 62-63 Jakarta, Indonesia 11410 Tel : +62-21530-7950 Fax : +62-21530-8930	8120011061265 (Registered in Indonesia)	Petrochemical manufacturer and distributor	12,264,785,664,000 IDR	Common	86,511,545,092	50 IDR per share	15 (Shareholding through PT TOP Investment Indonesia)

* PT Chandra Asri Petrochemical Tbk has changed name to "PT Chandra Asri Pacific Tbk" on 3 January, 2024.

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
Power Generation Business Global Power Synergy Public Company Limited 555/2 Energy Complex Building B, 5 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2140-4600 Fax : +66(0) -2140-4601	0107557000411	Operate power generation business, including invest and develop future projects in power business	28,197,293,710	Common	2,819,729,367	10	10
TOP SPP Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2974	0105556198933	Power and steam generator and distributor	3,500,000,000	Common	350,000,000	10	100
Transportation Business Thai Petroleum Pipeline Company Limited 2/8 Moo 11, Lumlukka Road, Ladsawai, Lumlukka, Pathumthani 12150, Thailand Tel : +66(0) -2034-9199 Fax : +66(0) -2533-2687	0105534002696	Pipeline transportation of petroleum products	8,479,000,000	Common	84,790,000	100	9.19
Other Business Thaioil Energy Services Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2970	0105550078006	Recruiting management service	40,000,000	Common	4,000,000	10	100

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
Thaioil Ethanol Company Limited 555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2970	0105551121754	Investment in ethanol business and alternative energy	1,450,000,000	Common	145,000,000	10	100
Sapthip Company Limited 68 Soi Santipap, Sap Road, Sipraya, Bangrak, Bangkok 10500, Thailand Tel : +66(0) -2233-0444-5 Fax : +66(0) -2233-0441	0105539017543	Cassava-based ethanol manufacturer and distributor	800,000,000	Common	8,000,000	100	50 (Shareholding through Thaioil Ethanol Co., Ltd.)
Sapthip Green Energy Company Limited 49 Moo 6, Nikomlamnalai, Chaibadan, Lopburi 15130, Thailand Tel : +66(0) -3646-2438 Fax : +66(0) -3646-2475	0165561000615	Power from biogas, generator, and distributor	25,000,000	Common	2,500,000	10	50 (Shareholding through Sapthip Co., Ltd.)
Ubon Bio Ethanol Public Company Limited 333 Moo 9, Nadee, Navear, Ubonratchatani 34160, Thailand Tel : +66(0) -4525-2777 Fax : +66(0) -4525-2776	03455500000315	Cassava-based and molasses-based ethanol manufacturer and distributor	2,740,000,000	Common	2,740,000	1,000	12.39 (Shareholding through Thaioil Ethanol Co., Ltd.)

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
PTT Digital Solutions Company Limited 555/1 Energy Complex Building A, 4 th - 5 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2140-2000 Fax : +66(0) -2140-2999	0105549076496	IT and communication services	150,000,000	Common	15,000,000	10	20
PTT Energy Solutions Company Limited 888 Green Building, Mapchalood-Leamson Road, Huai Pong, Mueng Rayong, Rayong 21150, Thailand Tel : +66(0) -3897-8300 Fax : +66(0) -3897-8333	0105554075621	Engineering technique consultation and other services	150,000,000	Common	1,500,000	100	20
Thaioil Treasury Center Company Limited 555/1 Energy Complex Building A, 1 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2974	0105560167273	Financial service provider for Thaioil and Subsidiaries	956,200,000	Common	95,620,000	10	100
TOP Ventures Company Limited 555/1 Energy Complex Building A, 1 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2299-0000, +66(0) -2797-2999 Fax : +66(0) -2797-2974	0105562147342	Investments in Corporate Venture Capital and/or Startup Business	35,000,000	Common	1,925,000	10	100 (Shareholding through Thaioil Treasury Center Co., Ltd.)

Company Name and Address	Registration Number	Business	Registered Capital (THB)	Type of Shares	Number of Shares (Issued)	Value of Share (THB per share)	Shareholding (Percent)
TOP Ventures Hong Kong Limited 40 th Floor, Dah Sing Financial Centre, No. 248 Queen's Road East, Wanchai, Hong Kong Tel : +852-3912-0800 Fax : +852-3912-0801	2860983 (Registered in Hong Kong)	Investments in Corporate Venture Capital and/or Startup Business	1 HKD 22,625,801 USD	Common	1 1	1 HKD per share 22,625,801 USD per share	100 (Shareholding through Thaioil Treasury Center Co., Ltd.)
TOP Ventures America Limited Liability Company The Corporation Trust Company, 1209 Orange Street, Wilmington, Delaware 19801 Tel : +1(888)-724-9870	7559091 (Registered in USA)	Investments in Corporate Venture Capital and/or Startup Business	15,275,802 USD	Common	1	15,275,802 USD per share	100 (Shareholding through TOP Ventures Hong Kong Limited)
Sam Palung Social Enterprise Company Limited 555/1 Energy Complex Building A, 10 th Floor, Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900, Thailand Tel : +66(0) -2537-2971 Fax : +66(0) -2537-2978	0105560151628	Support execution of social enterprise of PTT Group	10,000,000	Common	1,000,000	10	15

Reference

Securities Registrar

Thailand Securities Depository Company Limited (TSD)

The Stock Exchange of Thailand Building,

93 Ratchadaphisek Road, Dindaeng,

Bangkok 10400, Thailand

Tel : +66(0) -2009-9999 (Call center)

Fax : +66(0) -2009-9991

Debenture Registrar and Principal Paying Agent

Bangkok Bank Public Company Limited

The Registrar and Debenture Holders' Representative

333 Head Office, 1st Floor, Trinity Building,

Silom Road, Silom, Bangrak, Bangkok 10500, Thailand

Tel : +66(0) -2230-1478, +66(0) -2230-2895

Fax : +66(0) -2230-1893

Bank of Ayudhya Public Company Limited

AA Floor, 1222 Rama III Road, Bang Phongphang,

Yan Nawa, Bangkok 10120, Thailand

Tel : +66(0) -2296-3582

Fax : +66(0) -2683-1298

Contact: Ms. Srisunan Dutiyabodhi

Auditor

EY Office Limited

33rd Floor, Lake Rajada Office Complex,

193/136-137 Ratchadaphisek Road, Klongtoey,

Bangkok 10110, Thailand

Tel : +66(0) -2264-9090

Fax : +66(0) -2264-0789

Other Services (Loss of Share Certificate, Change of Particulars in Securities Register and Other Services)

Counter Service

The Stock Exchange of Thailand Building, 1st Floor,

93 Ratchadaphisek Road, Dindaeng,

Bangkok 10400, Thailand

Tel : +66(0) -2009-9999 (Call center)

or

Office of Registration Services

Thailand Securities Depository Company Limited (TSD)

The Stock Exchange of Thailand Building,

93 Ratchadaphisek Road, Dindaeng,

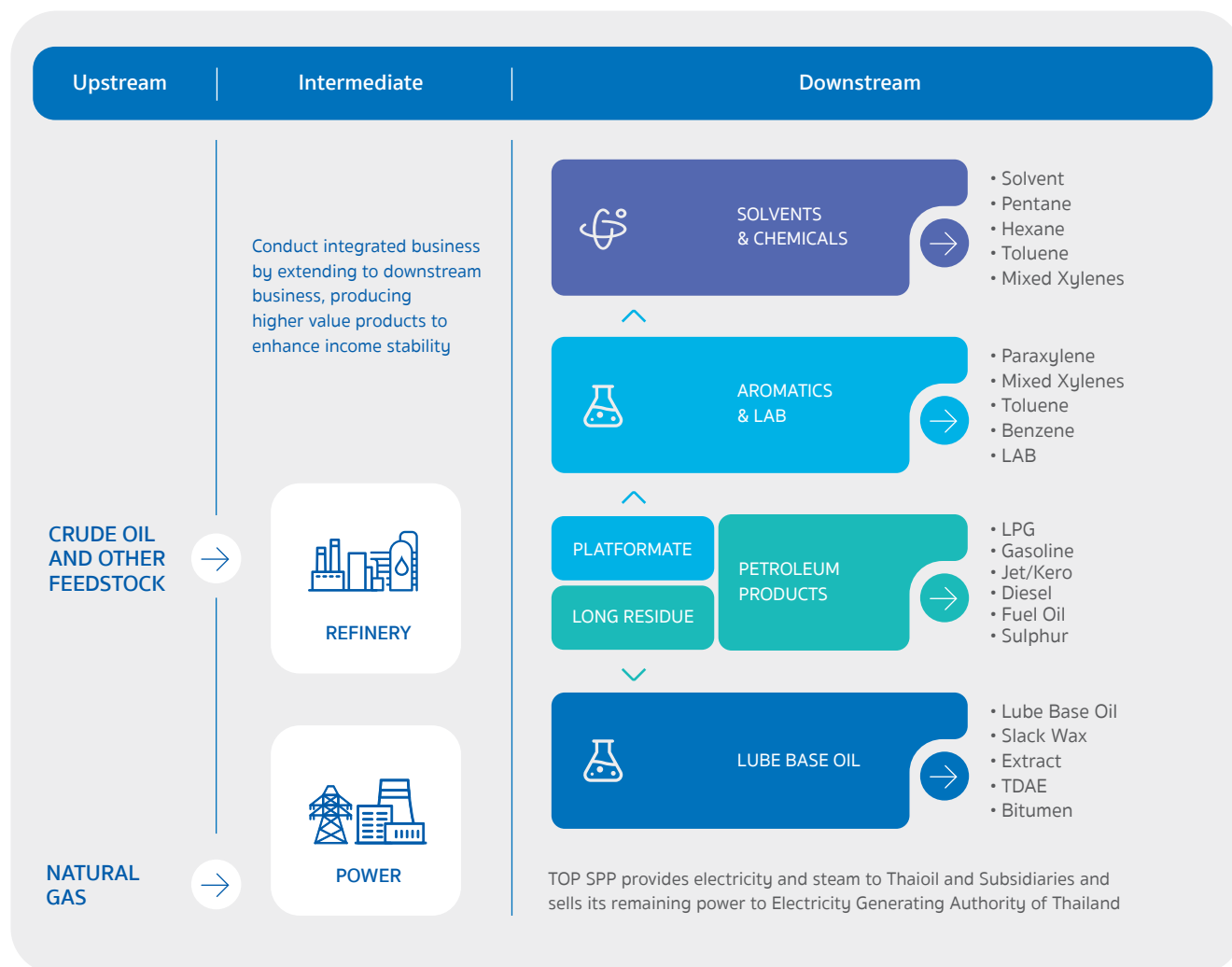
Bangkok 10400, Thailand

Tel : +66(0) -2009-9000

+66(0) -2009-9999 (Call center)

Fax : +66(0) -2009-9991

Products and Services



Thailoil and Subsidiaries' Major Income-generating Products with Domestic Production Base

Refinery Business

Thailoil Refinery is the country's largest single-site refinery with maximum complexity to generate premium value-added products. It is a leading complex refinery with a capacity to produce and distribute wholesale petroleum products (with crude and other raw materials run capacity of approximately 22% of the entire domestic refining capacity), focusing on distributing to domestic and regional markets. Unlike other refineries in Thailand,

Thailoil's refining complexity and technologies allow flexibility for maintenance shutdowns of each distillation unit without shutting down the entire system, thus enabling Thailoil to constantly meet customers' needs.

Lubricant Business

Thai Lube Base Plc (TLB) mainly produces and distributes lube base oil Group 1; when blended with additives, it can be turned into lube oil (or lubricating oil) for

machinery moving parts such as pistons and shafts, providing lubrication as well as cooling. TLB also produces bitumen for road pavement as well as Treated Distillate Aromatics Extract (TDAE), which lowers carcinogens and air pollutants. Other TLB products include slack wax, a raw material for multiple consumer products such as candles, shoe wax, gloss coating, cosmetics, and adhesives for plywood.

Petrochemical Business

Thai Paraxylene Co., Ltd. (TPX) is a producer of paraxylene, feedstock for Purified Terephthalic Acid (PTA) production in the intermediate petrochemical industry. PTA is the monomer in the downstream petrochemical industry for polyester fiber or synthetic fiber used for manufacturing apparel and plastic bottles commonly known as Polyethylene Terephthalate (PET) such as drinking water bottles and soda bottles, as well as other consumer products such as film, food containers, and plastic bags for heat preservation. TPX also produces benzene (key feedstock for styrene monomer:SM), phenol, and cyclohexene (monomers for plastic packaging, electrical appliances, automobiles, etc).

LABIX Co., Ltd. is Thailand's first producer of Linear Alkyl Benzene (LAB) and the first fully integrated producer of Southeast Asia. LAB is key feedstock for detergents and cleaning agents.

PT Chandra Asri Petrochemical Tbk (CAP) is Thailoil's investment through PT TOP Investment Indonesia. Being Indonesia's only olefins producer, CAP runs the naphtha cracker with a wide range of petrochemical Products from upstream to downstream including Polyethylene (PE), Polypropylene (PP), SM, butadiene, and several other olefins products. CAP is investigating capacity expansion and construction of the second petrochemical plant to double the existing capacity.

Solvent and Chemical Business

Thailoil invested in the solvent business to enhance its product value chain through Thailoil Solvent Co., Ltd.

(TOS), of which subsidiary TOPNEXT International Co., Ltd. (TX) (formerly known as TOP Solvent Co., Ltd. (TS)), is a distributor of solvents and chemicals in domestic and overseas markets. TX also owns Sak Chaisidhi Co., Ltd. (SAKC), a producer of high-quality hydrocarbon solvents for industrial applications. It also engages in an overseas business through TOP Solvent (Vietnam) LLC., a distributor of solvents and chemicals in Vietnam with warehouses in southern and northern Vietnam. Through a partnership, TX invested in PT. Tirta Surya Raya to distribute solvents and chemicals in Indonesia. It also entered joint ventures with JSKem Pte. Ltd. (JSKEM) and TXIndia Pte. Ltd., a JSKEM subsidiary, for procurement and distribution of chemicals and solvents in Singapore and India. In Myanmar it appointed TOPNEXT International Co., Ltd. (Myanmar Representative Office), a representative office in Yangon.

Today Thailoil and Subsidiaries engage in the import, export, sale, and distribution of assorted products together with High Value Products (HPVs) and bio-products to Vietnam, Indonesia, India, Myanmar, Cambodia, Laos, the Philippines, and others. Product groups are described below.

- >> Solvents and chemicals: Hydrocarbon solvents consist of hydrogen and carbon, namely paraffins and aromatics for applications in such industries as paint, polymer, and auto-tire. Chemical solvents consist of alcohol, ketone, ester, and glycol ether for the paint industry and coating work, and others.
- >> Aromatics: Chemicals in this group are benzene, toluene, and xylene, which find applications in the solvent industry and serve as feedstock for other products, including paraxylene.
- >> Olefins: Olefins come in the forms of monomers and polymers, serving as feedstock for chemicals and finding applications in the production of polymers and other everyday products.

- >> Petroleum: Products under this group which exported to retail business target groups such as Vietnam and Indonesia to support the CFP product demand in the future.
- >> Lubricants and by-products: For base oil and lubricant products, Thailoil focuses on sale through Flexi Bags to Asian end users in the Philippines, Malaysia, Vietnam, and others.
- >> Specialty products are chemicals used in five industries, namely automotive, personal care, healthcare, electronics, and food & nutrition.

These industry groups feature chemicals that serve as raw materials for assorted products, including additives for lubricants, plastics, paint, auto-tires, lotions, shampoos, and food & nutrition. They also include disinfectants & surfactants and specialty polymers.

Power and Steam Businesses

Thailoil invests in the cogeneration power business, supplying power and steam for Thailoil and Subsidiaries' core businesses and leading to higher efficiency and securing revenue streams. These businesses are invested through subsidiaries and joint ventures as follows.

- 1) TOP SPP Co., Ltd. (TOP SPP) is running two gas-fired cogeneration power and steam plants. Electricity produced by TOP SPP is sold to the Electricity Generating of Thailand (EGAT) under two 25-year power purchase agreements at a combined volume of 180 megawatts (MW), or 90 MW each. Electricity sale to EGAT generates 41% of TOP SPP's total revenue; the remaining 59% is contributed by the remaining electricity and steam distributed to Thailoil's subsidiaries.
- 2) Global Power Synergy Public Co., Ltd. (GPSC) also produces and distributes utilities through its own operations and joint ventures.

Ethanol Business

To strengthen its business capability, Thailoil invests through Thailoil Ethanol Co., Ltd. (TET) in the production and distribution of ethanol used to produce a variety of gasohol fuels including gasohol E10, E20 and E85, with 10, 20 and 85% of ethanol content, respectively. TET invests through its subsidiary and joint venture:

- 1) Sapthip Co., Ltd. (SAPTHIP), a TET's subsidiary, produces and distributes cassava-based ethanol for fuel production. SAPTHIP owns another subsidiary, Sapthip Green Energy Co., Ltd., a power producer from biogas.
- 2) Ubon Bio Ethanol Public Co., Ltd. (UBE), a TET's joint venture, produces and distributes ethanol from cassava and molasses for fuel production and industrial use. UBE currently has two subsidiaries. One is Ubon Sunflower Co., Ltd., a producer of food-grade and industrial-grade tapioca starch. The processed water and tapioca residue can be turned into biogas, used as renewable fuel and for power generation distributed within Ubon Group and to the Provincial Electricity Authority (PEA). The other is Ubon Bio Agricultural Co., Ltd., a distributor of agricultural products and organic products such as coffee beans, rice, tapioca starch, cassava chips, a soil enhancer from cassava residue, and Napier grass. It also provides livestock management and engages in agricultural land leasing.

Business Assets

Primary Fixed Assets under the Ownership of Thailoil and Subsidiaries

As of December 31, 2023, the primary business assets under the ownership of Thailoil and Subsidiaries after cumulative depreciation and allowance for impairment losses as shown in the financial statements amounted to THB 218,618 million:

Description	Net book value after cumulative depreciation and allowance for impairment losses (THB Million)
Land	7,358
Buildings	5,142
Leasehold improvement	212
Refinery plants and equipment	120,289
Power plants	20,929
Petrochemical plants	36,159
Machinery, equipment, and plant equipment	7,882
Furniture, fixtures, office equipment, and others	1,164
Vehicles	16
Construction in progress	152,425
Total Cost	351,576
Less-Cumulative depreciation and allowance for impairment losses	(132,958)
Total-Net value after cumulative depreciation and allowance for impairment losses	218,618

Thai Oil Plc

As of December 31, 2023, Thaioil's fixed assets were mainly land, buildings, refinery plants, power plants, machinery and equipment, of which the Company took ownership:

Description	Net book value (THB Million)	Obligation (THB)
Land	4,880	-
Buildings	3,747	-
Oil refinery and equipment	111,200	-
Power plant	5,322	-
Machinery, tools and factory equipment	1,591	-
Furniture, fixtures, office equipment, etc.	766	-
Vehicles	1	-
Construction work in progress	153,323	-
Total Cost	280,830	-
Less-Cumulative depreciation and allowance for impairment losses	(91,509)	-
Total-Net value after cumulative depreciation and allowance for impairment losses	189,321	-

Subsidiaries

As of December 31, 2023, Thaioil's 20 subsidiaries, namely Thai Paraxylene Co., Ltd., LABIX Co., Ltd., Thai Lube Base Plc, TOP SPP Co., Ltd., Thaioil Solvent Co., Ltd., TOPNEXT International Co., Ltd., Sak Chaisidhi Co., Ltd., TOP Solvent (Vietnam) LLC, PT Tirta Surya Raya, JSKem Pte., Ltd., TOPNEXT India Private Limited (formerly known as TSCHEM India Pte., Ltd.), Thaioil Ethanol Co., Ltd., Sapthip Co., Ltd., Sapthip Green Energy Co., Ltd., Thaioil Energy Services Co., Ltd., Thaioil Treasury Center Co., Ltd., TOP Ventures Co., Ltd., TOP Ventures Hong Kong Limited, TOP Ventures America LLC., and PT TOP Investment Indonesia, held several primary fixed assets such as land, office buildings, power plants, plants, and machinery as detailed below:

Description	Net book value (THB Million)	Obligation (THB)
Land	1,388	-
Buildings	1,429	-
Leasehold improvement	212	-
Power plants, plants, machinery, equipment and plant equipment	68,020	<ul style="list-style-type: none"> - Land, machinery, buildings, and the wastewater residue treatment unit of Sapthip Co., Ltd. have been used as collateral to secure a loan of THB 141 million from a financial institution. - The petrochemical plant of LABIX Co., Ltd. has been used as collateral to secure a loan of THB 5,400 million from multiple financial institutions.
Furniture, fixtures, office equipment, and others	277	-
Vehicles	16	-
Construction in progress	695	-
Total Cost	72,037	-
Less-Cumulative depreciation and allowance for impairment losses	(42,076)	-
Total-Net value after cumulative depreciation and allowance for impairment losses	29,961	-

Investment Properties

As of December 31, 2023, investment properties which can generate profit from rental or from value appreciation or both under the ownership of Thailoil and Subsidiaries registered a net value-after cumulative depreciation and allowance for impairment losses-of THB 103 million and THB 1,185 million respectively, as shown in the consolidated financial statements and separate financial statements.

Intangible Assets

Right of Use of Water Pipelines and Natural Gas Pipelines

Under the water consumption contract that Thailoil made with Eastern Water Resources Development and Management Plc, it is entitled to pipe water from the Nong Pla Lai-Nong Khaw and Nong Khaw-Laem Chabang water pipelines to the oil refining system. Permission has also been granted by applicable agencies to lay connecting pipes through their land to Thailoil's water-receiving point.

Thailoil is also entitled to share the use of the gas pipelines belonging to PTT Plc for gas delivery to Thailoil's refinery processes for 15 years. The pipeline fee is included in the monthly gas consumption charge, based on a formula specified under the agreement. The agreement can be renewed by Thailoil through a written notification to PTT Plc no less than six months in advance.

Right under Land and Building Rental Contracts

On August 21, 2018, Thailoil engaged in a land lease agreement with the Treasury Department, Ministry of Finance, whereby Thailoil must pay rent yearly for 30 years from 2022 to 2052 for the right to exploit such land for an oil refinery and staff housing in Chon Buri Province. The land occupies 1,499 rai, 3 ngan, and 26 square wah (65% of the total area of Thailoil refinery in Sriracha). The agreement will expire on September 10, 2052. The annual rental fee for September 2022 to September 2025 is around THB 384 million. The total rent through the contract period, with an increase of 10% every

three years, will be about THB 21,321 million. On the contract signing date, Thailoil had already paid THB 2,962 million in advance.

The Treasury Department has allowed Thailoil to allocate part of the rented land, accounting for 8% of the total refinery area, to subsidiaries and other companies related to Thailoil. For the sublease, Thailoil must pay an additional annual rental fee to the department. Thailoil has also allowed subsidiaries and related companies to lease 10% of the refinery area with a rental period and sublease period equal to the remaining validity of the rental contract it holds with the department.

Investment in Equity Shares of Subsidiaries and Affiliates

As of December 31, 2023, and December 31, 2022, financial investment in equity shares of Thailoil's subsidiaries and affiliates, using the cost method under separate financial statements, amounted to THB 42,262 million and THB 42,262 million.

Policy on Investment in Subsidiaries

Thailoil holds a policy on investment in subsidiaries and on future investment in businesses that support Thailoil or strengthen Thailoil and Subsidiaries.

To supervise subsidiaries, Thailoil as a shareholder appoints a representative to participate in the subsidiaries' shareholders' meeting as proxy or representative and exercise the voting right at the shareholders' meeting under the Board of Directors' principles or guidelines.

Moreover, Thailoil appoints representatives to serve as directors or managing director of subsidiaries, or both. The positions of representatives include the Chairman of the Board, director, managing director, high-level executives or experts with the required knowledge and experience suitable for and without any direct conflict of interest with the business. The appointed representatives will manage subsidiaries under rules, regulations, and guidelines specified in the articles of association of Thailoil and each given subsidiary, and applicable laws.

Investment Promotion Privileges

Thai Oil Plc has gained a number of investment promotion privileges from Thailand Board of Investment (BOI) under the criteria and procedures stated in the Investment Promotion Act, B.E. 2520 (1977), for the rights and incentives given to the oil refining business. This includes the exemption of import duties on machinery and equipment, a permit to import skilled workers and experts to work in the number and for the period agreed by BOI, and a permit for overseas remittance in foreign currencies. In 2018 Thail's Clean Fuel Project (CFP) gained BOI investment promotion privileges for exemption of import duties on machinery and equipment under the same criteria mentioned above. In 2020 additional BOI privileges were granted to support investment in power generation from pitch at the Residue Hydrocracking Unit (RHCU) and sulfuric acid. This investment is exempt from corporate income tax on the combined net profit of up to 100% of the investment cost over eight years. The project, after corporate income tax exemption has ended, will receive an additional 50% reduction in corporate income tax from the usual rate on the net profit for five years of power and for three years of sulfuric acid-in addition to import tax exemption.

BOI promotion privileges have also been granted to Thail's subsidiaries as detailed below:

>> TOP SPP Co., Ltd. (TOP SPP) gained BOI privileges in 2014 for investment in power generation and steam production of 239.65 megawatts of electricity and 445.9 tons per hour of steam. The privileges include corporate income tax exemption on the combined net profit of up to 100% of the investment cost for eight years from November 25, 2015-November 24, 2023. Moreover

in 2021, TOP SPP gained BOI privileges for investment in power generation and steam production (120 megawatts of electricity and 294.20 tons per hour of steam), which include corporate income tax exemption on the combined net profit of up to 100% of the investment cost for three years, starting from April 1, 2023-March 30, 2026.

>> LABIX Co., Ltd. (LABIX) gained BOI privileges in 2012 for investment in the production of Linear Alkyl Benzene (LAB) and its by-products. LABIX earned corporate income tax exemption on the combined net profit of up to 100% of the investment cost for seven years, from January 8, 2016-January 7, 2023.

>> Sak Chaisidhi Co., Ltd. (SAKC) gained BOI privileges for investment in the production of Aliphatic Hydrocarbons and Aromatic Hydrocarbons, exempting the corporate income tax exemption on the combined net profit of up to 100% of the investment cost for eight years. This exemption has now expired. The company is currently exercising its corporate income tax reduction at 50% of the usual rate on the net profit for five years, from May 12, 2022-May 11, 2027. The business also earned a permit for utility (electricity and piped water) cost deduction of twice the actual expense for 10 years.

>> Saphip Green Energy Co., Ltd. (SGE) gained BOI privileges in 2018 for power generation from biogas. The business earned corporate income tax exemption on the combined net profit of up to 100% of the investment cost for eight years from January 1, 2020-December 31, 2027. In 2019, SGE earned BOI privileges for its investment in steam production, with corporate

income tax exemption on the combined net profit of up to 100% of the investment cost for five years from January 1, 2020-December 31, 2024. The company in 2020 gained BOI privileges for power generation from agricultural produce under measures to improve

production efficiency using renewable energy, and for machinery modification to enhance production efficiency, reducing the corporate income tax 50% of the usual rate on the combined net profit for three years from May 27, 2022-May 26, 2025.



Revenue Structure

Thaioil's core earnings were derived from our Oil refinery business. Other revenue contributors were the Lube base oil refinery, Aromatics and LAB, Power generation, Marine transportation services (Discontinued operations), Solvent, Ethanol, Olefins and Others businesses.

(THB Million)

			Ownership Interest		For the year ended December 31				
					2023		2022		2021
			Operator ⁽¹⁾	(%)	Amount	%	Amount	%	Amount
A. Net Sales									
1. Oil refinery	TOP	-	501,897	107	568,678	103	358,390	102	
2. Lube base oil refinery	TLB	100	25,315	5	27,773	5	23,832	7	
3. Aromatics and LAB	TPX	100	78,974	17	88,938	16	60,547	17	
4. Power generation	TP/TOP SPP	74/100	12,788	3	11,716	3	7,573	3	
5. Marine transportation services (Discontinued operations)	TM/TOMI	100	-	-	-	-	210	-	
6. Solvent	TOS	100	19,381	4	22,585	5	13,313	4	
7. Ethanol	TET	100	1,879	-	1,796	-	1,589	-	
8. Olefins	TII	100	5	-	2	-	-	-	
9. Others	TES/TTC	100	7,068	2	6,647	1	6,330	2	
Less: Eliminations			(178,063)	(38)	(198,546)	(36)	(126,288)	(36)	
Total			469,244	100	529,589	97	345,496	99	
B. Net Derivative Gain on Hedging									
1. Aromatics and LAB	TPX	100	168	-	100	-	303	-	
2. Solvent	TOS	100	15	-	13	-	-	-	
3. Others	TTC	100	-	-	10	-	23	-	
Total			183	-	123	-	326	-	
C. Net Foreign Exchange Gain ⁽²⁾									
1. Oil refinery	TOP	-	254	-	-	-	-	-	
2. Lube base oil refinery	TLB	100	-	-	30	-	47	-	
3. Aromatics and LAB	TPX	100	-	-	-	-	117	-	
4. Power generation	TP/TOP SPP	74/100	11	-	6	-	8	-	
5. Marine transportation services (Discontinued operations)	TM/TOMI	100	-	-	-	-	10	-	
6. Solvent	TOS	100	14	-	-	-	112	-	
7. Olefins	TII	100	1	-	-	-	-	-	
Less: Eliminations			-	-	-	-	(10)	-	
Total			280	-	36	-	284	-	

	Operator ⁽¹⁾	Ownership Interest (%)	For the year ended December 31					
			2023		2022		2021	
			Amount	%	Amount	%	Amount	%
D. Other Revenues ⁽³⁾								
1. Oil refinery	TOP	-	3,477	1	20,623	3	2,198	1
2. Lube base oil refinery	TLB	100	147	-	114	-	65	-
3. Aromatics and LAB	TPX	100	272	-	314	-	264	-
4. Power generation	TP/TOP SPP	74/100	54	-	18	-	14,771	4
5. Marine transportation services (Discontinued operations)	TM/TOMI	100	-	-	-	-	12	-
6. Solvent	TOS	100	76	-	40	-	28	-
7. Ethanol	TET	100	14	-	5	-	657	-
8. Others	TES/TTC	100	293	-	297	-	3	-
Less: Eliminations			(2,916)	(1)	(3,001)	-	(15,106)	(4)
Total			1,417	-	18,410	3	2,892	1
Total revenues (A-D)			471,124	100	548,158	100	348,998	100

Remarks:

⁽¹⁾ TOP is Thai Oil Plc

TLB is Thai Lube Base Plc

TPX is Thai Paraxylene Co., Ltd. having respective interests in Labix Co., Ltd.

TP is Thailoil Power Co., Ltd. which Thai Oil Plc carried out an entire business transfer from TP on February 1, 2021.
It has completely liquidation on September 17, 2022.

TOP SPP is TOP SPP Co., Ltd..

TM is Thailoil Marine Co., Ltd. having respective interests in TOP Maritime Service Co., Ltd.
in 2021 which TM was completely disposed all of its ordinary shares on April 30, 2021.

TOMI is Thai Oil Plc having respective interests in Thailoil Marine International Pte. Ltd., in 2021 and 2022
which Thailoil Marine International Pte. Ltd., has completely liquidation on December 28, 2022.

TOS is Thailoil Solvent Co., Ltd. having respective direct interests in TOPNEXT International Co., Ltd. and indirect interest in Sak Chaisidhi Co., Ltd., TOP Solvent (Vietnam) LLC., PT. Tirta Surya Raya JSKEM Private Limited and TOPNEXT India Private Limited. (Formerly TSCHEM India Private Limited.)

TET is Thailoil Ethanol Co., Ltd. having respective interests in Sapthip Co., Ltd.

TES is Thailoil Energy Services Co., Ltd.

TTC is Thailoil Treasury Center Co., Ltd. having respective direct interests in TOP Ventures Company Limited,
TOP Ventures Hong Kong Limited and indirect interest in TOP Ventures America LLC.

TII is PT TOP Investment Indonesia

⁽²⁾ Oil refinery have net foreign exchange loss in 2021 and 2022 but Oil refinery have net foreign exchange gain in 2023

⁽³⁾ Comprises received interests, export tax subsidy, revenues from services provided to subsidiary companies, land lease, single buoy mooring service fee, oil storage tank lease, revenue from disposal of scrap, gain on disposal of investments in associate, gain on reclassified of investment, share of profit of joint ventures and associates.

Related Party Transactions

For Fiscal Years 2022-2023, Thaioil and/or Subsidiaries engaged in key business transactions with subsidiaries and associates as well as related parties with common major shareholders and/or directors, as shown in the notes to the financial statements. All such transactions are based on market prices wherever available or mutually agreed prices wherever market prices are unavailable. The relationships among parties are listed as follow:

Company	Relationship with Thaioil as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
PTT Plc (PTT)	Major shareholder, holding 45.03% of Thaioil's total shares	>> Revenue	2	-	Occasional sale of solvents, considered normal business practice.
		>> TOPNEXT International Co., Ltd. sold solvents			
		>> Thaioil generated revenue from P1 Collaboration Agreement	344	1,001	The three-year P1 Collaboration Agreement for the sourcing of crude and condensate and supplying products within PTT Group, expires in December 2024.
		>> Thai Paraxylene Co., Ltd. generated revenue from P1 Collaboration Agreement	3	6	The three-year P1 Collaboration Agreement for the sourcing of crude and condensate and supplying products within PTT Group, expires in December 2024.
		>> Other income	25	50	
		>> Expenses			
		>> Thaioil purchased petroleum products	327,082	359,318	The Product Offtake and Crude Oil Supply Agreement (POCSA) and Feedstock Supply Agreement.
		>> Thaioil purchased natural gas	3,166	7,288	The 15-year natural gas supply agreements expired in 2023 (under renewal process).

Company	Relationship with Thaiol as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
Global Power Synergy Plc ⁽¹⁾ (GPSC)	>> 47.27% owned by PTT >> 10% owned by Thaiol >> Common Directors: Mr. Bandhit Thamprajamchit and Ms. Pannalin Mahawongtikul	>> Thai Lube Base Plc purchased natural gas >> TOP SPP Co., Ltd. purchased natural gas >> Sak Chaisidhi Co., Ltd. purchased natural gas >> LABIX Co., Ltd. purchased natural gas >> Other expenses >> Acquisition of assets >> Disposal of investment in associated company >> Other receivables >> Trade accounts payable >> Other payables >> Lease liabilities	344 8,451 80 802 123 121 - 586 48,344 95 3	377 8,482 96 873 98 1 10,701 1,605 71,121 61 4	The 10-year natural gas supply agreements expires in 2026 The 25-year natural gas supply agreements expires in 2041 The 10-year natural gas supply agreements expires in 2028 The 10-year natural gas supply agreements expires in 2025
		>> Revenue >> Thaiol generated revenue from services >> Thaiol received dividend >> TOP SPP Co., Ltd. generated revenue from backup power	2,482 169 1	16,206 642 1	The 25-year agreement to obtain compensation for the construction cost of pipeline to supply water, including petroleum product and fuel oil reserve sales agreement (2023-2025). The 7-year and 3-month sale and purchase agreement of backup power sale expires in August 2025.

Company	Relationship with Thaiol as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
Energy Recovery Unit Co., Ltd.		>> Other income >> Trade accounts receivable >> Other receivables >> Other non-current liabilities	25	16	
			-	3,070	
	>> Wholly owned by GPSC	>> Other non-current liabilities	5	3	The sale and purchase agreement of the Energy Recovery Unit (ERU) to supply power and steam to the Clean Fuel Project (CFP). Thaiol transferred the rights of use of ERU assets to Energy Recovery Unit Co., Ltd.
			3	5	
PTT Energy Solutions Co., Ltd. ⁽²⁾ (PTTES)	>> 40% owned by PTT >> 20% owned by Thaiol >> Thaiol's executive on PTES Board: Ms. Rungnapa Janchookiat	>> Revenue >> Thaiol received dividend >> Expenses >> Thaiol paid service expenses >> Loss on impairment of investments	3,092	3,092	
			-	4	
			-	88	The three-year service agreement to provide technical solutions and advice expired in December 2022. Impairment loss was related to the dissolution of PTT Energy Solutions Co., Ltd.
			-	11	

Company	Relationship with Thai Oil as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
Thai Petroleum Pipeline Co., Ltd. (THAPP)	>> 40.53% owned by PTT Oil and Retail Business Plc (PTTOR) >> 9.19% owned by Thai Oil >> Thai Oil's executive on THAPP Board: Mr. Chatapong Wungtanagorn	>> Revenue >> Thai Oil received dividend >> Expenses >> Thai Oil paid transportation service expenses and other expenses	212	95	The 20-year service agreement for transportation of petroleum products started from May 17, 1994 or goals achieved (which have not been met).
		>> Other payables	8	5	
PTT Digital Solutions Co., Ltd. (PTTDG)	>> 20% owned by PTT >> 20% owned by Thai Oil >> Common Director: Mr. Terdkiat Prommool >> Thai Oil's executive on PTTDG Board: Mr. Jeerawat Pattanasomsit	>> Revenue >> Thai Oil received dividend >> Expenses >> Thai Oil paid service expenses >> Acquisition of assets >> Other receivables >> Other payables >> Lease liabilities	30 239 43 68 126 5	25 227 32 35 91 8	The one-year technology and telecommunication services and solutions agreement expired in December 2024.
PTT Global Chemical Plc (GC)	>> 45.18% owned by PTT	>> Revenue >> TOPNEXT International Co., Ltd. sold solvent products >> Sak Chaisidhi Co., Ltd. >> Other income	235 160 2	292 - -	Occasional sale and purchase of solvent product, including purchase of feedstock, considered normal business practice.

Company	Relationship with Thaiol as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
IRPC Plc (IRPC)	>> 45.05% owned by PTT	>> Expenses >> Thaiol paid expenses for petroleum products >> TOPNEXT International Co., Ltd. purchased solvent products >> Sak Chaisidhi Co., Ltd. purchased raw materials >> TOP Solvent (Vietnam) LLC purchased solvent products >> Other expenses >> Trade accounts receivable >> Other receivables >> Trade accounts payable	- 210 - 114 2 22 1 21	1,237 49 226 14 1 39 - 292	Occasional sale and purchase of petroleum, petrochemical and solvent products, considered normal business practice.
		>> Revenue >> Thaiol sold petroleum products >> Thai Paraxylene Co., Ltd. sold petrochemical products >> TOPNEXT International Co., Ltd. sold solvent products >> Expenses >> Thaiol purchased petroleum products >> Thai Lube Base Plc. purchased raw materials >> TOPNEXT International Co., Ltd. purchased solvent products >> Sak Chaisidhi Co., Ltd. purchased raw materials	142 2,244 91 - 89 1,489 475	- 1,418 147 550 - 1,730 408	

Company	Relationship with ThaiOil as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
PTT Oil and Retail Business Plc (OR)		>> TOP Solvent (Vietnam) LLC. purchased solvent products	-	227	
		>> Trade accounts receivable	68	11	
		>> Trade accounts payable	94	127	
	>> 75% owned by PTT >> Common Directors: Dr. Buranin Rattanasombat and Mr. Terdkiat Prommool	>> Revenue	200,817	221,783	The Product Offtake and Crude Oil Supply Agreement (POCSA) and Feedstock Supply Agreement
		>> ThaiOil sold petroleum products			
		>> Thai Lube Base Plc sold lube base oil products	3,956	4,379	Occasional sale of lube base oil, considered normal business practice.
		>> Saphthip Co., Ltd. sold ethanol products	675	764	Occasional sale of ethanol, considered normal business practice.
		>> Other income	13	12	
		>> Expenses			
		>> ThaiOil purchased petroleum products	114	32	Occasional sale of petroleum products, lube base oil,
		>> Thai Lube Base Plc purchased lube base oil products	-	33	petrochemicals, fuels for production and solvents,
		>> Thai Paraxylene Co., Ltd. purchased fuel for production processes	3	2	considered normal business practice.
		>> TOPNEXT International Co., Ltd. purchased solvents	20	20	
		>> Saphthip Co., Ltd. purchased petroleum products	7	10	
		>> Other expenses	4	2	

Company	Relationship with Thaiol as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
		>> Trade accounts receivable >> Trade accounts payable >> Other payables	11,335 94 4	12,655 10 3	
GC Maintenance and Engineering Co., Ltd.	>> Wholly owned by GC	>> Acquisition of assets >> Other expenses >> Other payables	41 4 4	22 4 1	
IRPC Polyol Co., Ltd.	>> 50% owned by IRPC	>> Revenue >> TOPNEXT International Co., Ltd. sold solvents	3	3	Occasional sale of solvent products, considered normal business practice.
NPC Safety and Environmental Service Co., Ltd.	>> Wholly owned by GC	>> Expenses >> Other expenses	1	1	
Energy Complex Co., Ltd.	>> 50% owned by PTT	>> Expenses >> Other expenses >> Interest expense - finance lease >> Other non-current assets >> Other payables >> Lease liabilities	45 1 15 6 20	44 1 15 3 42	The three-year property lease agreement expires in November 2024 and can be renewed on a three-year basis.
Global Green Chemicals Plc	>> 72.29% owned by GC	>> Expenses >> Thaiol purchased petroleum products >> Trade accounts payable	2,154 97	2,533 98	Occasional sale of petroleum products, considered normal business practice.

Company	Relationship with Thaioil as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
PTT International Trading Pte. Ltd.	>> Wholly owned by PTT	>> Revenue			
		>> Thaioil sold petroleum products	11,091	16,454	Occasional sale of petroleum products, lube base oil and petrochemicals products, considered normal business practice.
		>> Thai Paraxylene Co., Ltd. sold petrochemical products	2,416	6,533	
		>> Thai Lube Base Plc	31	-	
		>> sold lube base oil products			The three-year P1 Collaboration Agreement for the sourcing of crude and condensate and supplying products within PTT Group expires in December 2024.
		>> Thaioil generated revenue from P1 Collaboration Agreement	585	649	
		>> Thai Paraxylene Co., Ltd. generated revenue from P1 Collaboration Agreement	3	7	The three-year P1 Collaboration Agreement for the sourcing of crude and condensate and supplying products within PTT Group expires in December 2024.
		>> Revenue from oil price crack spread swap contract	42	2	
		>> Expenses			
		>> Expenses on petroleum products	2,577	9,339	
		>> TOP Solvent (Vietnam) LLC. purchased solvent products	376	678	
		>> JSKEM Private Limited purchased solvent products	35	-	
		>> Trade accounts receivable	3,276	943	
		>> Other receivables	636	643	
		>> Trade accounts payable	33	1,219	

Company	Relationship with Thaiol as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
PTT Phenol Co., Ltd.	>> Wholly owned by GC	>> Expenses >> TOPNEXT International Co., Ltd. purchased solvent products >> TOP Solvent (Vietnam) LLC. purchased solvent products >> JSKem Pte. Ltd. purchased solvent products >> Trade accounts payable	17	205	Occasional purchase of solvent products, considered normal business practice.
			-	133	
			-	25	
			-	26	
			-	-	
PTT MCC Biochem Co., Ltd.	>> 50% owned by GC	>> Expenses >> TOPNEXT International Co., Ltd. purchased solvent products	-	3	Occasional sale of solvent products, considered normal business practice.
			-	-	
Vencorex (Thailand) Co., Ltd.	>> Wholly owned by GC	>> Revenue >> TOPNEXT International Co., Ltd. sold solvent products >> Trade accounts receivable	5	8	Occasional sale of solvents products, considered normal business practice.
			1	-	
GC Polyols Co., Ltd.	>> 82.10% owned by GC	>> Expenses >> TOP Solvent (Vietnam) LLC. purchased solvent products >> Trade accounts payable	2	-	Occasional sale of solvents, considered normal business practice.
			1	-	
PTT Tank Terminal Co., Ltd.	>> Wholly owned by PTT	>> Expenses >> Sak Chaisidhi Co., Ltd. paid storage tank service expenses >> Other payables	24	24	The 24-year storage tank service agreement expires on September 30, 2038.
			2	-	

Company	Relationship with Thaiol as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
Thai Tank Terminal Co., Ltd.	>> 36.43% owned by GC	>> Expenses >> Sak Chaisidhi Co., Ltd. paid storage tank service expenses	13	16	The three-year storage tank service agreement expires on December 31, 2025.
		>> LABIX Co., Ltd. paid storage tank service and other service expenses	-	6	The three-month storage tank service agreement expired in May 2022.
		>> Other payables	-	1	
		>> Expenses >> TOP Solvent (Vietnam) LLC. purchased solvent products	-	27	Occasional sale of solvent products, considered normal business practice.
PTT Treasury Center Co., Ltd.	>> Wholly owned by PTT	>> Thaiol paid interest expenses on borrowings	-	157	The bridging loan for not more than 18 months with a market rate of not more than 2.5% per annum for an amount not exceeding USD 670 million, or approximately THB 22,154 million.
Combined Heat and Power Producing Co., Ltd. (CHPP)	>> Wholly owned by GPSC	>> Expenses >> Thaiol purchases fuels for production process	5	3	Occasional purchase of fuels for production process, considered normal business practice.
GC-M PTA Co., Ltd.	>> 74% owned by GC	>> Revenue >> Thai Paraxylene Co., Ltd. sold petrochemical products	5,462	3,529	Occasional sale and purchase of petrochemical products, considered normal business practice.
		>> Trade accounts receivable	423	-	

Company	Relationship with ThaiOil as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
Siam Management Holding Co., Ltd.	>> Wholly owned by PTT Global Management Co., Ltd.	>> Disposal of investment in associated company	-	11,346	
Business Services Alliance Co., Ltd.	>> 25% owned by PTT >> Common Director: Mr. Suchart Ramarch	>> Expenses >> Other expenses	-	1	
Nuplex Resins (Vietnam) Pty Ltd.	>> Wholly owned by GC	>> Revenue >> TOP Solvent (Vietnam) LLC. sold solvent products >> Trade accounts receivable	21 3	26 3	Occasional sale of solvent products, considered normal business practice.
PTT International Trading London Ltd.	>> Wholly owned by PTT	>> Revenue >> ThaiOil generated revenue from P1 Collaboration Agreement >> Thai Paraxylene Co., Ltd. generated revenue from P1 Collaboration Agreement >> Other receivables	23 - 26	46 1 48	The three-year P1 Collaboration Agreement expires in December 2024 for the sourcing of crude and condensate and supplying products within PTT Group. The three-year P1 Collaboration Agreement expires in December 2024, for the sourcing of crude and condensate and supplying products within PTT Group.

Company	Relationship with Thailoil as at December 31, 2023	Transaction	Value (THB Million)		Conditions
			2023	2022	
PTT International Trading USA Inc.	>> Wholly owned by PTT	>> Revenue >> Thailoil generated revenue from P1 Collaboration Agreement	2	-	The three-year P1 Collaboration Agreement expires in December 2024 for the sourcing of crude and condensate and supplying products within PTT Group.
		>> Other receivables	2	-	
PTT MEA Ltd.	>> Wholly owned by PTT	>> Revenue >> Thailoil generated revenue from P1 Collaboration Agreement	11	11	The three-year P1 Collaboration Agreement expires in December 2024 for the sourcing of crude and condensate and supplying products within PTT Group.
		>> Expenses >> Thailoil purchased bunker oil	86	-	
		>> Other receivables	5	12	

Remarks:

- (1) All issued and subscribed shares of Global Power Synergy Plc (GPSC) and Thailoil have seen investment type change in GPSC from an investment fund in an associated company to financial assets, whose fair values are determined through other net profits/losses.
- (2) On August 29, 2022, the Extraordinary General Meeting of Shareholders No. 1/2022 of PTT Energy Solution Co., Ltd. (PTTES) approved the dissolution of PTES, whose liquidation process is expected to be completed in two years from the dissolution date.
- (3) On August 31, 2022, GC Glycol Co., Ltd. registered its company dissolution with the Department of Business Development, Ministry of Commerce, with effect from December 31, 2023 and is under the liquidation process.

Opinion of the Audit Committee on Related Party Transactions

The Audit Committee does not have any difference in opinion from that of the Board of Directors.

Policy on Future Related Party Transactions

Thaioil is committed to full compliance with laws, rules and regulations set forth by the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET), including generally acceptable accounting principles on the disclosure of related parties and entities and connected transactions defined by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King.

In case of any accounting disagreement and discrepancy on related party transactions with either persons or

entities, the Audit Committee is charge for reviewing and making decisions on the appropriateness of such transactions. Should any transactions need specific knowledge and expertise, Thaioil is to acquire comments and suggestions from a third party with applicable proficiency, such as the external auditor or independent asset assessor and individuals with conflicts of interests. The opinions of the Audit Committee or the proficient third party will serve as insights and information for the approval by the Board or the shareholders, as applicable. This is to ensure that such transactions are not considered an illegal transfer of benefit among and between Thaioil, subsidiaries, joint ventures and associates, or related parties and shareholders, but transactions taken for the maximum benefit of the shareholders, especially minor shareholders.

Management Discussion and Analysis of Financial Position and Operating Results Fiscal Year 2023

Operating Results-Consolidated Financial Results

		2023	2022	+ / (-)
Gross Integrated Margin (GIM)	USD/barrel	10.0	13.4	(3.4)
<u>excluding</u> Stock Gain/(Loss) ⁽¹⁾				
Gross Integrated Margin (GIM)	"	9.8	14.3	(4.5)
<u>including</u> Stock Gain/(Loss) ⁽¹⁾				
Sales Revenue	Million Baht	459,402	505,703	(46,301)
Net Realized Gain/(Loss) on Financial Instruments	"	(2,493)	(15,841)	13,348
EBITDA	"	35,453	37,187	(1,734)
Net Gain/(Loss) on Fair Value Measurement of Financial Instruments	"	(356)	(164)	(192)
Net Foreign-Exchange Gain/(Loss) ⁽²⁾	"	213	(64)	277
Gain from Selling Investment in an Associate	"	-	10,038	(10,038)
Gain/(Loss) from Reclassification of Investment	"	-	7,297	(7,297)
Financial Costs	"	(4,089)	(3,860)	(229)
Reversal of Income Tax/(Expenses)	"	(4,672)	(8,918)	4,246
Net Profit/(Loss)	"	19,443	32,668	(13,225)
Basic Earnings/(Loss) per Share	Baht	8.70	15.63	(6.93)
Stock Gain/(Loss)	Million Baht	(808)	3,613	(4,421)
Reversal/(Write-Down) on Crude and Petroleum Product Inventory ⁽³⁾	"	(125)	(10)	(115)

Remarks:

- ⁽¹⁾ Gross Integrated Margin (GIM) is the integrated margin among Thailoil Refinery, Thai Lube Base Plc, Thai Paraxylene Co., Ltd., and LABIX Co., Ltd.
- ⁽²⁾ Including net foreign exchange gain/(loss) on foreign currency assets and liabilities in 2023 and 2022 of THB 485 million and THB (983) million, respectively.
- ⁽³⁾ Including reversal/(write-down) of allowance for the decline in values of crude and petroleum product inventories, adjusted to realizable values and reversal/(write-down) of petroleum products at cost.

In 2023, Thailoil and Subsidiaries derived THB 459,402 million in sales revenue, down THB 46,301 million with lower product selling prices tracking with crude oil prices, while the products spread over Dubai crude fell almost across the board with the slowdown of the global economy together with rising supply. The lube base oil spread over fuel oil fell with rising supply while the gross profit of the LABIX fell with lower domestic demand. Nevertheless, the spread between paraxylene over ULG 95 surged with the improved paraxylene demand over last year, while the spread between bitumen over fuel oil improved mildly. These resulted in the GIM excluding stock gain/(loss), lose USD 3.4 per barrel to USD 10.0 per barrel. Furthermore, Thailoil booked stock loss of THB 808 million, compared with THB 3,613 million in stock gain last year. On the other hand, there was a write-down on crude and petroleum product inventory of THB 125 million, bigger loss than 2022 of THB 115 million. With the incorporation of the net realized loss from financial instruments of THB 2,493 million, smaller loss by THB 13,348 million than the previous year (including only derivative instruments for commodity hedging), Thailoil and Subsidiaries reported THB 35,453 million in EBITDA, down THB 1,734 million from last year. Thailoil and Subsidiaries had a loss from fair value measurement of financial instruments of THB 356 million, but had a net foreign exchange gain of THB 213 million due to Thai Baht appreciation (THB 485 million of which was from foreign exchange gain on foreign currency assets and liabilities). However, in 2022, Thailoil and Subsidiaries profited from investment reclassification and disposal of investment in Global Power Synergy Plc (GPSC) totaling THB 17,334 million (before tax) or THB 12,880 million (net of tax). Offsetting with depreciation, financial costs, and income tax expenses, this year Thailoil and Subsidiaries netted a profit of THB 19,443 million, down THB 13,225 million from last year.

Results by Company for the Year 2023 Compared with Year 2022

Thailoil Refinery (Thailoil): Thailoil Refinery commanded higher utilization this year, whereas its product sales

totalled roughly the same as last year, so the sharp fall in average product selling prices resulted in THB 492,055 million in revenue, down THB 52,737 million. The refinery posted a gross refining margin excluding stock gain/(loss) amounted to USD 8.5 per barrel, down USD 3.5 per barrel; its stock losses this year totaled THB 808 million against a stock gain of THB 3,613 million last year. Inclusive of the net realized loss from financial instruments of THB 2,650 million, the loss was lower by THB 13,347 million. The EBITDA for the refinery this year was then THB 26,288 million, down THB 3,851 million from last year. Note that the refinery posted a loss on the fair value measurement of financial instruments of THB 224 million, a slightly heavier loss than last year. It profited from foreign exchange transactions a net amount of THB 254 million, compared with last year's loss of THB 24 million. At any rate, last year the refinery recorded a profit derived from the reclassification of investment and disposal of investment in GPSC of THB 18,026 million before tax, which equaled THB 13,572 million, net of tax. With the deduction of depreciation, financial costs, and income tax expenses, the refinery's net profit amounted to THB 14,607 million, down THB 16,280 million from last year. Note also that, with the dividend received this year, Thailoil Refinery's net profit would stand at THB 21,513 million.

Thai Lube Base Plc (TLB): TLB derived THB 25,315 million in sales revenue, down THB 2,458 million from last year, mainly due to lower product prices. In addition, the lube base oil spread over fuel oil narrowed, resulting in USD 36 per ton lower product-to-feed margin. The bottom line is TLB's EBITDA of THB 2,678 million (down THB 803 million) and net profit of THB 1,984 million (down THB 667 million from last year).

Thai Paraxylene Co., Ltd. (TPX): TPX posted THB 54,007 million in sales revenue, down THB 5,735 million, due to lower average product selling prices. Yet, the product-to-feed margin rose USD 38 per ton, mainly on account of the better aromatics spread from lower ULG after concerns

about Russia-Ukraine tensions have lessened. Combining with net realized gain on financial instruments of THB 155 million, TPX derived THB 1,284 million in EBITDA against the loss last year of THB 1,359 million. With the incorporation of the gain from the fair value measurement of financial instruments of THB 7 million (against a corresponding loss of THB 56 million last year) and this year's net foreign exchange loss of THB 33 million (against a corresponding profit of THB 17 million last year), TPX reported a net profit this year of THB 401 million, compared with a net loss of THB 2,411 million in the same period last year.

LABIX Co., Ltd. (LABIX): Production rate rose 5% in volume due to capacity expansion in Q2/2023, while LAB sales grew 5% over the same time last year. Nevertheless, with LAB prices tracking its feedstock prices, sales revenue dropped to THB 26,615 million (down THB 4,297 million) while the gross profit took a drop due to lower LAB domestic demand and rising supply. As a result, LABIX posted a lower EBITDA of THB 620 million; the net foreign exchange loss this year totaled THB 33 million or THB 6 million higher loss than last year. Offsetting with depreciation, financial costs, and income tax expenses, LABIX's net profit fell THB 1,008 million from last year.

For 2023, the aromatics business group derived THB 78,975 million in consolidated sales revenue, with THB 2,941 million in consolidated EBITDA and THB 873 million in consolidated net profit.

TOP SPP Co., Ltd. (TOP SPP): TOP SPP generated THB 12,788 million in sales revenue, increased by THB 1,072 million from last year, mainly due to the rising sales volume from the commercial operation of the TOP SPP Expansion Project, thus giving the company THB 3,029 million in EBITDA, an increment of THB 889 million. Nevertheless, TOP SPP booked a loss from the unwind of interest rate swap contracts and financial costs of loan refinancing totaling THB 202 million. Offsetting depreciation and income tax expenses, TOP SPP netted

a profit of THB 1,737 million, up THB 395 million from last year.

Thaioil and Subsidiaries had their equity in GPSC diluted from 20.78% to 10.0%, thus eliminating booked a share of profit from GPSC compared with the same period last year. Thus, dividend income from GPSCs of Baht 85 million in Q1/2023 and interim dividend income of Baht 85 million were booked in Q3/2023.

Thaioil Solvent Co., Ltd. (TOS): TOS boasted 73% in solvent utilization rate and an increment in sale volume of approximately 5,000 tons. Its average product sales price per unit dropped tracking crude oil price, resulting in THB 19,381 million in sales revenue, down THB 3,204 million. TOS posted THB 887 million in EBITDA, down THB 156 million. In 2023 it posted booking of profit from foreign exchange and fair value measurement of financial instruments of THB 29 million, up THB 74 million from last year. Offsetting depreciation, financial costs, tax income expenses, and non-controlled equity, in 2023 TOS derived a net profit of THB 403 million, down THB 122 million from last year.

PT TOP Investment Indonesia (TII): The company netted a loss of THB 200 million, which was an improvement of THB 613 million from last year, mainly due to its booking of the share of the loss in PT Chandra Asri Petrochemical Tbk (CAP) after lower production costs in 2023. Meantime, petrochemical demand surged with China's border reopening early in the year, which enabled CAP to grow its capacity and sales volume. Also, CAP's acquisition of a power company early in the year allowed it to post healthier performance this year.

On December 29, 2023, the Extraordinary General Meeting of Shareholders (EGM) of CAP approved the renaming of the company to "PT Chandra Asri Pacific Tbk", with the name registration approved on January 3, 2024.

Thaioil Ethanol Co., Ltd. (TET): TET grossed a revenue of THB 1,879 million, up THB 83 million from last year

due to the surge in ethanol selling prices. Yet, the rise in feedstock costs, coupled with the drop in ethanol sales volume, consistent with the lower demand for E85 and E20, contributed to a lower gross profit margin. As a result,

its EBITDA fell to THB 87 million, down THB 119 million, and its net loss stood at THB 54 million, THB 72 million higher loss than last year.

Analysis of Consolidated Financial Position

Unit: THB Million

Financial Position	As at December 31, 2023	As at December 31, 2022	+/(−)
Total Assets	419,993	444,581	(24,588)
Total Liabilities	251,681	285,923	(34,242)
Total Equity-net	168,312	158,657	9,655

Total Assets

As of December 31, 2023, Thailoil and Subsidiaries reported THB 419,993 million in total assets, THB 24,588 million lower than last year, with the following main reasons:

- >> Cash, cash equivalents, and short-term investment fell THB 9,543 million with their performance in 2023, deduction of the annual dividends, paid out in April 2023, and the interim dividend, paid out in September 2023, in addition to the cash paid to investment projects. Most of this cash payment was for the investment in the Clean Fuel Project (CFP) and repayment for mature debentures of about USD 500 million in early 2023.
- >> Current assets fell THB 18,914 million on account of decreases inventories following decline in crude oil prices and related products. Additionally, oil fuel fund receivables declined significantly from repayment from the fund which was in line with Royal Thai Government energy price policy.
- >> Non-current assets rose THB 3,869 million, due largely to the net rise in property, plant, and equipment from

project investment, including the Clean Energy Project, offsetting the Rights Of Use (ROU) that fell according to the TFRS. Meanwhile, fair value through other comprehensive income went down following decline in prices of the securities the company invested in.

Total Liabilities

As of December 31, 2023, Thailoil and Subsidiaries reported total liabilities of THB 251,681 million, down THB 34,242 million from the same period in 2022 mainly due to:

- >> Declining current liabilities of THB 20,031 million largely because of lower trade accounts payable from the lower crude oil prices. Also, Thailoil paid crude oil trade accounts payable sooner due to its liquidity; current liabilities surged as some subsidiaries used more working capital during the period.
- >> Long-term borrowings and debentures (including current portions) fell THB 11,941 million because Thailoil issued debentures during the year in a lesser number than debentures redeemed during the year.
- >> Other non-current liabilities fell THB 2,270 million mainly because of the falls in lease liabilities and those

under financial derivatives regarding CCS and IRS in accordance with fair value measurement.

Total Equity

As of December 31, 2023, Thaioil and Subsidiaries reported THB 168,312 million in consolidated equity, a rise of THB 9,655 million or 6% from last year. The main

reason was the net profit rise for the year offset by annual and interim dividends coupled with the change in financial assets whose fair values were measured by FVTOCI, notably for GPSC and UBE capital, as their stock prices faced drastic drops. Equally important, there was a decrease in the evaluation of fair value of capital in CVC businesses.

Analysis of Cash Flow and Financial Ratios

Briefly Cash Flow Statement

Unit: THB Million

	Consolidated Financial Statements	Separate Financial Statements
Net cash flow from (used in) operating activities	28,088	20,185
Net cash flow from (used in) investing activities	(19,692)	(18,580)
Net cash flow from (used in) financing activities	(23,072)	(12,260)
Net decrease in cash and cash equivalents	(14,676)	(10,656)
Cash and cash equivalents at the beginning of period	43,576	34,787
Effect of exchange rate changes on cash and cash equivalents	(468)	(395)
Cash and cash equivalents at the end of period ⁽¹⁾	28,432	23,737

Remark:

⁽¹⁾ Excluding deposits at financial institutions used as collateral

In 2023, Thaioil and Subsidiaries boasted THB 28,088 million in cash flow derived from operating activities, the bulk of which (THB 24,257 million) was profit before income tax expenses together with items with adjustment in profit before tax registered a net rise of THB 12,887 million and THB 6,873 million in less cash derived from operating assets and liabilities. During the period, there was a tax payment, net, of THB 2,183 million. Nevertheless, Thaioil and Subsidiaries posted THB 19,692 million in cash flow spent on investing activities largely because of the cash needed for property, plants, and equipment (THB 14,504 million), the bulk of which went into CFP, which was under construction.

Thaioil and Subsidiaries' cash flow associated with financing activities came to THB 23,072 million largely because of the net cash receipt from current and long-term borrowings from financial institutions of THB 2,309 million and THB 10,000 million in issued new debentures in cash. Then there is THB 16,381 million in cash paid for debenture redemption together with THB 5,268 million in dividend payment as well as cash payment for financial costs totaling THB 7,653 million.

As a result of all activities, Thaioil and Subsidiaries reported a drop of THB 14,676 million in cash and cash equivalents from December 31, 2022. Thaioil and

Subsidiaries were affected by foreign exchange rates, which trimmed our cash and cash equivalents by THB 468 million. Once the cash and cash equivalents at the

beginning of the year (THB 43,576 million) were included, Thailoil and Subsidiaries commanded THB 28,432 million at December 31, 2023.

Financial Ratios

Financial Ratios		2023	2022 ⁽¹⁾
Current Ratio	Times	1.7	1.5
Interest Coverage Ratio ⁽¹⁾	"	8.7	9.6
Long-term Loans/Total Capitalization	Percent	52	55
Long-term Loans/Total Equity	Times	1.1	1.2
Total Liabilities/Total Equity	"	1.5	1.8
Net Debt/Equity	"	0.9	1.0

Remark:

⁽¹⁾ Excluding depreciation and amortization.

In 2023, Thailoil and Subsidiaries' current ratio came to 1.7 times, up from last year by 0.2 time. Our interest coverage ratio equaled 8.7 times, a decline from last year's by 0.9 time. Accounting for this was our inferior performance to last year. However, our cash flow and current ratio, as well as other ratios demonstrated in the table above, ensure that Thailoil and Subsidiaries have enough liquidity for the operations, investment, ability

to manage loan repayment, and compliance with all key debt covenants.

In addition, this year Thailoil and Subsidiaries reported lower long-term loans to total capitalization, long-term loans to total equity, and total liabilities to total equity than last year.

Outstanding Consolidated Liabilities (Short-Term and Long-Term)
As of December 31, 2023 and 2022

Unit: THB Million

	For the year ended December 31	
	2023	2022
Short-term loans from financial institutions	3,198	1,892
Current portion of long-term loans from financial institutions, net	3,061	2,884
Long-term loans from financial institutions, net	16,035	19,807
Long-term loans from a third party	191	216
Current portion of long-term loans from related parties, net	7,000	17,317
Debentures, net	133,632	131,635
Total	163,117	173,751

Details of Long-Term Borrowings and Outstanding Debentures as of December 31, 2023
By Company and Denomination

Unit: THB Million

	Thai Oil Plc	LABIX Co., Ltd.	TOP SPP Co., Ltd.	Thaioil Solvent Co., Ltd.	Thaioil Ethanol Co., Ltd.	Thaioil Treasury Center Co., Ltd.	Total
USD-denominated Debentures ⁽¹⁾	5,812	-	-	-	-	98,340	104,151
THB-denominated Debentures	36,480	-	-	-	-	-	36,480
THB-denominated Borrowings	16,212	2,651	-	-	52	-	18,915
Other currencies denominated Borrowings ⁽¹⁾	-	-	-	372	-	-	372
Total	58,504	2,651	-	372	52	98,340	159,919

Remark:

⁽¹⁾ Including foreign-exchange gain/(loss) from foreign currency-denominated liabilities revaluation.

Capital Expenditure by Company for the Year 2023 and 2022

Unit: THB Million

	For the year ended December 31	
	2023	2022
Thai Oil Plc	12,912	28,732
Thai Paraxylene Co., Ltd.	8	13
LABIX Co., Ltd.	26	45
Thai Lube Base Plc	198	534
Thaioil Power Co., Ltd.	0	-
Thaioil Marine Co., Ltd.	0	-
Thaioil Solvent Co., Ltd.	42	269
Thaioil Ethanol Co., Ltd.	80	133
Thaioil Energy Service Co., Ltd.	0	-
PT TOP Investment Indonesia	0	0
TOP SPP Co., Ltd.	731	1,907
Total	14,504	31,929

Remark:

⁽¹⁾ Excluding Related Parties Transactions in Thaioil and Subsidiaries.

In 2023, Thaioil and Subsidiaries reported a total capital expenditure of THB 14,504 million: THB 12,912 million was under Thaioil and the remaining THB 1,592 million under subsidiaries. This capital expenditure was allocated to the following key projects:

- >> THB 11,646 million for the CFP.
- >> THB 255 million for the RHCU Project Phase 2.
- >> THB 150 million for the Corporate Venture Capital (CVC) Project.
- >> THB 121 million for the Digital Transformation Project.
- >> THB 44 million for the New Fuel Oil Storage Tank Construction Project.
- >> THB 12 million for the New Bang Phra Reservoir Raw Water Line Project.
- >> THB 5 million for the Thaioil Sriracha Building Project.

In 2022, Thaioil and Subsidiaries reported a total capital expenditure of THB 31,929 million: THB 28,732 million under Thaioil and the remaining THB 3,197 million under subsidiaries. This capital expenditure was allocated to:

- >> THB 26,390 million for the CFP.
- >> THB 2 million for the Thaioil Sriracha Building Project.
- >> THB 26 million for the Jetty Expansion Project.
- >> THB 157 million for the Digital Transformation Project.
- >> THB 114 million for the New Bang Phra Reservoir Raw Water Line Project.
- >> THB 28 million for the Fire-Extinguishing Water Improvement Project.
- >> THB 2 million for the Crude Oil Tank Construction Project.

Investors can access historical details under the “Management Discussion and Analysis of Financial Position and Operating Performance” at the corporate website “www.thaioilgroup.com” under topic “Invest or Relations/Financial Highlights”.

Factors and Impacts of Sustainability

To upgrade the quality of life for all by leveraging our sustainable energy and chemical businesses, Thailoil and Subsidiaries strive to build on our strong foundation, leading to growth. Our goal is to become a highly competitive energy and chemical company that strives for sustainable growth and become a centennial organization. We pay due attention to Environment, Social and Governance (ESG) in line with our business context and future directions of the energy industry while meeting expectations and maintaining Thailoil’s engagement with all stakeholders.

This year posed diverse challenges to Thailoil and Subsidiaries, brought about by domestic and global circumstances. These challenges arise from economic volatility amid sluggish conditions, in turn arising from

volatile financial markets as well as commodity prices; geopolitical conflicts; and demographic structural transformation to an aging society-all of which directly affect our businesses. Challenges have also come from Thailand’s Net Zero GHG emission goal by 2065 together with the energy transition to a low-carbon society. All these have caused changes in consumers’ needs and behavior, prompting Thailoil and Subsidiaries to modify business strategies to align with such changes and elevate their competitiveness for sustainable growth. Our assessment of materiality issues of 2023 indicated that climate change would continue to wield both positive and negative effects on stakeholders and businesses over the long term. Thailoil and Subsidiaries have therefore managed our business flexibility and preparedness for short-term and long-term business opportunities to align with our vision of Empowering Human Life through Sustainable Energy and Chemicals.

For additional details, please go to “**Sustainability**” on page 76 under “**Policy and Goals for Sustainability Management**” and “**Sustainability Management in Environmental Aspect**”.

Summary of Financial Data

Summary of consolidated financial statements of Thaioil and Subsidiaries for the period 2021-2023

Statement of Financial Position

Unit: THB Million

Statement of Financial Position	As at 31 December		
	2023	2022	2021
Assets			
Current assets			
Cash and cash equivalents	28,432	43,576	29,696
Deposits at financial institutions as collaterals	-	343	328
Short-term investments	5,945	-	-
Trade accounts receivable, net	31,154	28,759	23,415
Current portion of finance lease receivables, net	-	-	-
Other receivables	2,353	4,361	1,009
Inventories, net	52,656	55,343	39,576
Derivative assets	219	1,408	414
Prepaid corporate income tax	2,197	2,197	428
Value-added tax receivables	1,790	1,957	2,500
Assets related to discontinued operations	-	-	305
Assets held-for-sale	-	-	-
Other current assets	625	15,884	3,568
Total current assets	125,371	153,828	101,239
Non-current assets			
Financial assets measured at fair value through profit or loss	722	798	619
Financial assets measured at fair value through other comprehensive income	14,253	21,394	1,256
Investments in joint ventures	32,039	32,603	55,412
Investments properties, net	103	103	103
Property, plant and equipment, net	218,618	206,476	178,399
Rights-of-use assets, net	22,224	24,038	17,131
Derivative assets	-	-	1,255
Intangible assets, net	3,230	3,348	3,307

Statement of Financial Position	As at 31 December		
	2023	2022	2021
Deferred tax assets	2,502	1,125	2,585
Other non-current assets	930	868	838
Total non-current assets	294,621	290,753	260,905
Total assets	419,993	444,581	362,144
Liability and equity			
Current liabilities			
Short-term loans from financial institutions	3,199	1,892	929
Trade accounts payable	50,184	74,154	23,001
Other payables	3,910	4,948	6,561
Current portion of long-term loans from financial institutions, net	3,061	2,884	1,213
Derivatives liabilities	29	193	2
Current portion of debentures, net	7,000	17,317	3,000
Current portion of lease liabilities, net	1,402	1,401	1,247
Excise duty payables	1,463	452	1,798
Income tax payables	3,154	432	725
Estimated short-term liabilities	99	-	-
Total current liabilities	73,501	103,673	38,476
Non-current liabilities			
Long-term loans from financial institutions, net	16,035	19,807	30,476
Long-term loans from third parties	191	216	279
Long-term loans from related parties, net	-	-	14,000
Debentures, net	133,632	131,635	132,868
Derivatives liabilities	1,109	1,980	373
Lease liabilities, net	19,688	21,107	14,135
Deferred tax liabilities	16	3	170
Other non-current liabilities	7,509	7,503	8,273
Total non-current liabilities	178,180	182,251	200,574
Total liabilities	251,681	285,924	239,050

Statement of Financial Position	As at 31 December		
	2023	2022	2021
Equity			
Share capital			
Registered	22,338	23,151 ⁽²⁾	20,400 ⁽¹⁾
Issued and fully paid-up	22,338	22,338	20,400
Share premium on ordinary shares	10,699	10,699	2,456
Appropriated retained earnings			
Statutory reserve	2,315	2,315	2,040
Other reserves	245	245	245
Unappropriated retained earnings	141,288	127,095	103,544
Other deficits	(4,343)	(4,343)	(6,665)
Other surplus held-for-sale	-	-	-
Other components of equity	(6,974)	(2,315)	(1,152)
Other components of equity related to discontinued operations	-	-	13
Equity attributable to the owners of the parent	165,568	156,034	120,881
Non-controlling interests	2,744	2,623	2,213
Total equity	168,312	158,657	123,094
Total liabilities and equity	419,993	444,581	362,144

Remarks:

⁽¹⁾ Registered share capital, issued and paid-up share capital of 2,040,027,873 ordinary shares at a par value of THB 10 each, totaling THB 20,400 million as at year-end 2021

⁽²⁾ Registered share capital, issued, and offered of 2,315,147,873 ordinary shares at a par value of THB 10 each, totaling THB 23,151 million, and fully paid-up share capital of 2,233,835,566 ordinary shares at a par value of THB 10 each, for a total of THB 22,338 million at year-end 2022.

Statement of Income

Unit: THB Million

Statement of Income	For the year ended December 31		
	2023	2022	2021
Revenue			
Revenue from sales and services	459,402	505,703	335,827
Subsidy from Oil Fuel Fund	9,842	23,886	9,669
Net foreign exchange gain	213	-	-
Gain on disposal of investment in associate	-	10,038	-
Gain from investment reclassification	-	7,297	-
Dividend income	201	81	7
Other income	1,138	781	1,129
Total revenue	470,796	547,786	346,632
Expenses			
Cost of sales of goods and services	(436,164)	(481,137)	(319,555)
Selling expenses	(950)	(1,052)	(770)
Administrative expenses	(2,570)	(3,130)	(2,286)
Net financial instruments loss	(2,850)	(16,006)	(2,406)
Net foreign exchange loss	-	(64)	(4,595)
Total expenses	(442,534)	(501,389)	(329,612)
Share of profits of joint ventures and associates	83	(513)	1,675
Profit before finance costs and income tax expense	28,345	45,884	18,695
Finance costs	(4,088)	(3,860)	(3,595)
Profit (loss) before income tax expense	24,257	42,024	15,100
Income tax benefits (expenses)	(4,672)	(8,918)	(2,034)
Profit (loss) for the period from continuing operations, net of tax	19,585	33,106	13,066
Loss for the period from discontinued operations, net of tax	-	-	(63)
Net profit (loss) for the year	19,585	33,106	13,003

Statement of Income	For the year ended December 31		
	2023	2022	2021
Other comprehensive income			
Changes in fair value of financial assets at fair value through other comprehensive income, net of tax	(5,794)	1,486	(61)
Loss from remeasurement of post-employment benefit obligation, net of tax	(2)	1,569	-
Cash flow hedges, net of tax	1,482	(3,035)	(1,267)
Cost of hedging, net of tax	11	(532)	(494)
Exchange differences on translating of financial statements	(406)	992	717
Share of other comprehensive income (expense) of an associate accounted for using the equity method, net of tax	46	210	474
Other comprehensive income (expense) for the year from discontinued operations, net of tax	-	-	24
Other comprehensive income (expense) for the year, net after tax	(4,663)	690	(607)
Total comprehensive income (expense) for the year	14,922	33,796	12,396
Profit (loss) attributable to:			
Owners of the parent company	19,443	32,668	12,578
- continuing operations	19,443	32,668	12,641
- discontinued operations	-	-	(63)
Non-controlling interests	142	438	425
Net profit (loss) for the year	19,585	33,106	13,003
Total comprehensive income (expense) attribute to:			
Equity portion	14,782	33,354	11,973
- continuing operations	14,782	33,354	12,013
- discontinued operations	-	-	(40)
Non-controlling interests	140	442	423
Total comprehensive income (expense) for the year	14,922	33,796	12,396
Basic earnings (loss) per share (Baht)	8.70	15.63	6.17

Statement of Cash Flows

Unit: THB Million

Statement of Cash Flows	For the year ended December 31		
	2023	2022	2021
Cash flow from operating activities			
Net profit (loss) for the year from continuing operations	19,585	33,106	13,066
Adjustments to reconcile profit (loss) to cash:			
Allowance for (reversal of) decline in value of inventories adjusted to net realizable value	(55)	558	237
Depreciation and amortization	7,799	7,744	7,424
Allowance of (Reversal of) expected credit loss	3	3	(2)
Finance costs	4,089	3,860	3,595
Net unrealized (gain) loss on foreign exchange	779	1,034	5,056
Share of profit of joint ventures and associates, net	(84)	514	(1,675)
Gain from investment reclassification	-	(7,297)	(504)
Dividends income	(201)	(81)	(7)
(Gain) loss on lease modification	-	(78)	6
(Gain) loss on disposal of investment in associate	-	(10,038)	(102)
(Gain) loss on hedging of forecasted revenue transaction	225	271	44
(Gain) loss from changes in fair value of financial assets	118	(18)	(49)
(Gain) loss from changes in fair value of derivatives	130	183	(6)
(Gain) loss on write-off of property, plant and equipment	9	(0)	6
Estimated short-term liabilities	98	-	-
Reversal of impairment loss on property, plant and equipment, and investment property	-	687	-
(Gain) loss on disposal of assets and liabilities held-for-sale	-	(12)	(41)
Amortization of advance receipts for land lease and others	(24)	(17)	(13)
Income tax expense (benefit)	4,672	8,918	2,034
	37,143	39,337	29,069

Statement of Cash Flows	For the year ended December 31		
	2023	2022	2021
Changes in operating assets and liabilities			
Trade accounts receivable	(2,532)	(5,430)	(10,694)
Other receivables	2,042	(3,316)	84
Receivables from Oil Fuel Fund	15,259	(12,316)	(1,578)
Value-added tax receivables	166	543	(1,457)
Inventories	2,743	(16,325)	(17,340)
Other non-current assets	44	(6)	37
Trade accounts payable	(23,967)	51,162	13,456
Other payables	(1,587)	(330)	440
Excise duty payables	1,011	(1,346)	71
Other non-current liabilities	(51)	746	108
Income tax received (paid)	(2,183)	(9,468)	(1,331)
Cash used in operating activities of discontinued operations	-	-	(361)
Net cash generated from operating activities	28,088	43,251	10,504
Cash flow from investing activities			
Dividend received	595	841	1,110
Payments for deposits at a financial institution used as collateral	343	(15)	(1)
Proceeds from (repayment of) short-term investments, net	(5,766)	-	19,162
Payments for financial assets measured at fair value through other comprehensive income	(100)	(70)	(80)
Payments for financial assets measured at fair value through profit and loss	(45)	(85)	(91)
Proceeds from long-term loans to savings co-operative of employees	0	44	46
Payment for long-term loans to savings co-operative of employees	(118)	(13)	(9)
Payments for property, plant and equipment	(14,504)	(31,929)	(35,146)
Proceeds from disposal of property, plant and equipment	0	0	-
Payments for rights-of-use assets	(1)	(19)	(42)
Payments for intangible assets	(96)	(160)	(248)
Proceeds from liquidation of subsidiaries	-	308	-
Payments for acquisition of investment in subsidiaries	-	-	(6)
Proceeds from disposal of investment in an associate	-	22,047	235
Payments for acquisition of investment in an associate	-	-	(29,807)
Payments for acquisition of investment in joint venture	-	-	(2)

Statement of Cash Flows	For the year ended December 31		
	2023	2022	2021
Proceeds from liquidation of joint ventures	0	-	-
Proceeds from disposal of investment in joint venture	-	1	-
Proceeds from business restructuring	-	-	1,560
Cash generated from (used in) investing activities of discontinued operations	-	-	(18)
Net cash generated from (used in) investing activities	(19,692)	(9,049)	(43,337)
Cash flows from financing activities			
Finance costs paid	(7,654)	(7,397)	(6,929)
Dividends paid to the shareholders	(5,268)	(8,579)	(8,624)
Redemption of capital paid to non-controlling interests	-	-	(806)
Proceeds from short-term loans from financial institutions	11,481	17,325	6,034
Repayment of short-term loans from financial institutions	(10,151)	(16,358)	(5,821)
Proceeds from long-term loans from related parties	-	-	14,000
Repayment of long-term loans from related parties	-	(14,000)	(3,999)
Proceeds from long-term loans from financial institutions	6,012	8,779	19,754
Repayment of long-term loans from financial institutions	(9,651)	(17,863)	(1,014)
Proceeds from long-term loans from third parties	(25)	(63)	-
Proceeds from debentures	10,000	12,000	-
Payment for debentures and loans financing fee	(32)	(20)	(204)
Proceeds from capital increase	-	10,369	-
Redemption of debentures	(16,381)	(3,000)	(3,000)
Repayment of principal of leases	(1,403)	(1,211)	(1,050)
Cash generate from (used in) financing activities of discontinued operations	-	-	(95)
Net cash generated from financing activities	(23,072)	(20,253)	8,246
Net increase (decrease) in cash and cash equivalents	(14,676)	13,949	(24,587)
Effect of exchange rate changes	(468)	(69)	1,039
Cash and cash equivalents at the beginning of the year	43,576	29,696	53,244
Cash and cash equivalents at the end of the year	28,432	43,576	29,696
Supplementary information related to cash flow			
Payables on purchase of property, plant and equipment	350	741	2,211
Payables on purchase of intangible assets	134	214	167
Non-cash changes in the right-of-use assets	132	9,458	4,001
Contingent consideration from acquisition of investment in an associate	-	-	130

Key Financial Ratios

Financial Ratios	Unit	2023	2022	2021
Liquidity ratio				
Liquidity ratio	times	1.7	1.5	2.6
Quick ratio	"	0.9	0.7	1.4
Cash flow current ratio	"	0.3	0.6	0.3
Receivable current ratio	"	15.3	19.4	18.6
Average debt collection period ⁽²⁾	day	23.8	18.8	19.6
Inventory turnover period	times	8.1	10.1	10.3
Average selling period ⁽²⁾	day	45.2	36.0	35.4
Payable current ratio	times	7.0	9.9	19.7
Loan repayment period ⁽²⁾	day	52.0	36.9	18.6
Cash Cycle ⁽²⁾	"	17.0	18.0	36.5
Profitability ratios				
Gross profit margin ⁽²⁾	percent	7.0	9.1	7.5
Operating profit margin ⁽²⁾	"	7.6	7.0	8.1
Other profit margin	"	2.4	7.7	3.1
Cash to profit margin	"	79.2	116.3	37.3
Net profit margin	"	4.2	6.0	3.8
Return on equity ⁽²⁾	"	12.0	23.5	10.7
Interest-bearing debt to EBITDA Ratio	times	5.2	5.3	7.0
Debt coverage ratio	"	2.4	1.6	4.4
Operating Efficiency ratios				
Return on assets	Percent	4.5	8.2	3.9
Return on fixed assets ⁽²⁾	"	12.9	21.2	12.5
Asset turnover ⁽²⁾	times	1.1	1.4	1.0
Financial policy ratios				
Total debt to equity ratio	times	1.5	1.8	1.9
Net debt to equity ratio	"	0.9	1.0	1.4
Share price to book value	"	0.7	0.8	0.9
Interest coverage ratio	"	8.7	9.6	7.8
Dividend payout ratio ⁽¹⁾	percent	39	26	42

Remarks:

⁽¹⁾ Dividend payments for 2021, 2022 and 2023 were THB 2.60, 3.70, and 3.40 per share, respectively. Thaioil will present and seek approval for the 2023 dividend payment at the 2024 AGM

⁽²⁾ Adjusted calculation method under the guidelines of the Office of the Securities and Exchange Commission, Thailand.

Credit Terms

Valuing credit administration by Thailoil and Subsidiaries, Thailoil appointed a Credit Committee to map out a policy and guidelines for governing, monitoring, administering, and analyzing credit for business partners and suppliers that would be the most suitable and uniform for each business. For maximum efficiency, the committee meets at least quarterly to define business partners' and suppliers' qualifications and criteria for credit analysis. Their risks, both qualitative and financial, are scrutinized. In addition, the committee defines the approach for controlling individual partners' credit lines and follows up on their payment to ensure that they can indeed punctually pay the agreed amounts to manage cash flow and liquidity.

Analysis of the ratio of average debt collection periods and payment periods in the table above follows Thailoil's policy.

Key Operating Information

	For the year ended December 31		
	2023	2022	2021
1. Refining Capacity (thousand barrels per day)	275	275	275
2. Intake Feedstock (thousand barrels per day) ⁽¹⁾	307	294	275
3. Refining Utilization (percent) ^{(2) (3)}	112	107	100
4. Gross Refining Margin-Refinery (USD per barrel) ⁽⁴⁾	8.5	12.0	2.2
5. Integrated Intake Feedstock (thousand barrels per day) ⁽⁵⁾	310	297	278
6. Gross Integrated Margin (USD per barrel) ⁽⁶⁾	10.0	13.4	5.5
6.1 Gross Refining Margin-Refinery (USD per barrel)	8.4	11.9	2.2
6.2 Gross Margin-Aromatics and intermediates in the production of surfactants (USD per barrel)	0.9	0.4	1.7
6.3 Gross Margin-Lube base oil (USD per barrel)	0.7	1.1	1.6
7. Operating Cost-Refinery (USD per barrel) ⁽⁷⁾	1.6	1.5	1.7

Remarks:

- ⁽¹⁾ Calculated from the intake of refinery feedstock for each period divided by the number of days in such period. After the disposal of mixed xylenes units to Thai Paraxylene Co., Ltd. on April 1, 2005, the average intake feedstock of each period excludes by-products from Thai Lube Base Plc, Thai Paraxylene Co., Ltd. and LABIX Co., Ltd., which become Thairoil Refinery's feedstock for refining and blending for refined products.
- ⁽²⁾ Calculated from the 275,000 barrel-per-day refining capacity for the selected period.
- ⁽³⁾ Calculated from the intake feedstock divided by refining capacity.
- ⁽⁴⁾ The Gross Refining Margin excludes the impact of the oil stock, using the average sales price converted into US dollars by the exchange rate announced by the Bank of Thailand for such specific period and calculated in unit value, based on the intake feedstock.
- ⁽⁵⁾ Calculated by the integrated intake by the refinery, aromatics, an intermediate in the production of surfactants, and lube base oil in each period, divided by the number of days in such period.
- ⁽⁶⁾ The Gross Integrated Margin is calculated from the gross margin of Thairoil Refinery, Thai Lube Base Plc, Thai Paraxylene Co., Ltd., and LABIX Co., Ltd., excluding the impact of the oil stock, divided by the average exchange rate of each period, and further divided by the intake feedstock.
- ⁽⁷⁾ Including expenses on employees, maintenance, catalysts, insurance, land leases, and others.

Board of Directors' Responsibility for Financial Reporting

The accompanying financial statements of Thai Oil Public Company Limited and the consolidated financial statements of Thai Oil Public Company Limited and its subsidiaries have been prepared in conformity to the requirements of the Public Companies Act B.E. 2535 (1992) and its amendment, the Securities and Exchange Act B.E. 2535 (1992) and its amendment, the Announcement of the Department of Business Development (No. 3) dated December 26, 2019 issued in accordance with Section 11, Paragraph 3 of the Accounting Act B.E. 2543 (2000), and the Financial Reporting Standards prescribed by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King.

The Board of Directors is responsible for the financial statements which have been prepared to ensure that the financial position, results of operations and cash flows are presented accurately; an effective internal control system has been established; and accounting records have been precisely, thoroughly and adequately maintained to safeguard assets and prevent fraud and other irregularities with material implications. Suitable accounting policies have been selected in preparation of the financial statements and consistently applied in accordance with Financial Reporting Standards, and key information has been adequately disclosed in the notes to the financial statements. The independent auditor has expressed opinion on the financial statements of Thai Oil Public Company Limited and the consolidated financial statements of Thai Oil Public Company Limited and its subsidiaries in the Auditor's Report.



(Professor Dr. Supot Teachavorasinskun)
Chairman of the Board



(Mr. Bandhit Thamprajamchit)
Chief Executive Officer and President

Independent Auditor's Report

To the Shareholders of Thai Oil Public Company Limited

Opinion

I have audited the accompanying consolidated financial statements of Thai Oil Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2023, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of Thai Oil Public Company Limited for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Thai Oil Public Company Limited and its subsidiaries and of Thai Oil Public Company Limited as at 31 December 2023, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Group in accordance with the *Code of Ethics for Professional Accountants including Independence Standards* issued by the Federation of Accounting Professions (Code of Ethics for Professional Accountants) that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code of Ethics for Professional Accountants. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial statements of the current period. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

I have fulfilled the responsibilities described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report, including in relation to these matters. Accordingly, my audit included the performance of procedures designed to respond to my assessment of the risks of material misstatement of the financial statements. The results of my audit procedures, including the procedures performed to address the matters below, provide the basis for my audit opinion on the accompanying financial statements as a whole.

Key audit matters and how audit procedures respond to each matter are described below.

The measurement of inventories valuation

The balance of the Group's inventories is significant to the financial statements while the Group's raw materials and finished goods are commodities, which are exposed to price volatility. The inventories are measured at the lower of cost or net realisable value. I focused on the estimation of the net realisable value of inventory, as disclosed in Note 12 to the financial statements, since it is an area requiring significant management judgment and may affect the valuation of inventories at the end of the reporting period.

I have examined the valuation of inventories of the Group as follows.

- Gained an understanding of and assessed the design and implementation of internal controls and tested the effectiveness of the controls related to the inventory valuation.
- Evaluated the appropriateness of the methodology used to calculate the net realisable value of inventories at the end of reporting period, considering the reasonableness of the market price used through comparison with the expected selling price of commodity, and tested the accuracy of the calculation.
- Assessed the adequacy of the disclosures made in the notes to the financial statements in relation to the allowance for diminution in value of inventories.

Other Information

Management is responsible for the other information. The other information comprise the information included in annual report of the Group, but does not include the financial statements and my auditor's report thereon.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal

control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

I am responsible for the audit resulting in this independent auditor's report.



Kessirin Pinpuvadol

Certified Public Accountant (Thailand) No. 7325

EY Office Limited

Bangkok: 14 February 2024

Statement of financial position

Thai Oil Public Company Limited and its subsidiaries

As at 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Assets					
Current assets					
Cash and cash equivalents	7	28,431,620,650	43,576,141,447	23,736,906,709	34,787,150,811
Deposits at financial institutions					
used as collateral	8	-	342,942,122	-	-
Short-term investments in					
financial assets	9	5,944,539,560	51,708	5,774,645,000	-
Trade receivables	10	31,154,418,362	28,758,763,491	31,899,944,117	29,780,895,851
Other receivables	11	2,353,195,206	4,360,674,670	2,398,157,893	4,335,163,616
Current portion of finance					
lease receivables		-	-	307,103,777	269,294,153
Receivables from oil fuel fund		624,548,279	15,883,619,978	624,548,280	15,883,619,978
Short-term loans to related parties	6	-	-	934,382,650	2,079,284,357
Inventories	12	52,655,827,049	55,343,143,495	47,174,183,274	49,854,208,859
Derivative assets	37	218,987,454	1,408,421,983	188,127,115	1,396,838,782
Prepaid corporate income tax		2,197,393,961	2,197,303,296	1,769,103,579	1,857,158,368
Value added tax receivables		1,790,795,407	1,957,127,320	1,285,504,086	1,132,472,675
Total current assets		125,371,325,928	153,828,189,510	116,092,606,480	141,376,087,450

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of financial position

Thai Oil Public Company Limited and its subsidiaries

As at 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Assets (continued)					
Non-current assets					
Financial assets measured at					
fair value through profit or loss	37	721,837,723	798,372,415	314,353,497	381,180,557
Financial assets measured at fair value					
through other comprehensive income	37	14,252,714,196	21,394,024,959	13,677,187,445	20,585,524,401
Investments in subsidiaries	13	-	-	41,280,364,907	41,280,364,907
Investments in joint ventures					
and associates	14	32,039,270,297	32,603,023,727	981,869,921	981,869,921
Long-term loans to related party	6	-	-	9,985,938,541	2,000,000,000
Finance lease receivables,					
net of current portion		-	-	837,111,270	832,504,343
Investment properties	15	102,520,270	102,520,270	1,185,363,847	1,123,781,182
Property, plant and equipment	16	218,617,821,097	206,475,779,500	189,321,383,343	175,669,529,025
Right-of-use assets	17	22,223,561,873	24,037,927,615	21,508,999,826	23,266,294,300
Goodwill	18	826,150,184	849,398,538	-	-
Intangible assets	19	2,403,654,692	2,498,591,531	860,863,095	894,478,714
Deferred tax assets	20	2,502,706,442	1,125,358,279	1,906,800,870	375,009,310
Other non-current assets		931,138,350	867,671,726	860,800,046	781,310,712
Total non-current assets		294,621,375,124	290,752,668,560	282,721,036,608	268,171,847,372
Total assets		419,992,701,052	444,580,858,070	398,813,643,088	409,547,934,822

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of financial position

Thai Oil Public Company Limited and its subsidiaries

As at 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Liabilities and shareholders' equity					
Current liabilities					
Short-term loans from					
financial institutions	21	3,198,430,994	1,891,679,473	-	-
Short-term loans from related parties	6	-	-	5,185,565,423	320,937,658
Trade payables	22	50,184,442,001	74,154,200,327	54,495,483,064	78,629,741,664
Other payables	23	3,910,475,893	4,948,018,121	3,218,319,234	4,222,520,887
Current portion of long-term loans					
from financial institutions	24	3,060,928,045	2,884,118,047	2,374,126,219	1,670,083,448
Current portion of long-term loans					
from related party	6	-	-	-	9,850,761,178
Current portion of debentures	25	7,000,000,000	17,317,475,318	7,000,000,000	7,515,272,144
Derivative liabilities	37	29,222,411	193,137,032	47,259,392	204,262,618
Current portion of lease liabilities	17	1,402,283,432	1,401,225,596	1,355,538,212	1,341,462,478
Income tax payables		3,153,972,139	431,326,511	2,729,195,655	-
Excise duty payables		1,463,127,267	451,837,587	1,461,835,339	451,755,137
Short-term provision		98,436,300	-	98,436,300	-
Total current liabilities		73,501,318,482	103,673,018,012	77,965,758,838	104,206,797,212

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of financial position

Thai Oil Public Company Limited and its subsidiaries

As at 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Liabilities and shareholders' equity (continued)					
Non-current liabilities					
Long-term loans from financial institutions, net of current portion	24	16,034,540,475	19,806,567,400	13,837,711,964	10,236,056,978
Long-term loans from a third party	24	191,437,500	216,437,500	-	-
Long-term loans from related party, net of current portion	6	-	-	98,651,501,113	99,632,079,681
Debentures, net of current portion	25	133,631,605,245	131,634,961,395	35,292,022,580	32,355,912,277
Derivative liabilities	37	1,109,069,159	1,979,726,503	1,109,069,159	1,920,640,434
Lease liabilities, net of current portion	17	19,688,452,996	21,106,960,627	19,866,558,337	21,264,240,778
Deferred tax liabilities	20	15,751,580	2,811,025	-	-
Provision for long-term employee benefits	26	2,714,494,330	2,752,608,756	2,069,970,365	2,173,378,579
Other non-current liabilities		4,794,340,688	4,750,395,386	4,934,452,286	4,855,245,693
Total non-current liabilities		178,179,691,973	182,250,468,592	175,761,285,804	172,437,554,420
Total liabilities		251,681,010,455	285,923,486,604	253,727,044,642	276,644,351,632

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of financial position

Thai Oil Public Company Limited and its subsidiaries

As at 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Shareholders' equity					
Share capital	27				
Registered					
2,233,835,566 ordinary shares of Baht 10 each (2022: 2,315,147,873 ordinary shares of Baht 10 each)		22,338,355,660	23,151,478,730	22,338,355,660	23,151,478,730
Issued and fully paid up					
2,233,835,566 ordinary shares of Baht 10 each (2022: 2,233,835,566 ordinary shares of Baht 10 each)		22,338,355,660	22,338,355,660	22,338,355,660	22,338,355,660
Share premium on ordinary shares		10,698,724,259	10,698,724,259	10,698,724,259	10,698,724,259
Other deficits		(4,342,658,559)	(4,342,658,559)	(9,146,634,394)	(9,243,166,763)
Retained earnings					
Appropriated - statutory reserve	28	2,315,147,873	2,315,147,873	2,315,147,873	2,315,147,873
Appropriated - other reserves		244,500,000	244,500,000	244,500,000	244,500,000
Unappropriated		141,288,329,958	127,095,140,237	126,766,514,243	110,599,064,061
Other components of shareholders' equity		(6,974,640,316)	(2,314,908,203)	(8,130,009,195)	(4,049,041,900)
Equity attributable to owners					
of the Company		165,567,758,875	156,034,301,267	145,086,598,446	132,903,583,190
Non-controlling interests					
of the subsidiaries		2,743,931,722	2,623,070,199	-	-
Total shareholders' equity		168,311,690,597	158,657,371,466	145,086,598,446	132,903,583,190
Total liabilities and shareholders' equity		419,992,701,052	444,580,858,070	398,813,643,088	409,547,934,822

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of income

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Revenue					
Revenue from sales		459,402,194,950	505,703,223,990	492,054,518,624	544,791,694,672
Subsidy from oil fuel fund		9,841,693,460	23,885,643,273	9,841,693,460	23,885,643,273
Total revenue		469,243,888,410	529,588,867,263	501,896,212,084	568,677,337,945
Cost of sales		(436,163,527,244)	(481,137,018,938)	(477,488,207,787)	(526,994,340,498)
Gross profit		33,080,361,166	48,451,848,325	24,408,004,297	41,682,997,447
Dividend income		200,774,430	80,531,829	6,905,946,641	2,778,257,746
Loss from financial instruments		(2,849,952,347)	(16,005,831,795)	(2,873,490,433)	(16,128,333,432)
Gain (loss) on exchange		212,826,718	(64,454,875)	253,985,452	(24,241,664)
Gain on disposal of investments					
in associates	14	-	10,037,820,547	-	10,487,368,511
Gain on reclassification of investments	14	-	7,296,617,443	-	7,539,035,364
Other income	29	1,138,175,482	781,970,931	3,477,187,708	2,596,232,584
Selling and distribution expenses		(949,961,377)	(1,052,076,412)	(108,638,695)	(68,246,848)
Administrative expenses		(2,570,854,449)	(3,129,684,881)	(3,097,255,409)	(2,819,648,121)
Share of profit (loss) from investments					
in joint ventures and associates	14	83,753,805	(512,610,221)	-	-
Operating profit		28,345,123,428	45,884,130,891	28,965,739,561	46,043,421,587
Finance cost		(4,088,509,884)	(3,860,037,320)	(3,754,545,176)	(3,490,691,352)
Profit before income tax expenses		24,256,613,544	42,024,093,571	25,211,194,385	42,552,730,235
Income tax expenses	20	(4,671,722,061)	(8,917,861,561)	(3,698,311,432)	(8,887,386,197)
Profit for the year		19,584,891,483	33,106,232,010	21,512,882,953	33,665,344,038

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of income

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Profit attributable to:					
Equity holders of the Company		19,443,165,644	32,668,134,594	21,512,882,953	33,665,344,038
Non-controlling interests					
of the subsidiaries		141,725,839	438,097,416		
		19,584,891,483	33,106,232,010		
Earnings per share					
	32				
Basic earnings per share					
Profit attributable to equity holders					
of the Company		8.70	15.63	9.63	16.11

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of comprehensive income

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Profit for the year		19,584,891,483	33,106,232,010	21,512,882,953	33,665,344,038
Other comprehensive income:					
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>					
Cash flow hedges,					
net of income tax	36	1,481,858,771	(3,034,720,209)	1,434,589,915	(3,240,728,805)
Cost of hedging,					
net of income tax	36	11,112,355	(531,845,871)	11,112,355	(531,845,871)
Exchange differences on translation of financial statements in foreign currency		(405,977,626)	992,203,914	-	-
Share of other comprehensive income from investments in associates under equity method, net of income tax	14	45,781,296	147,817,577	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax		1,132,774,796	(2,426,544,589)	1,445,702,270	(3,772,574,676)

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of comprehensive income

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
<i>Other comprehensive income</i>					
<i>not to be reclassified to profit or loss in subsequent periods</i>					
Actuarial gain (loss), net of income tax	26	(2,151,044)	1,568,947,765	-	1,288,808,947
Changes in fair value of financial assets at fair value through other comprehensive income, net of income tax		(5,793,057,494)	1,485,531,242	(5,526,669,565)	1,861,021,384
Share of other comprehensive income from investments in joint ventures and associates, net of income tax	14	-	61,657,501	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax		(5,795,208,538)	3,116,136,508	(5,526,669,565)	3,149,830,331
Other comprehensive income for the year		(4,662,433,742)	689,591,919	(4,080,967,295)	(622,744,345)
Total comprehensive income for the year		14,922,457,741	33,795,823,929	17,431,915,658	33,042,599,693
Total comprehensive income attributable to:					
Equity holders of the Company		14,782,358,010	33,354,307,224	17,431,915,658	33,042,599,693
Non-controlling interests of the subsidiaries		140,099,731	441,516,705		
		<u>14,922,457,741</u>	<u>33,795,823,929</u>		

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of changes in shareholders' equity

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

Consolidated financial statements																		
Equity attributable to owners of the Company																		
	Other surpluses (deficits)					Other components of shareholders' equity												
	Issued and fully paid-up share capital	Share premium on ordinary shares	Surplus on business combination under common control	Deficits from the change in the ownership interests in subsidiaries	Surpluses (deficits) from the change in the net assets in an associate	Other comprehensive income								Share of other comprehensive income from an associate	Share of other comprehensive income from held-for-sale	Total equity attributable to owners of the Company	Non-controlling interests of the subsidiaries	Total shareholders' equity
						Appropriated statutory reserve	Appropriated - other reserves	Retained earnings	Unappropriated	Changes in value of financial assets designated at fair value through other comprehensive income	Exchange difference on translation of financial statements in foreign currency	Cash flow hedges	Cost of hedging					
Balance as at 1 January 2022	20,400,278,730	2,456,261,491	330,835,954	(4,673,494,513)	(2,322,774,902)	2,040,027,873	244,500,000	103,544,202,130	(60,986,103)	1,045,067,052	(2,251,515,412)	(139,250,650)	255,062,349	12,530,179	120,880,744,178	2,213,335,971	123,094,080,149	
Profit for the year	-	-	-	-	-	-	-	32,668,134,594	-	-	-	-	-	-	32,668,134,594	438,097,416	33,106,232,010	
Other comprehensive income for the year	-	-	-	-	-	-	-	1,574,798,788	1,485,531,242	991,533,813	(3,034,720,207)	(531,846,871)	202,069,936	(1,194,157)	686,173,544	3,419,289	689,592,833	
Total comprehensive income for the year	-	-	-	-	-	-	-	34,242,933,382	1,485,531,242	991,533,813	(3,034,720,207)	(531,846,871)	202,069,936	(1,194,157)	33,354,308,138	441,516,705	33,795,824,843	
Increase share capital	1,938,076,930	8,430,634,645	-	-	-	-	-	-	-	-	-	-	-	-	10,368,711,575	-	10,368,711,575	
Transaction costs - net of income tax	-	(188,171,877)	-	-	-	-	-	-	-	-	-	-	-	-	(188,171,877)	-	(188,171,877)	
Transfer to statutory reserve	-	-	-	-	-	275,120,000	-	(275,120,000)	-	-	-	-	-	-	-	-	-	
Dividend paid (Note 34)	-	-	-	-	-	-	-	(8,546,849,418)	-	-	-	-	-	-	(8,546,849,418)	(31,782,477)	(8,578,631,895)	
Liquidation a subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	-	(11,336,022)	(11,336,022)	-	(11,336,022)	
Disposal of investment in an associate	-	-	-	-	-	-	-	(1,870,025,867)	-	-	-	-	(275,854,352)	-	174,703,310	-	174,703,310	
Share gain from the change in the net assets in an associate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,191,383	-	2,191,383	
Balance as at 31 December 2022	22,338,355,660	10,698,724,259	330,835,954	(4,673,494,513)	-	2,315,147,873	244,500,000	127,095,140,237	1,424,545,139	2,036,600,865	(5,286,235,619)	(671,096,521)	181,277,933	-	156,034,301,287	2,623,070,199	158,657,371,466	
Balance as at 1 January 2023	22,338,355,660	10,698,724,259	330,835,954	(4,673,494,513)	-	2,315,147,873	244,500,000	127,095,140,237	1,424,545,139	2,036,600,865	(5,286,235,619)	(671,096,521)	181,277,933	-	156,034,301,287	2,623,070,199	158,657,371,466	
Profit for the year	-	-	-	-	-	-	-	19,443,165,644	-	-	-	-	-	-	19,443,165,644	141,725,839	19,584,891,483	
Other comprehensive income for the year	-	-	-	-	-	-	-	(1,075,521)	(5,793,057,494)	(405,427,041)	1,481,858,771	11,112,355	45,781,296	-	(4,660,807,634)	(1,626,108)	(4,662,433,742)	
Total comprehensive income for the year	-	-	-	-	-	-	-	19,442,090,123	(5,793,057,494)	(405,427,041)	1,481,858,771	11,112,355	45,781,296	-	14,782,358,010	140,099,731	14,922,457,741	
Dividend paid (Note 34)	-	-	-	-	-	-	-	(5,248,900,402)	-	-	-	-	-	-	(5,248,900,402)	(19,238,208)	(5,268,138,610)	
Balance as at 31 December 2023	22,338,355,660	10,698,724,259	330,835,954	(4,673,494,513)	-	2,315,147,873	244,500,000	141,288,329,958	(4,366,512,355)	1,631,173,824	(3,804,376,848)	(659,984,166)	227,059,229	-	165,567,758,875	2,743,931,722	168,311,690,597	

The accompanying notes to financial statements are an integral part of the financial statements.

For the year ended 31 December 2023

(Unit: Baht)

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of cash flows

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Cash flows from operating activities					
Profit before income tax expenses		24,256,613,544	42,024,093,571	25,211,194,385	42,552,730,235
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:					
Depreciation and amortisation	30	7,799,461,684	7,744,330,761	5,175,044,946	5,281,655,023
Expected credit loss		2,990,407	3,155,351	-	-
Loss (reversal) of reduction of inventory to net realisable value	12	(55,459,025)	557,542,659	221,343,137	332,074,942
Finance cost		4,088,509,884	3,860,037,320	3,754,545,176	3,490,691,352
Unrealised loss on exchange		778,724,483	1,033,832,176	730,525,498	906,789,204
Share of loss (profit) from investments in joint ventures and associates	14	(83,753,805)	512,610,221	-	-
Dividends income		(200,774,430)	(80,531,829)	(6,905,946,641)	(2,778,257,746)
Difference on lease termination		-	(78,110,615)	-	(76,091,730)
Impairment loss on investment in an associate		-	-	-	11,400,000
Impairment loss on property, plant and equipment		-	686,953,439	-	-
Loss (gain) on disposal of property, plant and equipment		34,151	(41,989)	(61,859,575)	2,866
Loss on write-off of property, plant and equipment		8,922,645	7,477	8,899,721	-
Short-term provision		98,436,300	-	98,436,300	-
Loss on hedging of forecasted revenue transaction		224,946,715	271,145,454	224,946,715	271,145,454
Loss (gain) from changes in fair value of financial assets		117,814,302	(18,302,106)	66,827,060	(8,679,064)
Unrealised loss from changes in fair value of derivatives		130,507,872	182,777,373	156,696,406	139,780,182

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of cash flows

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Cash flows from operating activities (continued)					
Gain on disposal of assets and liabilities held-for-sale		-	(11,881,212)	-	(31,235,890)
Gain on disposal of investments in an associate	14	-	(10,037,820,166)	-	(10,487,368,511)
Gain on reclassification of investment	14	-	(7,296,617,443)	-	(7,539,035,364)
Amortisation of advance receipts for land lease and others		(23,680,612)	(16,527,146)	(673,343,161)	(517,112,158)
Profit from operating activities before changes in operating assets and liabilities		37,143,294,115	39,336,653,296	28,007,309,967	31,548,488,795
Operating assets (increase) decrease					
Trade receivables		(2,531,565,450)	(5,430,112,419)	(2,198,325,874)	(4,741,327,573)
Other receivables		2,041,682,804	(3,316,102,587)	1,921,268,029	(3,470,349,380)
Receivables from oil fuel fund		15,259,071,699	(12,315,955,343)	15,259,071,699	(12,315,955,343)
Inventories		2,742,775,472	(16,324,649,499)	2,458,682,448	(16,563,531,369)
Value added tax receivables		166,331,913	542,913,112	(153,031,411)	701,302,340
Other non-current assets		43,238,973	(5,919,922)	10,967,051	32,364
Operating liabilities increase (decrease)					
Trade payables		(23,967,425,095)	51,162,328,929	(24,132,659,907)	53,295,754,544
Other payables		(1,586,943,196)	(330,059,477)	(621,552,848)	(176,678,137)
Excise duty payables		1,011,289,680	(1,345,805,566)	1,010,080,202	(1,344,871,424)
Other non-current liabilities		(51,053,506)	745,829,229	(40,616,901)	518,845,590
Cash from operating activities		30,270,697,409	52,719,119,753	21,521,192,455	47,451,710,407
Corporate income tax paid		(2,182,928,753)	(9,468,363,069)	(1,336,374,046)	(8,206,074,908)
Net cash flows from operating activities		28,087,768,656	43,250,756,684	20,184,818,409	39,245,635,499

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of cash flows

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Cash flows from investing activities					
Dividends received		594,809,552	841,280,179	6,905,946,641	2,778,257,746
Decrease (increase) in deposits at a financial institution used as collateral		342,942,122	(14,973,841)	-	-
Repayment of short-term investments in financial assets		(5,766,216,853)	(152)	(5,589,161,000)	-
Cash payment for purchase of financial assets measured at fair value through other comprehensive income		(99,662,001)	(70,133,368)	-	-
Cash payment for purchase of financial assets measured at fair value through profit or loss		(45,276,631)	(84,666,924)	-	-
Cash receipt from short-term loans to related parties	6	-	-	1,135,281,727	781,882,950
Cash payment for short-term loans to related parties		-	-	-	(2,079,284,357)
Cash receipt from long-term loans to related party	6	-	-	2,000,000,000	-
Cash payment for long-term loans to related party	6	-	-	(9,985,000,000)	(2,000,000,000)
Proceeds from long-term loans to savings co-operative of employees		187,259	43,657,453	-	43,393,365
Cash payment for long-term loans to savings co-operative of employees		(118,225,368)	(13,046,642)	(116,975,368)	(6,586,000)
Proceeds from disposal of property, plant and equipment		133,899	136,128	72,837,832	91,268
Cash payment for acquisition of property, plant and equipment		(14,503,557,443)	(31,929,205,073)	(12,912,018,397)	(28,731,959,237)
Cash payment for acquisition of intangible assets		(96,266,773)	(159,603,521)	(90,542,213)	(148,176,801)
Cash payment for right-of-use assets		(814,139)	(19,344,619)	(814,139)	(19,344,619)
Cash payment for capital increase in a subsidiary		-	-	-	(266,810,000)
Proceeds from disposal of investments in an associate	14	-	22,047,150,675	-	22,047,150,675
Proceeds from liquidation of a subsidiary		-	308,417,890	-	308,417,890
Proceeds from liquidation of joint ventures		4,769	-	-	-
Proceeds from decrease in capital of joint ventures		-	1,186,096	-	-
Net cash flows used in investing activities		(19,691,941,607)	(9,049,145,719)	(18,580,444,917)	(7,292,967,120)

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of cash flows

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
Cash flows from financing activities					
Finance costs paid		(7,653,521,747)	(7,397,031,980)	(8,323,443,642)	(7,694,992,039)
Dividends paid to the shareholders of the Company	34	(5,248,900,402)	(8,546,849,418)	(5,248,900,402)	(8,546,849,418)
Dividends paid to non-controlling interests		(19,238,208)	(31,782,477)	-	-
Proceeds from short-term loans from financial institutions	21	11,480,657,635	17,325,104,966	-	-
Repayment of short-term loans from financial institutions	21	(10,150,168,786)	(16,358,412,216)	-	-
Proceeds from (repayment of) short- term loans from related parties	6	-	-	4,864,627,766	(1,814,542,454)
Proceeds from long-term loans from financial institutions	24	6,012,208,056	8,779,136,908	6,000,000,000	8,500,000,000
Repayment of long-term loans from financial institutions	24	(9,651,308,085)	(17,862,863,012)	(1,700,000,000)	(16,209,000,000)
Repayment of long-term loans from a third party	24	(25,000,000)	(63,000,000)	-	-
Repayment of long-term loans from related parties	6	-	(14,000,000,000)	(9,365,156,104)	(14,000,000,000)
Cash payment for loans financing fee		(28,178,562)	(7,530,274)	(28,133,562)	(7,510,274)
Proceeds from issuance of debentures	25	10,000,000,000	12,000,000,000	10,000,000,000	12,000,000,000
Redemption of debentures	25	(16,381,352,255)	(3,000,000,000)	(7,109,024,651)	(3,000,000,000)
Cash payment for debenture financing fee		(3,944,712)	(12,136,946)	(3,944,712)	(12,136,946)
Payment of principal portion of lease liabilities		(1,403,133,971)	(1,211,000,040)	(1,346,015,721)	(1,140,588,486)
Proceeds from increase in share capital		-	10,368,711,576	-	10,368,711,576
Transaction costs on issue of shares		-	(235,214,847)	-	(235,214,847)
Net cash flows used in financing activities		(23,071,881,037)	(20,252,867,760)	(12,259,991,028)	(21,792,122,888)

The accompanying notes to financial statements are an integral part of the financial statements.

Statement of cash flows

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Net increase (decrease) in cash and cash equivalents		(14,676,053,988)	13,948,743,205	(10,655,617,536)	10,160,545,491
Cash and cash equivalents at beginning of the year		43,576,141,447	29,695,935,321	34,787,150,811	24,599,931,465
Effect of exchange rate changes		(468,466,809)	(68,537,079)	(394,626,566)	26,673,855
Cash and cash equivalents at end of the year	7	28,431,620,650	43,576,141,447	23,736,906,709	34,787,150,811

Supplemental disclosure of cash flows information

Payables on acquisition of property, plant and equipment	350,341,399	741,475,168	176,741,783	692,115,512
Payables on acquisition of intangible assets	134,122,039	214,209,574	15,309,165	-
Increase in right-of-use assets and lease liabilities	131,946,159	9,458,104,838	122,155,829	9,540,274,158

The accompanying notes to financial statements are an integral part of the financial statements.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

1. General information

Thai Oil Public Company Limited (the Company) is a public limited company which is incorporated and domiciled in Thailand and is listed on the Stock Exchange of Thailand. The parent company is PTT Public Company Limited (45.03% of shareholding as at 31 December 2023).

The principal business operations of the Group is oil refinery and distributions, petrochemicals, lube base oil and other businesses in domestic and overseas. The address of the Company's registered offices and refinery plant as follows:

Head office:	555/1 Energy Complex Building A, 11 th Floor, Vibhavadi Rangsit Road, Kwang Chatuchak, Khet Chatuchak, Bangkok 10900
Sriracha office and refinery plant:	42/1 Moo 1, Sukhumvit Road Km. 124, Tambol Tungsukla, Amphur Sriracha, Chonburi 20230

2. Basis of preparation

2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development, issued under the Accounting Act B.E. 2543, including guidelines promulgated by the Federation of Accounting Professions (TFAC), and the financial reporting requirements of the Securities and Exchange Commission under the Securities and Exchange Act, B.E. 2535.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies. The financial statements in Thai language are the official statutory financial statements of the Company. The financial statements in English language have been translated from the Thai language financial statements.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

2.2 Basis of consolidation

- a) The consolidated financial statements include the financial statements of Thai Oil Public Company Limited (“the Company”) and the following subsidiary companies (“the subsidiaries”) (collectively as “the Group”):

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2023	2022
Direct subsidiaries				
Thai Paraxylene Co., Ltd.	Paraxylene manufacturing and distribution	Thailand	99.99	99.99
Thai Lube Base Public Company Limited	Lube base oil refining and distribution	Thailand	99.99	99.99
Thaioil Energy Services Co., Ltd.	Providing human Resource management	Thailand	99.99	99.99
Thaioil Solvent Co., Ltd.	Investment in solvent and chemical business	Thailand	99.99	99.99
Thaioil Ethanol Co., Ltd.	Investment in ethanol businesses and alternative energy products	Thailand	99.99	99.99
TOP SPP Co., Ltd.	Power and stream generation and distribution	Thailand	99.99	99.99
Thaioil Treasury Center Co., Ltd.	Treasury centre services for the Group's business	Thailand	99.99	99.99
PT TOP Investment Indonesia	Investment in Olefins petrochemical business	Republic of Indonesia	100.00	100.00

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2023	2022
Indirect subsidiaries				
TOPNEXT International Co., Ltd.	Distribution of solvent and chemical products	Thailand	99.99	99.99
Sak Chaisidhi Co., Ltd.	Solvent and chemical products manufacturing	Thailand	80.52	80.52
TOP Solvent (Vietnam) LLC.	Distribution of solvent and chemical products	Socialist Republic of Vietnam	100.00	100.00
PT Tirta Surya Raya	Distribution of solvent and chemical products	Republic of Indonesia	77.71	77.71
JSKEM Private Limited	Distribution of solvent and chemical products	Republic of Singapore	60.00	60.00
TOPNEXT India Private Limited (Formerly known as “TSCHEM India Private Limited”)	Distribution of solvent and chemical products	Republic of India	60.00	60.00
Sapthip Co., Ltd.	Ethanol products manufacturing and distribution	Thailand	50.00	50.00
Sapthip Green Energy Co., Ltd.	Biogas power generation and distribution	Thailand	50.00	50.00
LABIX Co., Ltd.	Linear Alkyl Benzene manufacturing and distribution	Thailand	75.00	75.00
TOP Ventures Company Limited	Investment in venture capital and/or start-up business	Thailand	99.99	99.99
TOP Ventures Hong Kong Limited	Investment in venture capital and/or start-up business	Hong Kong Special Administrative Region	100.00	100.00
TOP Ventures America LLC	Investment in venture capital and/or start-up business	United States of America	100.00	100.00

- b) The financial statements of the subsidiaries are prepared using the same significant accounting policies as the Company.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

3. New financial reporting standards

3.1 Financial reporting standards that became effective in the current year

During the year, the Group has adopted the revised financial reporting standards which are effective for fiscal years beginning on or after 1 January 2023. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements.

3.2 Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2024

The Federation of Accounting Professions issued a number of revised financial reporting standards, which are effective for fiscal years beginning on or after 1 January 2024. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The management of the Group believes that adoption of these amendments will not have any significant impact on the Group's financial statements except for the following standard, which involves changes to key principles, as summarised below.

TAS 12, Income Taxes - International Tax Reform - Pillar Two Model Rules

The amendment requires that entities shall neither recognise nor disclose information about deferred taxes related to Pillar Two model rules published by the Organisation for Economic Co-operation and Development (OECD). This mandatory temporary exemption applies immediately.

The amendment also includes disclosure requirements for affected entities to help users of financial statements better understand an entity's exposure to Pillar Two income taxes arising from that legislation, particularly before its effective date. These disclosure requirements apply for annual reporting periods beginning on or after 1 January 2024, but not for any interim periods ending on or before 31 December 2024.

The management of the Group is currently in the process of assessing the potential exposure to Pillar Two income taxes on the financial statements.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

4. Significant accounting policies

4.1 Principles of consolidation

a) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method.

b) Associates

Associates are all entities over which the Group has significant influence but does not have control or joint control. Investments in associates are accounted for using the equity method of accounting, in consolidated financial statements.

In the separate financial statements, investments in associates are accounted for using cost method.

c) Equity method

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

d) Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.

Upon the disposal of investments, the difference between the net disposal proceeds and the carrying amount of the investments is recorded in profit or loss.

e) Intercompany transactions on consolidation

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

4.2 Business combination

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control.

Identifiable assets and liabilities acquired and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Group initially recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the identifiable net assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

Acquisition-related cost

Acquisition-related cost are recognised as expenses in profit and loss in consolidated financial statements.

Step-up acquisition

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

Changes in fair value of contingent consideration paid/received

Subsequent changes to the fair value of the contingent consideration that is an asset and/or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured.

Business combination under common control

The Group accounts for business combination under common control by measuring acquired assets and liabilities of the acquiree at their carrying values presented in the highest level of the consolidation. The Group retrospectively adjusted the business combination under common control transactions as if the combination had occurred on the later of the beginning of the preceding comparative period and the date the acquiree has become under common control.

Consideration of business combination under common control are the aggregated amount of fair value of assets transferred, liabilities incurred and equity instruments issued by the acquirer at the date of which the exchange in control occurs.

The difference between consideration of business combination under common control and the acquirer's interests in the carrying value of the acquiree is presented as "surplus arising from business combination under common control" in equity.

The group recognised expenses related to business combination under common control as expenses during the period of which the business combination occurs.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

4.3 Foreign currency translation

a) Functional and presentation currency

The financial statements are presented in Thai Baht, which is the Group's and the Company's functional and presentation currency.

b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

When the group recognises gains and losses on a non-monetary item that recognised in other comprehensive income, all of gains and losses on foreign exchange components will also be recognised in other comprehensive income. On the other hand, if gains and losses on a non-monetary item is recognised in profit and loss, all gains and losses on foreign exchange components will be recognised in profit and loss.

c) Group companies

The operational results and financial position of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a different functional currency from the Group's presentation currency are translated into the presentation currency as follows.

- Assets and liabilities are translated at the closing rate at the date of respective statement of financial position
- Income and expenses in statement of profit or loss and statement of comprehensive income are translated at average exchange rates and
- All resulting exchange differences are recognised in other comprehensive income.

4.4 Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

Bank overdrafts are included in current liabilities in the statements of financial position.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

4.5 Trade receivables

Trade receivables are amounts due from customers for goods sold and/or services performed in the ordinary course of business.

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost.

The impairment of trade receivables is disclosed in Note 4.7 (f).

4.6 Inventories

Inventories are stated at the lower of cost and net realisable value.

Cost of inventories is determined by the weighted average method. Cost of raw materials comprise all purchase cost and costs directly attributable to the acquisition of the inventory less all attributable discounts. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs, overhead costs and directly attributable costs to bring the inventories to their present location and condition.

4.7 Financial instruments

Financial asset

a) Classification

The Group classifies its debt instrument financial assets in the following measurement categories depending on i) business model for managing the asset and ii) the cash flow characteristics of the asset whether they represent solely payments of principal and interest (SPPI).

- those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss); and
- those to be measured at amortised cost.

The Group reclassifies debt investments when its business model for managing those assets changes.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

For investments in equity instruments, the Group has an irrevocable election at the time of the initial recognition to account for the equity investment at fair value through profit or loss (FVPL) or at fair value through other comprehensive income (FVOCI) except those that are held for trading, they are measured at FVPL.

b) Recognition and derecognition

Regular way purchases, acquires or sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

c) Measurement

At initial recognition, the Group measures a financial asset at its fair value plus transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether the cash flows are principal and interest (SPPI).

d) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost: Financial assets that are held for collection of contractual cash flows where those cash flows represent SPPI are measured at amortised cost. Interest income from these financial assets is included in other income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in net gain (loss) from financial instruments. Foreign exchange gains and losses are presented in net foreign exchange gain (loss). Impairment losses are presented as a separate line item in the statement of profit or loss.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

- FVOCI: Financial assets that are held for i) collection of contractual cash flows where the assets' cash flows represent solely payments of principal and interest are measured at FVOCI and ii) for selling the financial assets. Movements in the carrying amount are taken through other comprehensive income (OCI), except 1) for the recognition of impairment gains or losses, 2) interest income using the effective interest method, and 3) foreign exchange gains and losses which are recognised in profit or loss. When the financial assets is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in net gain (loss) from financial instruments. Interest income is included in other income. Impairment expenses are presented separately in the statement of income.
- FVPL: Financial assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within net gain (loss) from financial instruments in the period in which it arises.

e) Equity instruments

The Group measures all equity investments at fair value. Where the Group has elected to present fair value gains or losses on equity instruments in OCI, there is no subsequent reclassification of fair value gains or losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as dividend income when the right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in net gain (loss) from financial instruments in the statement of profit or loss.

Impairment losses or reversal of impairment losses on equity investments are reported together with changes in fair value.

f) Impairment

The Group applies the TFRS 9 using simplified approach in measuring the impairment of trade receivables, contract assets and lease receivables, which applies lifetime expected credit loss, from initial recognition, for all trade receivables, contract assets and lease receivables.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in progress and have substantially the same risk characteristics as the trade receivables for the same types of contracts. The Group has therefore concluded that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for the contract assets. The expected credit loss rates are based on payment profiles, historical credit losses as well as forward-looking information and factors that may affect the ability of the customers to settle the outstanding balances.

For other financial assets carried at amortised cost and FVOCI, the Group applies TFRS 9 using general approach in measuring the impairment of those financial assets. Under the general approach, the 12-month or the lifetime expected credit loss is applied depending on whether there has been a significant increase in credit risk and recognise loss from impairment since the initial recognition of those financial assets.

The credit risk assessment is performed at the end of each reporting period whether there is any significant increase in credit risk profile from the initial recognition by comparing i) expected risk of default as of the reporting date and ii) estimated risk of default on the date of initial recognition.

The Group assesses expected credit loss by considering the forward-looking information and past experiences. The expected credit loss is a probability-weighted estimate of credit losses (probability-weighted present value of estimated cash shortfall). The cash shortfall is the difference between all contractual cash flows that are due to the Group and all cash flows expected to receive, discounted at the original effective interest rate.

When measuring expected credit losses, the Group reflects the following:

- probability-weighted estimated uncollectible amounts
- time value of money
- supportable and reasonable information as of the reporting date about past experience, current conditions and forecasts of future situations.

Impairment and reversal of impairment losses are recognised in profit or loss as a separate line item and included in administrative expenses.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

4.8 Investment property

Investment property, which is land, is held for long-term rental yields or for capital appreciation and is not occupied by the Group.

Investment properties are measured initially at cost, including transaction costs. Subsequently to initial recognition, investment properties are stated at cost less allowance for loss on impairment (if any). Land is not depreciated.

On disposal of investment properties, the difference between the net disposal proceeds and the carrying amount of the asset is recognised in profit or loss in the period when the asset is derecognised.

4.9 Property, plant and equipment

Land is stated at cost. Buildings and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any). The costs comprise any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating. These include decommissioning costs, delivery and restoration costs, and any obligation associated with either its acquisition or a consequence of having used the items.

Subsequent costs are included carrying value of replace items, only when it is probable that future economic benefit associated with the items will flow to the group. In the case of replacement, the Group writes off carrying value of replaced items. Repair and maintenance costs are recognized in profit or loss during the financial period in which they are incurred.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Depreciation of plant and equipment is calculated by reference to their costs on the straight-line basis over the following estimated useful lives:

	Years
Buildings	10 - 30
Leasehold improvements	5 - 20
Refinery plant and equipment	20 - 35
Lube base oil refinery plants and equipment	16 - 30
Petrochemical plants	10 - 30
Power plants	20 - 25
Machinery, equipment and plant equipment	3 - 20
Oil and liquid chemical tankers and crew boats	10 - 25
Furniture, fixtures, office equipment and others	3 - 10
Vehicles	5

Depreciation is included in determining income.

No depreciation is provided on land and assets under construction.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

4.10 Goodwill

Goodwill is initially recorded at cost, which equals to the excess of cost of business combination over the fair value of the net assets acquired. If the fair value of the net assets acquired exceeds the cost of business combination, the excess is immediately recognised as gain in profit or loss.

Goodwill is carried at cost less any accumulated impairment losses. Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired.

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For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the Company's cash-generating units (or group of cash-generating units) that are expected to benefit from the synergies of the combination. The Company estimates the recoverable amount of each cash-generating unit (or group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash-generating unit is less than the carrying amount, an impairment loss is recognised in profit or loss. Impairment losses relating to goodwill cannot be reversed in future periods.

4.11 Intangible assets

Intangible assets acquired through business combination are initially recognised at their fair value on the date of business acquisition while intangible assets acquired in other cases are recognised at cost. Following the initial recognition, the intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses (if any).

Intangible assets with finite lives are amortised on the straight-line basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation expense is charged to profit or loss.

A summary of the intangible assets with finite useful lives is as follows:

	Years
License fee	10 - 25
Computer software	5 - 10
Patent	10

4.12 Impairment of non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the property, plant and equipment, right-of-use assets, investment properties and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. The Group also carries out annual impairment reviews in respect of goodwill. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount.

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An impairment loss is recognised in profit or loss.

In the assessment of asset impairment (except for goodwill), if there is any indication that previously recognised impairment losses may no longer exist or may have decreased, the Group estimates the asset's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The increased carrying amount of the asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in profit or loss.

4.13 Leases

Leases - where the Group is the lessee

Leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis or utilisation rate.

Depreciation of right-of-use assets are calculated by reference to their costs, on the straight-line basis over the shorter of their estimated useful lives and the lease term.

Land	33 years
Buildings	3 years
Equipment	5 years
Oil tanker	10 years
Motor vehicles	5 years

If ownership of the leased asset is transferred to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

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For contracts which contain both lease and non-lease components, the Group allocates the considerations in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the group is a lessee, it has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Assets and liabilities arising from a lease are initially measured at present value. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable,
- variable lease payment that are based on an index or a rate,
- amounts expected to be payable by the lessee under residual value guarantees,
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Lease payments under the extension options period are also included in the measurement of the liability, if the Company is reasonably certain in exercise its extension options.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions, is used.

For contracts which have variable lease payments that depend on an index or rate, those payments are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Right-of-use assets are measured at cost. It comprises the following:

- the amount of the initial measurement of lease liability,
- any lease payments made at or before the commencement date less any lease incentives received,
- any initial direct costs, and
- restoration costs.

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Short-term leases and leases of low-value assets

A lease that has a lease term less than or equal to 12 months from commencement date or a lease of low-value assets is recognised as expenses on a straight-line basis over the lease term. Low-value assets comprise of IT-equipment and small items of office furniture.

Leases - where the Group is the lessor

Finance lease

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease which reflects a constant periodic rate of return. Initial direct costs are included in initial measurement of the finance lease receivable and reduce the amount of income recognised over the lease term.

Operating lease

Rental income under operating leases (net of any incentives given to lessees) is recognised on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognised as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

The investment properties of the Group are leased to tenants under operating leases with rentals payable monthly. There are no variable lease payments that depend on an index or rate.

4.14 Financial liabilities

a) Classification

Financial instruments issued by the Group are classified as either financial liabilities or equity securities by considering contractual obligations as follow:

- Where the Group has an unconditional contractual obligation to deliver cash or another financial asset to another entity, it is considered a financial liability unless there is a predetermined or a possibility that settlement for a fixed amount of cash in exchange of a fixed number of the Group's own equity instruments.

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- Where the Group has no contractual obligation or has an unconditional right to avoid delivering cash or another financial asset in settlement of the obligation, it is considered an equity instrument.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

b) Measurement

Financial liabilities are initially recognised at fair value and are subsequently measured at amortised cost.

c) Derecognition and modification

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled, or expired.

Where the terms of a financial liability are renegotiated or modified, the Group assesses whether the renegotiation or modification will result in the derecognition of that financial liability. Where the modification results in an extinguishment, the new financial liability is recognised based on fair value of its obligation. The remaining carrying amount of financial liability is derecognised. The difference is recognised as other gains (losses) in profit or loss.

Where the modification does not result in the derecognition of the financial liability, the carrying amount of the financial liability is recalculated as the present value of the renegotiated or modified contractual cash flows discounted at its original effective interest rate. The difference is recognised in other gains (losses) in profit or loss.

4.15 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

4.16 Income tax

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

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Current tax

Current income tax is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

Deferred tax

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The Group recognises deferred tax liabilities for all taxable temporary differences while it recognises deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Group reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Group records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

4.17 Employee benefits

a) Short-term employee benefits

Salaries, wages, bonuses and contributions to the social security fund are recognised as expenses when incurred.

b) Post-employment benefits and other long-term employee benefits

Defined contribution plans

The Company and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Company. The fund's assets are held in a separate trust fund and the Company's contributions are recognised as expenses when incurred.

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Defined benefit plans and other long-term employee benefits

The Group has obligations in respect of the severance payments it must make to employees upon retirement under labor law and other employee benefit plans. The Group treats these severance payment obligations as a defined benefit plan. In addition, the Group provides other long-term employee benefit plan, namely long service awards.

The obligation under the defined benefit plan and other long-term employee benefit plans is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from defined benefit plans are recognised immediately in other comprehensive income.

Actuarial gains and losses arising from other long-term benefits are recognised immediately in profit and loss.

Past service costs are recognised in profit or loss on the earlier of the date of the plan amendment or curtailment and the date that the Group recognises restructuring-related costs.

4.18 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation. The increase in the provision due to passage of time is recognised as finance costs.

4.19 Government grants

Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with attached conditions.

Government grants relating to income are deferred and recognised in profit or loss as subsidy over the period necessary to match them with the costs they are intended to compensate.

Subsidy from oil fuel fund is calculated based on the conditions and rates announced by the Energy Policy and Planning committees.

The Group separately presents government grants from revenue from sales in profit or loss.

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4.20 Revenue recognition

Revenue includes all revenues from ordinary business activities. All ancillary income in connection with rendering of services in the course of the Group's ordinary activities are also presented as revenue.

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectability of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into individual distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfilment of the obligation to the customer.

Sales of goods

Revenue from contracts with customers that is derived in connection with oil refinery, lube base oil refinery, aromatics and LAB, solvent and ethanol business is recognised when the Group satisfies a performance obligation by transferring the petroleum products, petrochemical products and other products to customers via vessel, truck, or pipeline. A transfer of goods generally occurs at the same time when legal ownerships are transferred to customers and customers have physical goods in their possession. In that case, the Group satisfies a performance obligation at a point in time.

Electricity and steam sales are recognised on delivery of electricity and steam and customers' acceptance, and measured based on actual electricity and steam delivered and the price as set out in the electricity and steam purchase agreements.

4.21 Derivatives and hedging activities

a) Embedded derivative and derivatives that do not qualify for hedge accounting

Embedded derivative that is separately accounted for and derivatives that do not qualify for hedge accounting is initially recognised at fair value. Changes in the fair value are included in net gain (loss) from financial instruments.

Fair value of derivatives is classified as a current or non-current following its remaining maturity.

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b) Hedge accounting

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The Group designates certain derivatives as either:

- hedges of the fair value of i) recognised assets or liabilities or ii) unrecognised firm commitments (fair value hedges)
- hedges of a particular risk associated with the cash flows of i) recognised assets and liabilities and ii) highly probable forecast transactions (cash flow hedges); or
- hedges of a net investment in a foreign operation (net investment hedges).

At inception of the hedge relationship, the Group documents i) the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items and ii) its risk management objective and strategy for undertaking its hedge transactions.

The full fair value of a hedging derivative is classified as a current or non-current asset or liability following the maturity of related hedged item.

The fair values of derivative financial instruments designated in hedge relationships are disclosed in Note 37. Movements in the hedging reserve in shareholders' equity are shown in Note 36.

Hedge effectiveness

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments, to ensure that an economic relationship exists between the hedged item and hedging instrument.

For hedges of foreign currency purchases, the Group enters into hedge relationships where the critical terms of the hedging instrument match exactly with the terms of the hedged item. The Group therefore performs a qualitative assessment of effectiveness. If changes in circumstances affect the terms of the hedged item such that the critical terms no longer match exactly with the critical terms of the hedging instrument, the Group uses the hypothetical derivative method to assess effectiveness.

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In hedges of foreign currency purchases, ineffectiveness may arise if the timing of the forecast transaction changes from what was originally estimated, or if there are changes in the credit risk of the derivative counterparty.

The Group enters into interest rate swaps that have significant similar critical terms as the hedged item, such as reference rate, reset dates, payment dates, maturities and notional amount. The Group does not hedge all of its loans, therefore the hedged item is identified as a proportion of the outstanding loans up to the notional amount of the swaps. Due to the critical terms match of the hedge items and the hedged instrument throughout the year, such hedged transactions are concluded to have economic relationship.

Hedge ineffectiveness for interest rate swaps is assessed using the same principles as for hedges of foreign currency purchases. It may occur due to:

- the credit value/debit value adjustment on the interest rate swaps which is not matched by the loan, and
- differences in critical terms between the interest rate swaps and loans.

Cash flow hedges that qualify for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges is recognised in the cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss within net gain (loss) from financial instruments.

When cross currency swap contracts are used to hedge forecast transactions, the Group does not designate the cross currency basis spread as the hedging instrument. The changes in fair value of hedging instrument relating to the effective portion are recognised in the cash flow hedge reserve in other comprehensive income within equity. The Group will recognise the change in the fair value of cross currency basis spread that is not related to the hedging instrument in the cost of hedging reserve in other comprehensive income within equity.

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The Group uses forward contracts to hedge future transactions by designating only the change in fair value of the forward contracts related to the spot component of forward contracts as the hedging instrument gains or losses relating to the effective portion of the change in the spot component of the forward contracts are recognised within other comprehensive income in the cash flow hedges reserve within equity. The change in the forward element of the contract that relates to the hedged item ('aligned forward element') is recognised within other comprehensive income in the costs of hedging reserve within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss, as follows:

- where the hedged item subsequently results in the recognition of a non-financial asset (such as inventory), both the deferred hedging gains and losses and the deferred forward points are included within the initial cost of the asset. The deferred amounts are ultimately recognised in profit or loss when the hedged item affects profit or loss (for example through cost of sales when products are sold)
- the gain or loss relating to the effective portion of the interest rate swaps hedging variable rates borrowings is recognised in profit or loss within finance costs at the same time as the interest expense on the hedged borrowings.

When a hedging instrument expires, is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecast transaction occurs. When the forecast transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.

The Group recognises changes in the fair value of any derivative instrument that does not qualify for hedge accounting immediately in profit or loss, which includes in net gain (loss) from financial instruments.

The Group designates only the spot element of forward contracts and the financial instrument excluding the foreign currency basis spread as a hedging instrument. The change in fair value of the forward element of forward contracts and the foreign currency basis spread of financial instrument that relates to the hedged item is separately accounted for as a cost of hedging which is recognised in other comprehensive income and accumulated in a separate component of equity under cost of hedging reserve.

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If the hedged item is transaction-related, the cost of hedging reserve accumulated in other comprehensive income is reclassified to profit or loss when the hedged item affects profit or loss. If the hedged item is time-period related, then the reserve accumulated in other comprehensive income is reclassified to profit or loss on systematic and rational basis. The reclassified amounts are recognised in profit or loss in the same line as the hedged item. If the hedged item is a non-financial item, then the reserve is removed directly from equity and included in the initial carrying amount of the recognised non-financial item. Furthermore, if the Group expects that some or all of the loss accumulated in cost of hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

4.22 Financial guarantee contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- the amount determined in accordance with the expected credit loss model under TFRS 9; and
- the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of TFRS 15.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between a) the contractual payments required under the debt instrument; and b) the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where guarantees in relation to loans or other payables of associates are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment.

4.23 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

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All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

5. Significant accounting judgements and estimates

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

Allowance for diminution in value of inventories

Net realisable value is the estimate of the selling price in the ordinary course of business, less applicable variable selling expenses. Allowance is made, where necessary, for obsolete, slow-moving and defective inventories.

Goodwill

The initial recognition and measurement of goodwill, and subsequent impairment testing, require management to make estimates of cash flows to be generated by the asset or the cash-generating units and to choose a suitable discount rate in order to calculate the present value of those cash flows.

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Investment in associate

The management of the Company determined that the Group has significant influence on PT Chandra Asri Petrochemical Tbk (CAP) and classified investment as an investment in associate, even though the Group only holds less than 20% of shares and voting rights. This is because the Company holds 15% of the shares in CAP through its subsidiary, PT TOP Investment Indonesia. The Company has delegated representatives to serve as the directors of CAP's Board of Commissioners and executives to serve as the members of CAP's Board of Directors. In addition, the Company also entered into the Feedstock Sale and Purchase Agreement with CAP.

Lease

Determining the lease term with extension and termination options - The Group as a lessee

In determining the lease term, the management is required to exercise judgement in assessing whether the Group is reasonably certain to exercise the option to extend or terminate the lease considering all relevant facts and circumstances that create an economic incentive for the Group to exercise either the extension or termination option.

Estimating the incremental borrowing rate - The Group as a lessee

The Group cannot readily determine the interest rate implicit in the lease, therefore, the management is required to exercise judgement in estimating its incremental borrowing rate to discount lease liabilities. The incremental borrowing rate is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.

Post-employment benefits under defined benefit plans and other long-term employee benefits

The obligation under the defined benefit plan and other long-term employee benefit plans is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

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6. Related party transactions

During the years, the Group had significant business transactions with related parties. Such transactions, which are summarised below, arose in the ordinary course of business.

Relationships with key management and other related parties were as follows:

Name of entities	Country of incorporation	Nature of relationships
PTT Public Company Limited	Thailand	Parent company
Thai Paraxylene Co., Ltd.	Thailand	Subsidiary and/or common directors and/or the Company's management as a director
LABIX Co., Ltd.	Thailand	Indirect subsidiary and/or common directors and/or the Company's management as a director
Thai Lube Base Public Company Limited	Thailand	Subsidiary and/or common directors and/or the Company's management as a director
Thaioil Marine International Pte. Ltd. ⁽¹⁾	Republic of Singapore	Subsidiary and/or the Company's management as a director
PT TOP Investment Indonesia	Republic of Indonesia	Subsidiary and/or the Company's management as a director
PT Chandra Asri Petrochemical Tbk.	Republic of Indonesia	Indirect associate and/or common directors
Thaioil Energy Services Co., Ltd.	Thailand	Subsidiary and/or common directors and/or the Company's management as a director
Thaioil Solvent Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director
TOPNEXT International Co., Ltd. ⁽²⁾	Thailand	Indirect subsidiary and/or common directors/ or the Company's management as a director
Sak Chaisidhi Co., Ltd.	Thailand	Indirect subsidiary and/or the Company's management as a director
TOP Solvent (Vietnam) LLC.	Socialist Republic of Vietnam	Indirect subsidiary and/or the Company's management as a director

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Name of entities	Country of incorporation	Nature of relationships
PT Tirta Surya Raya	Republic of Indonesia	Indirect subsidiary
JSKEM Private Limited	Republic of Singapore	Indirect subsidiary and/or the Company's management as a director
TOPNEXT India Private Limited ⁽³⁾ (Formerly known as "TSCHEM India Private Limited")	Republic of India	Subsidiary of indirect subsidiary
TOP SPP Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director
Thaioil Ethanol Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director
Sapthip Co., Ltd.	Thailand	Indirect subsidiary and/or common directors and/ or the Company's management as a director
Sapthip Green Energy Co., Ltd.	Thailand	Subsidiary of indirect subsidiary and/or the Company's management as a director
Ubon Bio Ethanol Public Co., Ltd.	Thailand	Other related and/or the Company's management as a director
Chaibadan Community Power Plant 1 Co., Ltd. ⁽⁴⁾	Thailand	Joint venture of indirect subsidiary
Chaibadan Community Power Plant 2 Co., Ltd. ⁽⁴⁾	Thailand	Joint venture of indirect subsidiary
Thaioil Treasury Center Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director
TOP Ventures Company Limited	Thailand	Indirect subsidiary and/or the Company's management as a director
TOP Ventures Hong Kong Limited	Hong Kong Special Administrative Region	Indirect subsidiary and/or the Company's management as a director
TOP Ventures America LLC	United States of America	Indirect subsidiary and/or the Company's management as a director
PTT Digital Solutions Co., Ltd.	Thailand	Associate and/or common directors and/or the Company's management as a director

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Name of entities	Country of incorporation	Nature of relationships
PTT Energy Solutions Co., Ltd. ⁽⁵⁾	Thailand	Associate and/or the Company's management as a director
Thai Petroleum Pipeline Co., Ltd.	Thailand	Associate and/or the Company's management as a director
Global Power Synergy Public Co., Ltd. ⁽⁶⁾	Thailand	Other related and/or common directors
Sarn Palung Social Enterprise Company Limited	Thailand	Other related and/or the Company's management as director
PTT Oil and Retail Business Public Company Limited	Thailand	Subsidiary of the parent company and/or common directors
Business Services Alliance Co., Ltd.	Thailand	Subsidiary of the parent company and/or common directors
PTT Exploration and Production Public Company Limited	Thailand	Subsidiary of the parent company
PTT International Trading Pte. Ltd.	Republic of Singapore	Subsidiary of the parent company
PTT Treasury Center Co., Ltd.	Thailand	Subsidiary of the parent company
Energy Complex Co., Ltd.	Thailand	Subsidiary of the parent company
IRPC Public Company Limited	Thailand	Subsidiary of the parent company
PTT Tank Terminal Co., Ltd.	Thailand	Subsidiary of the parent company
PTT Global Chemical Public Company Limited	Thailand	Subsidiary of the parent company
PTT International Trading London Ltd.	England	Subsidiary of the parent company
PTT International Trading USA Inc.	United States of America	Subsidiary of the parent company
PTT MEA Ltd.	United Arab Emirates	Indirect subsidiary of the parent company
Siam Management Holding Co., Ltd.	Thailand	Indirect subsidiary of the parent company
PTTEP International Limited	Thailand	Indirect subsidiary of the parent company
MEKHA V Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Energy Recovery Unit Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Combined Heat and Power Producing Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Nuplex Resins (Vietnam) Pty Ltd.	Socialist Republic of Vietnam	Indirect subsidiary of the parent company

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Name of entities	Country of incorporation	Nature of relationships
GC Maintenance & Engineering Co., Ltd.	Thailand	Indirect subsidiary of the parent company
NPC Safety and Environmental	Thailand	Indirect subsidiary of the parent company
Global Green Chemicals Public Company Limited	Thailand	Indirect subsidiary of the parent company
PTT Phenol Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Vencorex (Thailand) Co., Ltd.	Thailand	Indirect subsidiary of the parent company
GC Polyols Co., Ltd.	Thailand	Indirect subsidiary of the parent company
GC Glycol Co., Ltd.	Thailand	Indirect subsidiary of the parent company
GC-M PTA Company Limited	Thailand	Indirect subsidiary of the parent company
PTT MCC Biochem Co., Ltd.	Thailand	Joint venture of subsidiary of the parent company
Thai Tank Terminal Ltd.	Thailand	Joint venture of subsidiary of the parent company
IRPC Polyol Co., Ltd.	Thailand	Joint venture of subsidiary of the parent company
Brighter PTT Oil and Retail Business Company Limited	Myanmar	Joint venture of subsidiary of the parent company

⁽¹⁾ Thailoil Marine International Pte. Ltd., has already been liquidated and closed on 28 December 2022.

⁽²⁾ On 3 October 2022, TOP Solvent Company Limited changed its name to "TOPNEXT International Company Limited".

⁽³⁾ On 26 May 2023, TSCHEM India Private Limited changed its name to "TOPNEXT India Private Limited".

⁽⁴⁾ Chaibadan 1 Community Power Plant Company Limited and Chaibadan 2 Community Power Plant Company Limited, have already been liquidated and closed on 27 March 2023.

⁽⁵⁾ On 29 August 2022, the Extraordinary General Meeting of Shareholders of PTT Energy Solutions Company Limited ("PTTES") passed a resolution approving the dissolution of PTTES. The liquidation process is expected to be completed within 2 years from the date of approval.

⁽⁶⁾ During the year 2022, the Company classified investments in associates to financial asset measured at fair value through other comprehensive income (Note 14).

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

The pricing policies for particular types of transactions are explained further below:

Transactions	Pricing policies
Revenue from sale and services, lease income, purchase of goods and assets	Market prices or, where no market price exists, at contractually agreed prices
Interest income and expense	Agreed rates as stipulated in the agreements
Dividend income	Right to receive dividends
Other income and expenses	Contractually agreed prices
Directors' remuneration	Amounts approved by the Group's shareholders

Summarised significant business transactions with related parties are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022

Parent company

Revenue from sale	2	-	-	-
Purchase of crude oil and feedstock	339,577	375,428	329,904	365,605
Disposal of investment in associated company	-	10,701	-	10,701
Other income	25	50	25	50
Other expenses	122	98	122	98
Purchase of assets	121	1	-	1

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Subsidiaries				
<i>(eliminated from the consolidated financial statements)</i>				
Revenue from sale	-	-	100,623	116,581
Purchase of crude oil and feedstock	-	-	64,762	72,481
Interest income	-	-	373	99
Dividend income	-	-	6,487	2,004
Land lease income	-	-	112	67
Other income	-	-	1,956	1,679
Interest expense	-	-	795	1,159
Interest expense capitalised as cost of assets	-	-	3,931	3,989
Other expenses	-	-	1,763	1,488
Purchase of assets	-	-	230	187
Associates				
Revenue from sale	317	7,564	-	7,552
Purchase of crude oil and feedstock	1,131	922	-	-
Dividend income	-	-	242	710
Other income	-	6	-	6
Other expenses	346	378	345	378
Purchase of assets	43	32	43	30

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Subsidiaries of the parent company				
Revenue from sale	227,341	255,334	212,049	238,237
Purchase of crude oil and feedstock	7,169	16,736	4,314	12,988
Disposal of investment in associated company	-	11,346	-	11,346
Other income	15	14	15	14
Interest expense	1	111	1	111
Interest expense capitalised as cost of assets	-	47	-	47
Other expenses	60	109	15	52
Purchase of assets	41	22	41	22
Other related parties				
Revenue from sale	2,487	8,641	2,482	8,638
Purchase of crude oil and feedstock	-	3	-	-
Dividend income	189	68	169	56
Other income	25	10	25	10
Other expenses	14	22	-	-

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

As at 31 December 2023 and 2022, the balances of the accounts between the Group and those related companies are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade receivables - related parties (Note 10)				
Subsidiaries	-	-	9,076	8,188
An associate	146	-	-	-
Subsidiaries of the parent company	15,127	13,651	13,872	12,578
Other related parties	-	3,070	-	3,070
Total	15,273	16,721	22,948	23,836
Other receivables - related parties				
Parent company	586	1,605	582	1,599
Subsidiaries	-	-	309	204
An associate	68	35	68	35
Subsidiaries of the parent company	670	704	666	696
Other related party	5	3	5	3
Total	1,329	2,347	1,630	2,537
Finance lease receivables - related parties				
Subsidiaries	-	-	1,144	1,102
Total	-	-	1,144	1,102
Other non-current assets - related parties				
Subsidiaries	-	-	88	60
A subsidiary of the parent company	15	15	15	15
Total	15	15	103	75

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade payables - related parties				
Parent company	48,344	71,121	46,699	70,332
Subsidiaries	-	-	6,443	5,845
An associate	103	83	-	-
Subsidiaries of the parent company	339	1,772	188	1,550
Total	48,786	72,976	53,330	77,727
Other payables - related parties				
Parent company	94	61	-	-
Subsidiaries	-	-	890	1,035
Associates	134	95	134	95
Subsidiaries of the parent company	17	8	11	5
Other related parties	1	2	-	-
Total	246	166	1,035	1,135
Finance lease payables - related parties				
Parent company	3	4	3	4
Subsidiaries	-	-	508	538
Associates	5	8	5	8
A subsidiary of the parent company	20	42	20	42
Total	28	54	536	592
Derivative liability - related parties				
Subsidiaries	-	-	19	11
Total	-	-	19	11

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Other non-current liabilities - related parties				
Subsidiaries	-	-	671	611
A subsidiary of the parent company	3,092	3,091	3,092	3,091
Other related party	3	5	3	5
Total	3,095	3,096	3,766	3,707

Short-term loans to related parties

Movements of short-term loans to related parties during year ended 31 December 2023 are as follows:

(Unit: Million Baht)

	Separate financial statements				
	Balance as at 1 January 2023	Increase	Decrease	Effect of exchange rate	Balance as at 31 December 2023
Subsidiaries	2,079	-	(1,135)	(10)	934
Total	2,079	-	(1,135)	(10)	934

Interest rates for the year ended 31 December 2023 is charged based on BIBOR 3M plus certain fixed margin per annum and SOFR 3M plus certain fixed margin per annum. (31 December 2022 was charged based on BIBOR 3M plus certain fixed margin per annum and LIBOR 3M plus certain fixed margin per annum).

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Long-term loans to related party

Movements of long-term loans to related party during the year ended 31 December 2023 are as follows:

(Unit: Million Baht)

	Separate financial statements			
	Balance as at 1 January 2023	Increase	Decrease	Balance as at 31 December 2023
A subsidiary	2,000	9,986	(2,000)	9,986
Total	2,000	9,986	(2,000)	9,986

On 30 September 2021, the Company entered into a loan agreement with a subsidiary in an amount not exceeding of Baht 2,500 million, with a fixed interest rate of not exceeding 2.5 percent per annum throughout the contract period. The agreement is effective for a period of 3.5 years from the first utilisation date, with the first exercise of rights on 17 January 2022. The loan was used for the construction of the power plant under the Expansion Project of the subsidiary within the Group. During the current year, the subsidiary already repaid the outstanding loan.

On 3 May 2023, the Company entered into a loan agreement with a subsidiary in an amount not exceeding of Baht 10,000 million, with an average interest rate of not exceeding 4.05 percent per annum throughout the contract period. The agreement is effective for 5 - 15 years. The loan serves the purposes of repaying loans to various financial institutions and financing the operations of an electricity and steam generating expansion project for the subsidiary within the Group.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Short-term loans from related parties

Movements of short-term loans from related parties during the year ended 31 December 2023 are as follows:

(Unit: Million Baht)

	Separate financial statements			
	Balance as at 1 January 2023	Increase	Decrease	Balance as at 31 December 2023
Subsidiaries	321	4,865	-	5,186
Total	321	4,865	-	5,186

Interest rates for year ended 31 December 2023 and 2022 are charged based on BIBOR 1M plus certain fixed margin per annum.

Long-term loans from related party

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022

Current portion of long-term loans from related party

A subsidiary	-	-	-	9,851
	-	-	-	9,851

Long-term loans from related party, net of current portion

A subsidiary	-	-	98,652	99,632
	-	-	98,652	99,632
Total	-	-	98,652	109,483

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Movements of long-term loans from related party during the year ended 31 December 2023 are as follows:

(Unit: Million Baht)

	Separate financial statements					Balance as at 31 December 2023
	Balance as at 1 January 2023	Increase	Decrease	Amortise of deferred financing fee	Effect of exchange rate	
A subsidiary	109,483	-	(9,365)	15	(1,481)	98,652
Total	109,483	-	(9,365)	15	(1,481)	98,652

The Company entered into multiple loan agreements with a subsidiary, with repayment due ranging from 2023 to 2050. As at 31 December 2023, the outstanding balance of loans were US dollar 2,877.75 million. The loans bear fixed interest rates of 3.025% to 5.96% per annum.

Directors and management's benefits

During the years ended 31 December 2023 and 2022, the Group had employee benefit expenses payable to their directors and management as below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Short-term employee benefits	77	69	71	62
Total	77	69	71	62

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Significant agreements with related parties

During the year ended 31 December 2023, the Group had the following significant agreements with related parties.

Asset Sale and Purchase Agreement for the Energy Recovery Unit (ERU)

The Company has entered into the Asset Sale and Purchase Agreement for the ERU with a related company to support energy and utilities for Clean Fuel Project (CFP) whereby the purchase price is specified in the agreement. The Company will transfer ownership in the ERU to the purchaser upon satisfaction of all the conditions precedent set out in the agreement (Closing Date). Such conditions precedent include the Company's countersigning of the Provisional Acceptance Certificate (PAC) to the contractor which is expected to occur in 2025 and purchaser and seller receive all necessary certification from relevant authorities.

Fuel and Utilities Supply Agreement

The Company has entered into the Fuel and Utilities Supply Agreement with a related company to supply pitch, other fuels and utilities used in the operation of the ERU. The term of the agreement is 25 years from the Closing Date and the parties may agree to extend the term for another 5 years.

Power Purchase Agreement

The Company has entered into the Power Purchase Agreement with a related company to purchase electricity, steam and other by-products generated by the ERU. The term of the agreement is 25 years from the Closing Date and the parties may agree to extend the term for another 5 years.

Operation and Maintenance Services Agreement

The Company has entered into the Operation and Maintenance Services Agreement with a related company to provide the services of operation and maintenance of the ERU. The term of the agreement is 25 years from the Closing Date and the parties may agree to extend the term for another 5 years.

Master Agreement for Business Collaboration

The Company has entered into Master Agreement for Business Collaboration with a parent company in order to assign rules, conditions and guidelines for credit term extension of crude and condensate from 30 days to not exceeding 90 days. Term of the contract is 1 years which will be expired in 31 December 2023. The Company renewed the Service agreement with a subsidiary for another one year which will be expired on 31 December 2024.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Feedstock Supply Agreement

The Company has entered into Feedstock Supply Agreement with a parent company. A parent company will supply crude and condensate for the Company's refinery production including hire a vessels to deliver crude. Term of the contracts is 3 years which will be expired on 31 December 2024.

P1 Collaboration Agreement

The Company and subsidiaries have entered into P1 Collaboration Agreement to assign a collaboration guideline between PTT group, the Company and one of the Company's subsidiaries for supplying crude and condensate, petroleum product and petrochemical product, hire vessel, and derivatives related to an export and import of crude and condensate petroleum products and petrochemical products, including managing time charter vessel of the Company. These services will be managed by a related party in order to get a maximum benefit among PTT Group. The term of the contracts is 3 years which will be expired on 31 December 2024.

7. Cash and cash equivalents

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Cash on hand	1	-	-	-
Deposits held at bank				
- savings and current accounts	26,461	33,589	21,767	24,800
- fixed deposit accounts less than 3 months	1,970	9,987	1,970	9,987
Total	28,432	43,576	23,737	34,787

As at 31 December 2023, the interest rates on deposits in saving accounts are 0.01% - 5.30% per annum (2022: 0.01% - 2.23% per annum).

As at 31 December 2023, the interest rates on deposits in fixed accounts less than 3 months are 0.30% - 6.01% per annum (2022: 0.13% to 4.44% per annum).

As at 31 December 2023, the Group's had no deposit at financial institutions were used to pledge as collateral for credit facilities (2022: Baht 2,761 million) due to the Group's completely repaid for the loan in full.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

8. Deposits at a financial institution used as collateral

As at 31 December 2023, There was no deposits at a financial institution used as short-term collateral represented deposits of a subsidiary (2022: Baht 343 million) due to the repayment of loan completely in full.

9. Short-term investments in financial assets

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Fixed deposit accounts held at bank	5,945	-	5,775	-
Total	5,945	-	5,775	-

As at 31 December 2023, fixed deposit accounts held at bank was denominated in US Dollar amounting to US Dollar 175 million and bore interest at rates of 5.85% to 6.00% per annum.

10. Trade receivables

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Trade receivables - related parties</u>				
Age of outstanding debts by due date				
Not yet due	15,273	16,721	22,948	23,836

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade receivables - non related parties				
Age of outstanding debts by due date				
Not yet due	15,708	11,918	8,952	5,945
Past due				
Up to 3 months	170	122	-	-
3 - 6 months	7	1	-	-
Over 1 year	2	-	-	-
Total trade receivables - non related parties	15,887	12,041	8,952	5,945
Less: Allowance for expected credit losses	(6)	(3)	-	-
Total trade receivables - non related parties, net	15,881	12,038	8,952	5,945
Total	31,154	28,759	31,900	29,781

The normal credit term granted by the Group ranges from 7 days to 120 days.

11. Other receivables

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Other accounts receivables	1,835	3,928	2,114	4,095
Prepaid expenses	497	420	264	227
Current portion of long-term loans				
to savings co-operative of employees	21	13	20	13
Total	2,353	4,361	2,398	4,335

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

12. Inventories

(Unit: Million Baht)

	Consolidated financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2023	2022	2023	2022	2023	2022
Crude oil and feedstock	17,979	16,713	-	-	17,979	16,713
Materials, spare parts and supplies	1,863	1,741	(13)	(13)	1,850	1,728
Finished and semi-finished oil products	13,124	13,557	(744)	(801)	12,380	12,756
Goods in transit						
Crude oil	20,298	23,988	-	-	20,298	23,988
Materials, spare parts and supplies	34	23	-	-	34	23
Finished and semi-finished oil products	115	135	-	-	115	135
Total	53,413	56,157	(757)	(814)	52,656	55,343

(Unit: Million Baht)

	Separated financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2023	2022	2023	2022	2023	2022
Crude oil and feedstock	16,592	15,583	-	-	16,592	15,583
Materials, spare parts and supplies	1,317	1,236	-	-	1,317	1,236
Finished and semi-finished oil products	9,579	9,468	(644)	(422)	8,935	9,046
Goods in transit						
Crude oil	20,298	23,988	-	-	20,298	23,988
Materials, spare parts and supplies	32	1	-	-	32	1
Total	47,818	50,276	(644)	(422)	47,174	49,854

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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As at 31 December 2023, the inventories as stated above included a legal reserve amounting to Baht 12,664 million (2022: Baht 12,661 million).

As at 31 December 2023, a subsidiary has pledged inventories of approximately Baht 230 million (2022: Baht 287 million) to secure short-term loans from financial institutions.

Inventories recognised as expenses in cost of sale of goods for the year ended 31 December 2023 and 2022 are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Cost of sale of goods	359,534	407,781	402,594	455,340
Reduction of inventory to net realisable value	(55)	570	221	332
Net	359,479	408,351	402,815	455,672

13. Investments in subsidiaries

13.1 Movements of investments in subsidiaries are as follows:

(Unit: Million Baht)

	Separate financial statements	
	2023	2022
At 1 January	41,280	41,014
Increase in investment	-	266
At 31 December	41,280	41,280

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Significant transactions during the year ended 31 December 2023

Indirect subsidiaries

TOP Ventures Hong Kong Limited (TVHK)

During the year 2023, Thailoil Treasury Centre Co., Ltd. ("TTC"), a subsidiary of the Group, has paid for additional shares to TOP Ventures Hong Kong Limited ("TVHK"), an indirect subsidiary of the Group, amounting to US Dollar 5.08 million or equivalent to Baht 176 million and TTC has fully paid for the shares.

TOP Venture America LLC (TVUS)

In September 2023, TOP Ventures Hong Kong Limited ("TVHK"), an indirect subsidiary of the Group, has paid for additional shares to TOP Ventures America LLC ("TVUS"), amounting to US Dollar 2.58 million or equivalent to Baht 91 million and TVHK has fully paid for the shares in September 2023.

TOP Ventures Company Limited (TVTH)

In December 2023, Thailoil Treasury Centre Co., Ltd. ("TTC"), a subsidiary of the Group, has paid for additional shares to TOP Ventures Company Limited ("TVTH"), an indirect subsidiary of the Group, amounting to Baht 10 million.

Significant transactions during the year ended 31 December 2022

Direct subsidiaries

Thailoil Treasury Center Co., Ltd

On 27 April 2022, Thailoil Treasury Center Co., Ltd ("TTC"), a subsidiary company, has called up for additional shares totalling Baht 266 million. The Company has fully paid for the shares in April 2022.

Indirect subsidiaries

TOP Ventures Hong Kong Limited (TVHK)

In September 2022, Thailoil Treasury Center Co., Ltd ("TTC"), a direct shareholder holding 99.99 percent of the total registered capital of TVHK, has called up for additional shares in the amount of US Dollar 0.25 million. TTC has fully paid for the shares in September 2022.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

13.2 The details of subsidiaries are as follows:

(Unit: Million Baht)

		Separate financial statements							
Country of incorporation	Nature of the business	Percentage of direct shareholding		Paid-up capital		Cost method		Dividend received during the year	
		2023 (percent)	2022 (percent)	2023	2022	2023	2022	2023	2022
Thai Paraxylene Co., Ltd. and its subsidiary - Subsidiary LABIX Co., Ltd.	Thailand Paraxylene manufacturing and distribution Linear Alkyl Benzene manufacturing and distribution	99.99	99.99	2,572	2,572	2,161	2,161	-	386
Thai Lube Base Public Company Limited	Thailand Lube base oil refining and distribution	99.99	99.99	1,758	1,758	1,979	1,979	2,792	1,230
Thaioil Energy Services Co., Ltd.	Thailand Providing human resource management	99.99	99.99	40	40	40	40	3	18

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

(Unit: Million Baht)

Country of incorporation		Nature of the business	Separate financial statements							
			Percentage of direct shareholding		Paid-up capital		Cost method		Dividend received during the year	
			2023 (percent)	2022 (percent)	2023	2022	2023	2022	2023	2022
Thaioil Solvent Co., Ltd. and its subsidiaries	Thailand	Investment in solvent and chemical business	99.99	99.99	1,250	1,250	1,250	1,250	180	180
- Subsidiaries										
TOPNEXT International Company Limited and its subsidiaries	Thailand	Distribution of solvent and chemical products	99.99	99.99	1,200	1,200	-	-	-	-
Sak Chaisidhi Co., Ltd.	Thailand	Solvent and chemical products manufacturing	80.52	80.52	190	190	-	-	-	-
TOP Solvent (Vietnam) LLC.	Socialist Republic of Vietnam	Distribution of solvent and chemical products	100.00	100.00	634	634	-	-	-	-
PT Tirta Surya Raya	Republic of Indonesia	Distribution of solvent and chemical products	77.71	77.71	50	50	-	-	-	-
JSKEM Private Limited its subsidiary	Republic of Singapore	Distribution of solvent and chemical products	60.00	60.00	22	22	-	-	-	-
TOPNEXT India Private Limited (Formerly known as "TSCHEM India Private Limited")	Republic of India	Distribution of solvent and chemical products	99.99	99.99	_(1)	_(1)	-	-	-	-

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

		Separate financial statements						
Country of incorporation	Nature of the business	Percentage of direct shareholding		Paid-up capital		Cost method		Dividend received during the year
		2023 (percent)	2022 (percent)	2023	2022	2023	2022	
Thaioil Ethanol Co., Ltd. and its subsidiaries	Thailand	99.99	99.99	1,450	1,450	1,450	1,450	5
- Subsidiaries	Investment in ethanol businesses and alternative energy products							26
Sapthip Co., Ltd. and its subsidiaries	Thailand	50.00	50.00	800	800	-	-	-
Sapthip Green Energy Co., Ltd.	Thailand	99.99	99.99	25	25	-	-	-
TOP SPP Co., Ltd.	Thailand	99.99	99.99	3,500	3,500	3,500	3,500	3,360
	Power and stream generation and distribution							-

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

(Unit: Million Baht)

Separate financial statements									
Country of incorporation	Nature of the business	Percentage of direct shareholding		Paid-up capital		Cost method		Dividend received during the year	
		2023 (percent)	2022 (percent)	2023	2022	2023	2022	2023	2022
Thaioil Treasury Center Co., Ltd. and its subsidiaries	Treasury centre services for the Group's business	99.99	99.99	956	956	956	956	147	164
- Subsidiaries									
TOP Ventures	Investment in venture capital and/or start-up business	99.99	99.99	29	19	-	-	-	-
Company Limited									
TOP Ventures Hong Kong Limited and its subsidiaries	Investment in venture capital and/or start-up business	100.00	100.00	733	557	-	-	-	-
Administrative Region									
TOP Ventures	Investment in venture capital and/or start-up business	100.00	100.00	484	393	-	-	-	-
America LLC.									
PT TOP Investment Indonesia	Investment in Olefins	100.00	100.00	29,944	29,944	29,944	29,944	-	-
Indonesia	petrochemical business								
Total investments in subsidiaries				41,280	41,280	6,487	2,004		

⁽¹⁾ The balance is below Baht 1 million.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

13.3 Summarised financial information on subsidiaries with material non-controlling interests

Set out below are the summarised financial information for each subsidiary that has non-controlling interests and are material to the Group. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised statement of financial position

(Unit: Million Baht)

	LABIX Co., Ltd.		Other individually immaterial subsidiaries		Total	
	2023	2022	2023	2022	2023	2022
As at 31 December						
Non-controlling interest percentage	25	25				
Current assets	5,647	4,489				
Non-current assets	9,280	9,888				
Current liabilities	(4,189)	(3,415)				
Non-current liabilities	(3,051)	(3,905)				
Net assets	7,687	7,057				
Carrying amount of non-controlling interests	1,922	1,764	822	859	2,744	2,623

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Summarised statement of comprehensive income

(Unit: Million Baht)

	LABIX Co., Ltd.		Other individually immaterial subsidiaries		Total	
	2023	2022	2023	2022	2023	2022
For the year ended 31 December						
Revenue from sales	26,615	30,912				
Profit	630	1,638				
Other comprehensive income	-	-				
Total comprehensive income	630	1,638				
Profit allocated to non-controlling interests	158	409	(16)	29	142	438
Total comprehensive income allocated to non-controlling interests	158	409	(17)	32	141	441

Summarised statement of cash flows

(Unit: Million Baht)

	LABIX Co., Ltd.	
	2023	2022
For the year ended 31 December		
Cash flows from operating activities	1,479	1,227
Cash flows used in investing activities	(27)	(45)
Cash flows used in financing activities	(1,014)	(1,479)
Net increase (decrease) in cash and cash equivalents	438	(297)
Cash and cash equivalents at the beginning of the year	369	652
Exchange gains on cash and cash equivalents	5	14
Cash and cash equivalents at the end of the year	812	369

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

14. Investments in joint ventures and associates

14.1 Movements of investments in joint ventures and associates are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Net book value at beginning of year	32,603	55,412	982	23,272
Increase in investment	3	3	-	-
Decrease in investment	-	(1)	-	-
Disposal of investment in associates	-	(11,835)	-	(11,560)
Share of profit (loss) of joint ventures and associates	84	(512)	-	-
Dividend income	(398)	(765)	-	-
Exchange differences on translation	(299)	1,051	-	-
Share of other comprehensive expense of associates, net of tax	46	209	-	-
Share gain from the change in the net assets in an associate	-	2	-	-
Loss on impairment	-	-	-	(11)
Investment reclassification	-	(10,961)	-	(10,719)
Net book value at ending of year	32,039	32,603	982	982

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Thai Oil Public Company Limited and its subsidiaries

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Significant transactions during the year ended 31 December 2023

Indirect joint ventures

Chaibadan Community Power Plant 1 Co., Ltd. and Chaibadan Community Power Plant 2 Co., Ltd.

The extraordinary meeting of Chaibadan Community Power Plant 1 Co., Ltd. ("CCPP1") and Chaibadan Community Power Plant 2 Co., Ltd. ("CCPP2") have approved the dissolution of the companies. CCPP1 and CCPP2 were liquidated and closed on 27 March 2023.

Significant transactions during the year ended 31 December 2022

Disposal of investment and decrease in shareholding of Global Power Synergy Public Company Limited ("GPSC")

On 7 April 2022, the Company's Annual General Meeting of Shareholders passed a resolution to approve the sale of ordinary shares of Global Power Synergy Public Company Limited ("GPSC") with a par value of Baht 10 per share to PTT Public Company Limited ("PTT"), the Company's major shareholder and/or Siam Management Holding Co., Ltd. ("SMH"), PTT's related party, in the aggregate amount of 304 million shares, representing 10.78 percent of the total issued and paid-up shares of GPSC, subject to the terms and conditions of the Share Sale Transaction as specified in the share purchase agreement.

On 6 June 2022 and 7 June 2022, the Company disposed of parts of its investment in GPSC, with 5.55 percent of all issued and paid-up shares of GPSC sold to SMH and 5.23 percent to PTT, or a total of 10.78 percent of the total issued and paid-up shares of GPSC, totalling Baht 22,047 million. The Group and the Company recognised gain from disposal of investment in an associate in the consolidated and separate statements of income of Baht 10,038 million and Baht 10,487 million, respectively.

After the disposal of this investment in GPSC, the Company's remaining shareholding was 10 percent of the total issued and paid-up shares of GPSC and the Company reclassified this investment from investments in associates to financial assets measured at fair value through other comprehensive income. The Group and Company recognised gain from reclassification of investment in the consolidated and separate statements of income amounting to Baht 7,297 million and Baht 7,539 million, respectively.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

The objective of the disposal of investment was to use the proceeds generated primarily to make repayment of loans from PTT under the credit facility agreement with PTT and the loans from commercial banks provided as financial assistance in the form of bridging loans and to finance the Company's investment in PT Chandra Asri Petrochemical Tbk.

Dissolution of PTT Energy Solutions Company Limited ("PTTES")

On 29 August 2022, Extraordinary General Meeting of Shareholders of PTT Energy Solutions Company Limited ("PTTES") passed a resolution to approve the dissolution of PTTES, which is an associate company with 20 percent owned by the Company.

On 29 December 2022, PTTES completed the registration of dissolution with the Ministry of Commerce and is in the process of liquidation. The dissolution of PTTES is aligned with PTT Group's business restructuring policy and does not have any material effect to the operation of the Company.

Indirect associates

PT Chandra Asri Petrochemical Tbk

In September 2021, PT TOP Investment Indonesia ("TII"), a subsidiary of the Group, entered into the share acquisition of PT Chandra Asri Petrochemical Tbk ("CAP"), a registered company in the Republic of Indonesia. The Group has 15% of shareholding interest in CAP.

Furthermore, the Group will acquire an additional 0.38% of shareholding interest in CAP with the contingent considerations not exceeding of US Dollar 3.9 million or not exceeding US Dollar 270 million which will depend on the condition of the approval for the final investment decision on the petrochemical plant construction project by PT Chandra Asri Perkasa (CAP2), a subsidiary of CAP within 5 years from the date of investment acquisition.

On 5 August 2022, the Extraordinary General Meeting of Shareholders of CAP passed a resolution to approve the stock split at a ratio of 1:4, resulting in an increase in the Company's shares from 3,244 million shares to 12,976 million shares.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

14.2 Investments in associates

The details of associates are as follows:

(Unit: Million Baht)

Consolidated financial statements										
	Country of incorporation	Nature of the business	Ownership interest held by the Group		Cost method		Equity method		Dividend received during the year	
			2023	2022	2023	2022	2023	2022		
			(percent)	(percent)						
PTT Digital Solutions Co., Ltd.	Thailand	Provide information technology and computer service activities	20.00	20.00	30	30	767	675	30	25
PTT Energy Solutions Co., Ltd.	Thailand	Provide technical and operational services	20.00	20.00	19	19	20	21	-	4
Global Power Synergy Public Company Limited	Thailand	Power, steam and water generation and distribution for industries	-	_(1)	-	_(1)	-	_(1)	-	586
Thai Petroleum Pipeline Co., Ltd.	Thailand	Oil transportation through the pipeline	9.19	9.19	933	933	929	983	212	95
PT Chandra Asri Petrochemical Tbk ⁽²⁾	Republic of Indonesia	Chemical products manufacturing and distribution	15.00	15.00	29,920	29,920	30,323	30,924	156	58
Total investments in associates					30,902	30,902	32,039	32,603	398	768

⁽¹⁾ During 2022, the Group classified this investment in an associate as financial asset measured at fair value through other comprehensive income.

⁽²⁾ On 29 December 2023, the Extraordinary General Meeting of Shareholders of PT Chandra Asri Petrochemical Tbk approved the change its company name to "PT Chandra Asri Pacific Tbk". The change has been received approval on 3 January 2024.

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Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

	Country of incorporation	Nature of business	Separate financial statements				
			Ownership interest held by the Group		Cost method		Dividend received during the year
			2023 (percent)	2022 (percent)	2023	2022	
PTT Digital Solutions Co., Ltd.	Thailand	Provide information technology and computer service activities	20.00	20.00	30	30	25
PTT Energy Solutions Co., Ltd.	Thailand	Provide technical and operational services	20.00	20.00	19	19	4
Global Power Synergy Public Company Limited	Thailand	Power, steam and water generation and distribution for industries	-	-(1)	-	-(1)	586
Thai Petroleum Pipeline Co., Ltd.	Thailand	Oil transportation through the pipeline	9.19	9.19	933	933	95
Total investments in associates					982	982	710

⁽¹⁾ During the year 2022, the Group classified investment in associate as financial assets measured at fair value through other comprehensive income.

As at 31 December 2023, the fair value of the Group and the Company's interest in PT Chandra Asri Petrochemical Tbk listed in the Stock Exchange of the Republic of Indonesia was Indonesian Rupiah 68,128 billion or equivalent to Baht 151,700 million (2022: Indonesian Rupiah 33,350 billion or equivalent to Baht 73,847 million).

Other associates are private companies and do not have a quoted market price available for their shares. There are no contingent liabilities relating to the Group's interest in these associates.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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14.3 Summarised financial information for associates

Set out below are the summarised financial information for the associates that are material to the Group. The information disclosed reflects the accounting presented in the financial statements of the relevant associates (not only the Group's shares of those amounts). They have been amended to reflect adjustments made using the equity method, including fair value adjustments and modifications for differences in accounting policy.

Summarised statement of financial position

(Unit: Million Baht)

	PT Chandra Arsi Petrochemical Tbk	
	2023	2022
Current assets	107,557	98,677
Non-current assets	80,473	70,584
Current liabilities	(23,524)	(20,937)
Non-current liabilities	(61,824)	(51,102)
Net assets	102,682	97,222
Shareholding percentage (%)	15.00	15.00
Share of net assets	15,402	14,583
Adjustment and elimination entries	14,921	16,341
Carrying amounts of associates based on equity method	30,323	30,924

Summarised statement of comprehensive income

(Unit: Million Baht)

	PT Chandra Arsi Petrochemical Tbk	
	2023	2022
Revenue	75,379	83,678
Loss	(1,089)	(5,116)
Other comprehensive income	(56)	1,298
Total comprehensive income	(1,145)	(3,818)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Reconciliation of summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in associates.

(Unit: Million Baht)

	Global Power Synergy Public Company Limited		PT Chandra Arsi Petrochemical Tbk	
	2023	2022	2023	2022
Group's interest in net assets of associates				
at 1 January	-	23,314	30,924	30,536
Addition of investment	-	-	3	3
Share of gain (loss) from investments				
in associates	-	58	(195)	(805)
Share of other comprehensive income from				
associates, net of income tax	-	8	46	195
Currency translation differences	-	-	(299)	1,051
Dividends received	-	(586)	(156)	(56)
Gain from the change in the net assets				
of an associate	-	2	-	-
Disposal of investment in an associate	-	(11,835)	-	-
Reclassification of investment	-	(10,961)	-	-
Carrying amount of interest in associates				
at 31 December	-	-	30,323	30,924

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

14.4 Individually immaterial associates

In addition to the interests in associates disclosed above, the Group also has interests in a number of individually immaterial associates that are accounted for using the equity method.

(Unit: Million Baht)

	Individually immaterial associates	
	2023	2022
Aggregate carrying amount of individually immaterial associates	1,716	1,679
The total amount of the group's share in associates		
Profit	280	235
Other comprehensive income	-	7
Total comprehensive income	280	242

15. Investment properties

Investment properties of the Group is land and land improvement.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
As at 1 January				
Cost	103	103	1,124	1,124
<u>Less</u> Provision for impairment	-	-	-	-
Book value	103	103	1,124	1,124

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
For the year ended 31 December				
Beginning book value	103	103	1,124	1,124
Transfer to property, plant and equipment (Note 16)	-	-	61	-
Ending book value	103	103	1,185	1,124
As at 31 December				
Cost	103	103	1,185	1,124
<u>Less</u> Provision for impairment	-	-	-	-
Book value	103	103	1,185	1,124
Fair value	458	458	2,759	2,626

Fair value Measurement

The fair value of investment property was determined by external, independent property valuers, having appropriate recognised professional qualifications and experiences in valuing the property. The independent valuers provide the fair value of the Group's investment property portfolio on a regular basis.

The fair value measurement for all investment property has been categorised as a level 3 fair value based on the inputs to the valuation technique used.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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The following table shows the valuation technique used in measuring the fair value of investment property, as well as the significant unobservable inputs used.

Valuation technique	Significant unobservable inputs	Inter-relationship between key unobservable inputs and fair value measurement
<p>- <u>Discounted cash flows</u></p> <p>The valuation model considers the present value of net cash flows to be generated from the property, taking into account expected rental growth rate. The expected net cash flows are discounted using risk-adjusted discount rates. Among other factors, the discount rate estimation considers the quality of its location (prime vs secondary), tenant credit quality and lease terms.</p>	<ul style="list-style-type: none"> Contractually agreed lease income over the remaining period. The risk-adjusted discount rates (6%-7%) 	<p>The estimated fair value increase (decrease) if:</p> <ul style="list-style-type: none"> Expected market rental growth were higher (lower); The risk-adjusted discount rate were lower (higher).
<p>- <u>Market approach</u></p>	<p>The adjusted quoted price and the actual selling price of comparable investment properties</p>	<p>The estimated fair value increase (decrease) if land price was higher (lower).</p>

Amounts recognised in profit and loss that related to investment property are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
For the year ended 31 December				
Rental income	22	12	92	58

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

16. Property, plant and equipment

Movements of property, plant and equipment for the years ended 31 December 2023 and 2022 are summarised below.

(Unit: Million Baht)

Consolidated financial statements

	Land	Buildings	Leasehold improvements	Refinery plant and equipment	Petro-chemical plants	Power plants	Machinery, equipment and plant	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
Cost											
At 1 January 2022	7,347	5,079	212	116,429	36,122	17,702	7,386	1,068	14	108,568	299,927
Additions	11	6	-	260	3	-	297	15	2	33,839	34,433
Disposals and write-off	-	-	-	(1)	-	-	(7)	(5)	-	-	(13)
Transfers in (out)	-	24	-	1,346	10	50	131	24	-	(1,618)	(33)
Exchange differences	-	-	-	-	-	-	(6)	-	-	-	(6)
At 31 December 2022	7,358	5,109	212	118,034	36,135	17,752	7,801	1,102	16	140,789	334,308
Additions	-	1	-	258	-	27	15	10	-	17,466	17,777
Disposals and write-off	-	-	-	(1)	-	(462)	(5)	(2)	-	-	(470)
Transfers in (out)	-	36	-	1,998	24	3,612	102	54	-	(5,829)	(3)
Exchange differences	-	(4)	-	-	-	-	(30)	-	-	(1)	(35)
At 31 December 2023	7,358	5,142	212	120,289	36,159	20,929	7,883	1,164	16	152,425	351,577

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Consolidated financial statements

Accumulated depreciation

	Land	Buildings	Leasehold improvements	Refinery plant and equipment	Petro-chemical plants	Power plants	Machinery, equipment and plant	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
At 1 January 2022	-	1,863	47	84,594	21,420	8,025	4,688	878	13	-	121,528
Depreciation charged during the year	-	233	8	2,944	1,309	767	330	51	1	-	5,643
Depreciation on disposals and write-off	-	-	-	(1)	-	-	(8)	(4)	(1)	-	(14)
Transfers in	-	2	-	-	-	-	-	-	-	-	2
Exchange differences	-	-	-	-	-	-	(1)	-	-	-	(1)
At 31 December 2022	-	2,098	55	87,537	22,729	8,792	5,009	925	13	-	127,158
Depreciation charged during the year	-	233	8	3,071	1,173	701	342	59	1	-	5,588
Depreciation on disposals and write-off	-	-	-	(34)	-	(410)	(5)	(2)	-	-	(451)
Transfers in	-	2	-	-	-	-	-	-	-	-	2
Exchange differences	-	(1)	-	-	-	-	(11)	-	-	-	(12)
At 31 December 2023	-	2,332	63	90,574	23,902	9,083	5,335	982	14	-	132,285

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Consolidated financial statements

	Land	Buildings	Leasehold improvements	Refinery plant and equipment	Petro-chemical plants	Power plants	Machinery, equipment and plant	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
Impairment allowance											
At 31 December 2022	-	-	-	-	674	-	-	-	-	-	674
At 31 December 2023	-	-	-	-	674	-	-	-	-	-	674
Net book value											
At 31 December 2022	7,358	3,011	157	30,497	12,732	8,960	2,792	177	3	140,789	206,476
At 31 December 2023	7,358	2,810	149	29,715	11,583	11,846	2,548	182	2	152,425	218,618
Depreciation for the year											
2022 (Baht 5,508 million included in manufacturing cost, and the balance in selling and administrative expenses)											5,643
2023 (Baht 5,398 million included in manufacturing cost, and the balance in selling and administrative expenses)											5,588

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

(Unit: Million Baht)

Separate financial statements

Cost

	Land	Buildings	Refinery plant and equipment	Power plants	Machinery, equipment and plant equipment	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
At 1 January 2022	4,941	3,740	108,034	5,784	1,575	681	1	107,206	231,962
Additions	-	-	236	-	13	7	-	32,196	32,452
Disposals and write-off	-	-	(1)	-	-	-	-	-	(1)
Transfers in (out)	-	7	977	-	-	23	-	(1,038)	(31)
At 31 December 2022	4,941	3,747	109,246	5,784	1,588	711	1	138,364	264,382
Additions	-	-	259	-	5	6	-	16,707	16,977
Disposals and write-off	-	-	(1)	(462)	(2)	-	-	-	(465)
Transfers in (out)	(61)	-	1,696	-	-	49	-	(1,748)	(64)
At 31 December 2023	4,880	3,747	111,200	5,322	1,591	766	1	153,323	280,830

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Separate financial statements

Accumulated depreciation

At 1 January 2022	-	1,038	77,088	5,316	1,324	562	1	-	-	85,329
Depreciation charged during the year	-	176	2,843	264	60	41	-	-	-	3,384
Depreciation on disposals and write-off	-	-	(1)	-	-	-	-	-	-	(1)

At 31 December 2022	-	1,214	79,930	5,580	1,384	603	1	-	-	88,712
Depreciation charged during the year	-	173	2,918	52	46	52	-	-	-	3,241
Depreciation on disposals and write-off	-	-	(34)	(408)	(2)	-	-	-	-	(444)

At 31 December 2023	-	1,387	82,814	5,224	1,428	655	1	-	-	91,509
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Impairment allowance

At 31 December 2022	-	-	-	-	-	-	-	-	-	-
At 31 December 2023	-	-	-	-	-	-	-	-	-	-

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Separate financial statements

	Land	Buildings	Refinery plant and equipment	Power plants	Machinery, equipment and plant equipment	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
Net book value									
At 31 December 2022	4,941	2,533	29,316	204	204	108	-	138,364	175,670
At 31 December 2023	4,880	2,360	28,386	98	163	111	-	153,323	189,321

Depreciation for the year

2022 (Baht 3,278 million included in manufacturing cost, and the balance in selling and administrative expenses)

3,384

2023 (Baht 3,080 million included in manufacturing cost, and the balance in selling and administrative expenses)

3,241

As at 31 December 2023, the Group had assets under construction for The Clean Fuel Project. The construction has been financed with loans. Borrowing costs amounting to Baht 4,141 million were capitalised during the year ended 31 December 2023 (the Company only: Baht 4,507 million). The weighted average rate of 2.62% to 5.39% per annum (The Company only: 3.73% to 5.99% per annum) has been used to determine the amount of borrowing costs eligible for capitalisation. The borrowing costs were included in 'Additions' during the year.

The gross amounts of the Group's and the Company's fully depreciated plant and equipment that were still in use as at 31 December 2023, were Baht 69,890 million (2022: Baht 68,861 million) and Baht 55,109 million (2022: Baht 54,106 million), respectively.

As at 31 December 2023, certain subsidiaries mortgaged their land, building, petrochemical plant and machines as collateral for credit facilities. The book value of land, building, petrochemical plant, and machines amounted to Baht 7,051 million (2022: Baht 15,935 million).

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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17. Leases

The Group as a lessee

The Group has lease contracts for assets used in its operations.

a) Right-of-use assets

Movements of right-of-use assets for the years ended 31 December 2023 and 2022 are summarised below:

(Unit: Million Baht)

	Consolidated financial statements					
	Land	Buildings	Equipment	Oil tankers	Motor vehicles	Total
1 January 2022	12,307	44	78	4,627	75	17,131
Additions	68	171	68	9,107	43	9,457
Lease modification	-	-	-	(841)	(1)	(842)
Exchange differences	-	-	(1)	-	-	(1)
Depreciation for the year	(429)	(66)	(48)	(1,120)	(44)	(1,707)
31 December 2022	11,946	149	97	11,773	73	24,038
Additions	7	2	94	-	30	133
Lease modification	-	-	-	(14)	-	(14)
Exchange differences	(2)	-	-	-	-	(2)
Depreciation for the year	(429)	(62)	(66)	(1,332)	(42)	(1,931)
31 December 2023	11,522	89	125	10,427	61	22,224

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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(Unit: Million Baht)

	Separate financial statements					
	Land	Buildings	Equipment	Oil tankers	Motor vehicles	Total
1 January 2022	11,315	6	52	4,627	66	16,066
Additions	289	73	50	9,107	40	9,559
Lease modification	103	-	-	(841)	(1)	(739)
Depreciation for the year	(404)	(29)	(28)	(1,120)	(39)	(1,620)
31 December 2022	11,303	50	74	11,773	66	23,266
Additions	7	-	94	-	22	123
Lease modification	(14)	-	-	(14)	-	(28)
Depreciation for the year	(411)	(27)	(46)	(1,332)	(36)	(1,852)
31 December 2023	10,885	23	122	10,427	52	21,509

The movements of right-of-use assets exclude the right-of-use assets which are classified as investment property which is presented in Note 15

b) Lease liabilities

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Lease payments	30,440	32,619	30,793	32,924
<u>Less:</u> Deferred interest expenses	(9,350)	(10,111)	(9,571)	(10,318)
Total	21,090	22,508	21,222	22,606
<u>Less:</u> Portion due within one year	(1,402)	(1,401)	(1,355)	(1,342)
Lease liabilities - net of current portion	19,688	21,107	19,867	21,264

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Movements of the lease liability account during the years ended 31 December 2023 and 2022 are summarised below:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Balance at beginning of year	22,508	15,382	22,606	15,223
Additions	132	9,458	122	9,540
Interest expenses	753	658	757	653
Repayments	(2,156)	(1,869)	(2,103)	(1,793)
Lease modification	(14)	(917)	(28)	(815)
Unrealised gain on exchange	(132)	(204)	(132)	(202)
Exchange differences	1	-	-	-
Balance at end of year	21,090	22,508	21,222	22,606

A maturity analysis of lease payments is disclosed in Note 36.1.3 under the liquidity risk.

c) Expenses relating to leases that are recognised in profit or loss

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Depreciation expenses of right-of-use assets	1,931	1,707	1,852	1,620
Interest expenses on lease liabilities	753	658	757	653
Expenses relating to short-term leases	4	11	-	-
Expenses relating to leases of low-value assets	4	5	4	5

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

d) Group as a lessor

The Group has entered into operating leases for its investment property portfolio consisting of (see Note 15). During the year 2023, the Group has sublease income amounting to Baht 22 million (2022: Baht 12 million) (The Company only: Baht 92 million, 2022: Baht 58 million).

18. Goodwill

(Unit: Million Baht)

	Consolidated financial statements	
	2023	2022
At 1 January		
Cost	849	850
Book value	849	850
For the year ended 31 December		
Book value at the beginning of year	849	850
Exchange differences	(23)	(1)
Book value at end of year	826	849
At 31 December		
Cost	826	849
Book value	826	849

Goodwill is allocated to the Group's cash-generating units (CGUs) identified according to business segment which is solvent segment.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Impairment testing for goodwill

The Group tests goodwill impairment on an annual basis. The recoverable amount was based on its value-in-use, determined by discounting future cash flows to be generated in the future from the continuing use of CGU which based on the management approved five-year financial budget. Those cash flows are determined by annual earnings before interest, taxes, depreciation, and amortisation (EBITDA) estimated by management, adjusted by corporate income tax, change in working capital and relevant capital expenditures. The estimate also included a long-term growth rate with reference to gross domestic product (GDP) growth rates for the countries in which the CGUs operates and experiences by management.

The key assumptions used for value-in-use calculations are as follows:

	Goodwill - Thailand %	Goodwill - Vietnam %
Gross margin	9.34 - 9.84	6.48 - 6.69
Long-term growth rate	3.00	6.20
Discount rate from weighted average cost of capital (WACC)	6.97	11.61

The recoverable amount of CGU in which goodwill is allocated is estimated to exceed the carrying amount of the CGU. Management has considered the above and believes that there is no occurrence of impairment of goodwill.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

19. Intangible assets

The net book value of intangible assets as at 31 December 2023 and 2022 are presented below.

(Unit: Million Baht)

	Consolidated financial statements				
	License fee	Computer software	Patent	Intangible assets under processing	Total
As at 31 December 2023					
Cost	3,577	1,485	2	293	5,357
<u>Less:</u> Accumulated amortisation	(1,969)	(983)	(1)	-	(2,953)
Net book value	1,608	502	1	293	2,404
As at 31 December 2022					
Cost	3,528	1,271	2	406	5,207
<u>Less:</u> Accumulated amortisation	(1,859)	(848)	(1)	-	(2,708)
Net book value	1,669	423	1	406	2,499

(Unit: Million Baht)

	Separate financial statements				
	License fee	Computer software	Patent	Intangible assets under processing	Total
As at 31 December 2023					
Cost	966	1,237	2	292	2,497
<u>Less:</u> Accumulated amortisation	(869)	(766)	(1)	-	(1,636)
Net book value	97	471	1	292	861
As at 31 December 2022					
Cost	953	1,035	2	397	2,387
<u>Less:</u> Accumulated amortisation	(853)	(639)	(1)	-	(1,493)
Net book value	100	396	1	397	894

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

20. Income tax

Income tax expenses for the years ended 31 December 2023 and 2022 are summarised as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current income tax:				
Income tax for the year	4,788	7,844	4,035	7,020
Deferred tax:				
Relating to origination and reversal of temporary differences	(116)	1,074	(337)	1,867
Income tax expense reported in profit or loss	4,672	8,918	3,698	8,887

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2023 and 2022 are presented in the movement in deferred tax assets and liabilities.

The amounts of current tax and deferred tax that recognised directly in equity for the years ended 31 December 2023 and 2022 are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current income tax:				
Current income tax on transaction costs for issued share capital	-	48	-	48

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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The reconciliation between accounting profit and income tax expense are shown below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Accounting profit before tax	24,257	42,024	25,211	42,553
Applicable tax rate	20%	20%	20%	20%
Accounting profit before tax multiplied by income tax rate	4,851	8,405	5,042	8,511
Decrease in deferred tax in current year	91	49	-	-
Adjustment from prior period	(59)	9	(48)	-
Effects of:				
Promotional privileges and dividends	(350)	(330)	(1,381)	(556)
Non-deductible expenses	210	895	150	1,007
Additional expense deductions allowed	(71)	(110)	(65)	(75)
Total	(211)	455	(1,296)	376
Income tax expense reported in profit or loss	4,672	8,918	3,698	8,887

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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Revenue, profit before finance costs and income tax expenses and income tax expenses from overseas operations of the Group for the year ended 31 December 2023 are as follows:

(Unit: Million Baht)

	Revenue ⁽¹⁾	Profit (loss) before finance costs and income tax expenses	Income tax expense
Thailand	460,064	28,438	4,649
Vietnam	3,779	86	6
Indonesia	3,130	(141)	16
Singapore	1,018	9	1
Hong Kong ⁽²⁾	(8)	(10)	-
United States of America ⁽²⁾	(37)	(37)	-
Total	467,946	28,345	4,672

Note:

⁽¹⁾ Taxable income consists of: Sales, Subsidy from oil fuel fund, Dividend Income, Gain (loss) from hedging derivatives, Foreign exchange gain (loss) and Other income etc.

⁽²⁾ No income tax expenses due to income tax loss.

The analysis of deferred tax assets and deferred tax liabilities is as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Deferred tax assets, net	2,503	1,125	1,907	375
Deferred tax liabilities, net	(16)	(3)	-	-
Deferred tax, net	2,487	1,122	1,907	375

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The movements in deferred tax assets and liabilities during the year are as follows:

(Unit: Million Baht)

Consolidated financial statements									
	Employee benefit obligation	Impairment losses on assets	Unused tax losses	Lease liabilities	Cash flow hedges	Borrowing cost	Loss from exchange rate in construction in progress	Unrealised loss on changes in fair value of investment FVOCI	Others Total
Deferred tax assets									
At 1 January 2022	960	-	76	248	-	206	1,916	-	36 3,442
Charged (credited) to profit or loss	(8)	140	550	55	-	21	582	-	55 1,395
Charged (credited) to other comprehensive income	(392)	-	-	-	-	-	-	-	78 (314)
Reclassification	-	-	-	-	157	-	-	-	(92) 65
Exchange differences	-	-	(2)	-	-	-	-	-	- (2)
At 31 December 2022	560	140	624	303	157	227	2,498	-	77 4,586
At 1 January 2023	560	140	624	303	157	227	2,498	-	77 4,586
Charged (credited) to profit or loss	(10)	(23)	(182)	17	235	19	-	-	55 111
Charged (credited) to other comprehensive income	1	-	-	-	(197)	-	-	-	- (196)
Reclassification	-	-	-	-	-	-	-	1,073	- 1,073
Exchange differences	1	-	-	-	-	-	-	-	- 1
At 31 December 2023	551	117	442	320	195	246	2,498	1,073	132 5,575

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

	Consolidated financial statements					
	Accumulated depreciation	Deferred cost of debentures	Gain on reclassification of investments	Cash flow hedges	Unrealised gain on changes in fair value of investment FVOCI	Total
Deferred tax liabilities						
At 1 January 2022	(344)	(70)	-	(246)	-	(1,027)
(Charged) credited to profit or loss	(52)	22	(1,916)	(165)	-	(2,472)
(Charged) credited to other comprehensive income	-	-	-	568	(465)	103
Reclassification	-	(4)	(136)	-	92	88
Exchange differences	-	1	-	(157)	-	(156)
At 31 December 2022	(396)	(51)	(2,052)	-	(373)	(3,464)
At 1 January 2023	(396)	(51)	(2,052)	-	(373)	(3,464)
(Charged) credited to profit or loss	(81)	2	-	-	-	4
Credited in other comprehensive income	-	-	-	-	1,446	1,446
Reclassification	-	-	-	-	(1,073)	(1,073)
Exchange differences	-	(1)	-	-	-	(1)
At 31 December 2023	(477)	(50)	(2,052)	-	-	(3,088)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

(Unit: Million Baht)

Separate financial statements

	Employee benefit obligation	Impairment losses on assets	Unused tax losses	Lease liabilities	Cash flow hedges	Borrowing cost	Loss from exchange rate in construction in progress	Unrealised loss on changes in fair value of investment FVOCI	Others	Total
Deferred tax assets										
At 1 January 2022	940	-	48	199	-	206	1,916	-	11	3,320
Charged (credited) to profit or loss	(76)	2	(48)	48	-	21	582	-	52	581
Credited in other comprehensive income	(322)	-	-	-	-	-	-	-	-	(322)
Reclassification	-	-	-	-	146	-	-	-	-	146
At 31 December 2022	542	2	-	247	146	227	2,498	-	63	3,725
At 1 January 2023	542	2	-	247	146	227	2,498	-	63	3,725
Charged (credited) to profit or loss	(8)	-	-	12	235	19	-	-	54	312
Credited in other comprehensive income	-	-	-	-	(186)	-	-	-	-	(186)
Reclassification	-	-	-	-	-	-	-	917	-	917
At 31 December 2023	534	2	-	259	195	246	2,498	917	117	4,768

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
For the year ended 31 December 2023

(Unit: Million Baht)

Separate financial statements						
	Accumulated depreciation	Deferred cost of debentures	Gain on reclassification of investments	Cash flow hedges	Unrealised gain on changes in fair value of investment FVOCI	Total
Deferred tax liabilities						
At 1 January 2022	(259)	(80)	-	(309)	-	(910)
(Charged) credited to profit or loss	(29)	23	(1,916)	(165)	-	(2,449)
(Charged) credited to other comprehensive income	-	-	-	620	(465)	155
Reclassification	-	-	(31)	(146)	-	(146)
At 31 December 2022	(288)	(57)	(1,947)	-	(465)	(3,350)
At 1 January 2023	(288)	(57)	(1,947)	-	(465)	(3,350)
(Charged) credited to profit or loss	(59)	2	-	-	-	24
Credited in other comprehensive income	-	-	-	-	1,382	1,382
Reclassification	-	-	-	-	(917)	(917)
At 31 December 2023	(347)	(55)	(1,947)	-	-	(2,861)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Deferred income tax assets are recognised for tax loss carried forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. As at 31 December 2023, the Group did not recognise deferred income tax assets of Baht 31 million (2022: Baht 218 million) in respect of losses that can be carried forward against future taxable income amounting to Baht 154 million which will expire during 2024 to 2028 (2022: Baht 1,087 million will expire during 2023 to 2027).

21. Short-term loans from financial institutions

Short-term loans from financial institutions for the Group are as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	2023	2022
Short-term loans from financial institutions		
- Secured	515	508
- Unsecured	2,683	1,384
Total short-term loans from financial institutions	3,198	1,892

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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Movements of short-term loans from financial institutions for the Group are as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	2023	2022
Opening balance	1,892	929
<u>Cash flows:</u>		
Proceeds from short-term loans	11,480	17,325
Repayments of short-term loans	(10,150)	(16,358)
<u>Other non-cash movements:</u>		
Exchange differences	(24)	(4)
Closing balance	3,198	1,892

As at 31 December 2023, short-term loans from financial institutions represented promissory notes of the subsidiaries which denominated in Thai Baht amounting to Baht 2,515 million, Vietnamese Dong 357,700 million (equivalent to Baht 503 million) and Indonesian Rupiah currency amounting to 81,224 million Indonesian Rupiahs (equivalent to Baht 181 million), and bore interest at rates of 2.00% to 10.00% per annum (2022: subsidiaries' short-term loans denominated in Thai Baht amounting to Baht 1,308 million, Vietnamese Dong 259,500 million (equivalent to Baht 378 million) and Indonesian Rupiah currency amounting to 92,083 million Indonesian Rupiahs (equivalent to Baht 204 million) with bore interest rates of 2.66% to 10.00% per annum. These short-term loans of a subsidiary are secured by the pledge of inventories and jointed collateral with the short-term loans under the terms and condition in the Credit Facilities Agreement.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

22. Trade payables

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Related parties (Note 6)	48,786	72,976	53,330	77,727
Other parties	1,398	1,178	1,165	903
Total	50,184	74,154	54,495	78,630

23. Other payables

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Other payables	1,717	2,550	1,405	2,020
Accrued interest	1,187	1,365	1,260	1,445
Accrued operating expenses	320	235	116	85
Oil Fuel Fund payable	156	340	156	340
Others	530	458	281	333
Total	3,910	4,948	3,218	4,223

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Thai Oil Public Company Limited and its subsidiaries

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24. Long-term loans from financial institutions and a third party

Long-term loans from financial institutions and a third party are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current portion of long-term loans from financial institutions, net				
- Secured	611	1,007	-	-
- Unsecured	2,450	1,877	2,374	1,670
Long-term loans from financial institutions, net of current portion				
- Secured	1,886	9,133	-	-
- Unsecured	14,148	10,674	13,838	10,236
Long-term loans from a third party				
- Unsecured	192	216	-	-
Total long-term loans	19,287	22,907	16,212	11,906

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For the year ended 31 December 2023

Movements of long-term loans from financial institutions and a third party are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Opening balance	22,907	31,968	11,906	19,536
<u>Cash flows:</u>				
Proceeds from long-term loans	6,012	8,779	6,000	8,500
Repayments of long-term loans	(9,676)	(17,926)	(1,700)	(16,209)
Financing fee	(28)	(8)	(28)	(8)
<u>Other non-cash movements:</u>				
Amortisation of deferred financing fee	90	98	34	87
Exchange differences	(18)	(4)	-	-
Closing balance	19,287	22,907	16,212	11,906

The weighted average effective interest rate of the long-term loans of the Group were 4.21% per annum (2022: 3.40% per annum), the Company was 4.37% per annum (2022: 3.54% per annum).

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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The detail of long-term loans of the Group are as follows:

As at 31 December										
No.	Loans by	Currency in agreement	2023		2022			Interest rate per annum (%)	Principal repayment term	Interest payment period
			Original currency (Million)	Equivalent to Million Baht	Original currency (Million)	Equivalent to Million Baht				
1	Subsidiaries	Baht	-	-	160	160	FDR (6M) plus a certain margin	Semi-Annual	Semi-Annual	
2	Subsidiaries	Baht	-	-	15	15	MLR minus a certain margin	Semi-Annual	Semi-Annual	
3	Subsidiaries	Baht	-	-	6,883	6,883	THBFIX (3M) plus a certain margin	Semi-Annual	Quarterly	
4	Subsidiaries	Baht	31	31	42	42	THOR plus a certain margin	Semi-Annual	Semi-Annual	
5	Subsidiaries	Baht	6	6	-	-	THOR plus a certain margin	Semi-Annual	Semi-Annual	
6	Subsidiaries	Baht	12	12	23	23	MLR minus a certain margin	Semi-Annual	Semi-Annual	
7	Subsidiaries	Baht	1	1	10	10	MLR minus a certain margin	Semi-Annual	Semi-Annual	
8	Subsidiaries	Baht	2	2	-	-	THOR plus a certain margin	Semi-Annual	Monthly	
9	Subsidiaries	Baht	2,460	2,460	3,200	3,200	THOR plus a certain margin	Semi-Annual	Monthly	
10	Subsidiaries	Baht	191	191	216	216	THOR plus a certain margin	A specified in the agreement	A specified in the agreement	
11	Subsidiaries	Vietnamese Dong	264,438	371	309,098	452	COF plus a certain margin	Semi-Annual	Semi-Annual	
12	The Company	Baht	6,247	6,247	6,922	6,922	MLR minus a certain margin	Quarterly	Quarterly	
13	The Company	Baht	3,989	3,989	4,984	4,984	6MBIBOR plus a certain margin	Semi-Annual	Quarterly	
14	The Company	Baht	497	497	-	-	3MBIBOR plus a certain margin	End of the contract	Quarterly	
15	The Company	Baht	499	499	-	-	THOR plus a certain margin	End of the contract	Quarterly	
16	The Company	Baht	994	994	-	-	THOR plus a certain margin	Quarterly	Quarterly	
17	The Company	Baht	2,994	2,994	-	-	THOR plus a certain margin	Semi-Annual	Quarterly	
18	The Company	Baht	993	993	-	-	MLR minus a certain margin	Quarterly	Quarterly	
Total			19,287		22,907					

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In December 2022, the Company entered into long-term loan facility agreements with various financial institutions in Thailand totalling of Baht 6,000 million, with the drawdown on 31 March 2023 with interest rates and repayment schedule for 5 - 8 years as stipulated in such agreements to be used in normal business operations. Under the terms, the Company agrees to maintain certain financial ratios and comply with conditions stipulated in the agreements.

The Group's long-term loans are secured by collateral of land, building, petrochemical plants, and machinery (Note 16) in accordance with the Credit Facilities Agreement.

The Group is required to comply with certain criteria and conditions; for example, maintaining shareholders' portion, maintaining debt to equity ratio at the level as specified in the contract and providing financial supports based on ownership percentage.

25. Debentures

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Debentures	141,423	149,781	42,429	40,004
<u>Less:</u> Discount on/ Issuance of debentures	(791)	(829)	(137)	(133)
Total	140,632	148,952	42,292	39,871
<u>Less:</u> Current portion of debentures, net	(7,000)	(17,317)	(7,000)	(7,515)
Debentures, net	133,632	131,635	35,292	32,356

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Movements of debentures of the Group and the Company are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Beginning balance	148,952	135,868	39,871	30,430
<u>Cash flows:</u>				
Additions	10,000	12,000	10,000	12,000
Repayments	(16,381)	(3,000)	(7,109)	(3,000)
Financing fee	(4)	(12)	(4)	(12)
<u>Other non-cash movements:</u>				
Interest of discount on debenture/ Amortisation				
of deferred financing fee	36	49	-	10
Exchange differences	(1,971)	4,047	(466)	443
Ending balance	140,632	148,952	42,292	39,871

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Debentures issued by the Group are owned by the Company and a subsidiary, which are unsecured and unsubordinated. The debentures issued by a subsidiary are fully guaranteed by the Company. Detail are as follows:

Consolidated financial statements							
Issuance date	Maturity date	Years	Currency	2023 (Million)	2022 (Million)	Interest rate (% p.a.)	Interest payment term
23 March 2012	23 March 2027	15	Baht	7,500	7,500	5.05	Semi-annual basis
23 January 2013	23 January 2023	10	US Dollars	-	216.4	3.625	Semi-annual basis
23 January 2013	23 January 2043	30	US Dollars	172.4	172.4	4.875	Semi-annual basis
12 March 2014	12 March 2024	10	Baht	7,000	7,000	4.84	Semi-annual basis
10 April 2018	23 January 2023	10	US Dollars	-	283.6	3.625	Semi-annual basis
10 April 2018	23 January 2043	30	US Dollars	327.6	327.6	4.875	Semi-annual basis
20 November 2018	20 November 2028	10	US Dollars	400	400	4.625	Semi-annual basis
20 November 2018	20 November 2048	30	US Dollars	600	600	5.375	Semi-annual basis
17 October 2019	17 October 2049	30	US Dollars	565	565	3.50	Semi-annual basis
18 June 2020	18 June 2030	10	US Dollars	400	400	2.50	Semi-annual basis
18 June 2020	18 June 2050	30	US Dollars	600	600	3.75	Semi-annual basis
11 November 2022	11 November 2025	3	Baht	1,400	1,400	2.99	Semi-annual basis
11 November 2022	11 November 2027	5	Baht	600	600	3.64	Semi-annual basis
11 November 2022	11 November 2029	7	Baht	2,000	2,000	4.13	Semi-annual basis
11 November 2022	11 November 2032	10	Baht	1,700	1,700	4.49	Semi-annual basis
11 November 2022	11 November 2034	12	Baht	3,100	3,100	4.79	Semi-annual basis
11 November 2022	11 November 2037	15	Baht	3,200	3,200	5.09	Semi-annual basis
3 May 2023	3 May 2028	5	Baht	2,800	-	3.32	Semi-annual basis
3 May 2023	3 May 2033	10	Baht	2,300	-	3.84	Semi-annual basis
3 May 2023	3 May 2038	15	Baht	4,900	-	4.24	Semi-annual basis

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Separate financial statements							
Issuance date	Maturity date	Years	Currency	2023 (Million)	2022 (Million)	Interest rate (% p.a.)	Interest payment term
23 March 2012	23 March 2027	15	Baht	7,500	7,500	5.05	Semi-annual basis
23 January 2013	23 January 2023	10	US Dollars	-	216.4	3.625	Semi-annual basis
23 January 2013	23 January 2043	30	US Dollars	172.4	172.4	4.875	Semi-annual basis
12 March 2014	12 March 2024	10	Baht	7,000	7,000	4.84	Semi-annual basis
11 November 2022	11 November 2025	3	Baht	1,400	1,400	2.99	Semi-annual basis
11 November 2022	11 November 2027	5	Baht	600	600	3.64	Semi-annual basis
11 November 2022	11 November 2029	7	Baht	2,000	2,000	4.13	Semi-annual basis
11 November 2022	11 November 2032	10	Baht	1,700	1,700	4.49	Semi-annual basis
11 November 2022	11 November 2034	12	Baht	3,100	3,100	4.79	Semi-annual basis
11 November 2022	11 November 2037	15	Baht	3,200	3,200	5.09	Semi-annual basis
3 May 2023	3 May 2028	5	Baht	2,800	-	3.32	Semi-annual basis
3 May 2023	3 May 2033	10	Baht	2,300	-	3.84	Semi-annual basis
3 May 2023	3 May 2038	15	Baht	4,900	-	4.24	Semi-annual basis

The Company and a subsidiary are required to comply with certain criteria and conditions; for example, maintaining shareholders' portion at the level as specified in the contract.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

26. Provision for long-term employee benefits

The movement in the provision for long-term employee benefits during the year is as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
At 1 January	2,753	4,799	2,173	3,874
Current service cost	155	314	88	166
Interest cost	75	67	57	54
Actuarial loss (gain)	3	(2,086)	-	(1,638)
Benefits paid during the year	(272)	(340)	(248)	(283)
Exchange differences	-	(1)	-	-
At 31 December	2,714	2,753	2,070	2,173

Actuarial (gains) losses recognised in other comprehensive income arising from:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Experience	(1)	(458)	-	(563)
Demographic assumptions	8	18	-	7
Financial assumptions	(4)	(1,521)	-	(1,055)
Total	3	(1,961)	-	(1,611)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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Actuarial (gains) losses recognised in profit and loss arising from:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Experience	-	(2)	-	9
Demographic assumptions	-	12	-	3
Financial assumptions	-	(135)	-	(39)
Total	-	(125)	-	(27)

The principal actuarial assumptions used were as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Discount rate	2.5% - 3.9%	2.5% - 3.9%	2.5% - 2.8%	2.5% - 2.8%
Salary increases rate	5.0% - 6.0%	5.0% - 6.0%	5.0%	5.0%
Employee turnover	0.2% - 5.7%	0.2% - 5.7%	0.2% - 2.3%	0.2% - 2.3%

Assumptions regarding future mortality have been based on published statistics and mortality tables.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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The result of sensitivity analysis for significant assumptions that affect the present value of the provision for long-term employee benefit as at 31 December 2023 and 2022 are summarised below:

(Unit: Million Baht)

	Consolidated financial statements					
	Change in assumption		Increase in assumption		Decrease in assumption	
	2023	2022	2023	2022	2023	2022
Discount rate	1%	1%	(350)	(363)	405	399
Salary growth rate	1%	1%	340	312	(299)	(275)

(Unit: Million Baht)

	Separate financial statements					
	Change in assumption		Increase in assumption		Decrease in assumption	
	2023	2022	2023	2022	2023	2022
Discount rate	1%	1%	(271)	(272)	308	312
Salary growth rate	1%	1%	272	254	(243)	(227)

The above sensitivity analysis is based on a change in an assumption while all other assumptions remain constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method which is the present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period has been applied when calculating the pension liability recognised within the consolidated statement of financial position. The methods and types of assumptions used in preparing the sensitivity analysis did not change when compared to the previous period.

The weighted average reserve long-term employee benefit of the Group is 10 years (2022: 10 years).

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Expected maturity analysis of undiscounted retirement benefits are as follows:

(Unit: Million Baht)

	Consolidated financial statements				
	Less than 1 year	Between 1 - 2 years	Between 2 - 5 years	Over 5 years	Total

At 31 December 2023

Retirement benefits	234	376	309	3,040	3,959
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At 31 December 2022

Retirement benefits	183	443	310	3,180	4,116
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(Unit: Million Baht)

	Separate financial statements				
	Less than 1 year	Between 1 - 2 years	Between 2 - 5 years	Over 5 years	Total

At 31 December 2023

Retirement benefits	229	360	279	2,267	3,135
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At 31 December 2022

Retirement benefits	149	428	296	2,411	3,284
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Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

27. Share Capital

Movements of the share capital for the year ended 31 December 2023 are summaries below:

	Consolidated/ Separate financial statements				
	Par value per share (Baht)	Number of share		Share capital	
		Registered share capital (Million share)	Paid-up share capital	Registered share capital (Million Baht)	Paid-up share capital
As at 1 January 2023	10	2,315	2,234	23,151	22,338
Decrease in registered share capital	10	(81)	-	(813)	-
As at 31 December 2023	10	2,234	2,234	22,338	22,338

On 10 April 2023, the Company's Annual General Meeting of Shareholders passed a resolution to approve the decrease in the Company's registered share capital of Baht 813 million by cancelling of 81.3 million unissued shares with a par value of Baht 10 per share from the existing registered capital of Baht 23,151 million to be Baht 22,338 million.

28. Statutory reserve

Pursuant to Section 116 of the Public Limited Companies Act B.E. 2535, the Company is required to set aside a statutory reserve at least 5 percent of its net profit after deducting accumulated deficit brought forward (if any), until the reserve reaches 10 percent of the registered capital. The statutory reserve is not available for dividend distribution. At present, the statutory reserve has fully been set aside.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

29. Other income

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Interest income	786	368	1,087	440
Service income and others	352	414	2,390	2,156
Total	1,138	782	3,477	2,596

30. Expenses by nature

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Changes in finished goods and work in progress	(91)	(2,860)	110	(2,827)
Purchase and raw materials used	356,343	416,777	406,039	471,703
Natural gas used	12,847	17,152	3,166	7,288
Employee benefit expenses	4,366	4,185	2,074	2,132
Depreciation and amortisation	7,799	7,744	5,175	5,282
Excise tax	36,935	33,362	36,901	33,332
Oil fuel fund contribution/ Energy conservation fund contribution	16,502	4,031	16,502	4,031

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

31. Promotional privileges

Certain local subsidiaries have been granted privileges by the Board of Investment relating to power and steam generation, petrochemical product production and chemical product production. The summary of privileges granted are as follows:

- a) an exemption from payment of import duty and tax on machinery and equipment as approved by the Board of Investment.
- b) an exemption from payment of corporate income tax for promoted operations for periods of 7 to 8 years from the dates on which the income is first derived from such operations or 8 years from the date on which the income is received subsequent to when the privileges were granted.
- c) a 50% reduction in the normal corporate income tax rate on the net profit derived from certain promotional operations for a period of 5 years, commencing from the expiry date in (b) above.

As promoted companies, the subsidiaries must comply with certain conditions and restrictions provided for in the promotional certificates.

Revenues from promoted businesses were as follows:

(Unit: Million Baht)

	Consolidated financial statement	
	2023	2022
Revenues from promoted businesses	15,803	47,088

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

32. Earnings per share

Basic earnings per share is calculated by dividing profit for the year attributable to equity holders of the Company (excluding other comprehensive income) by the weighted average number of ordinary shares that issue during the year.

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Profit for the year attributable to equity holders of the Company (Million Baht)	19,443	32,668	21,513	33,665
Weighted average number of ordinary shares (Million shares)	2,234	2,090	2,234	2,090
Basic earnings per share (Baht/share)	8.70	15.63	9.63	16.11

33. Segment information

Segment information is presented in respect of the Group's business segments. The primary format, business segments, is based on the Group's management and the internal reporting structure provided to the chief operating decision maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as President and Chief Executive Officer who make strategic decisions.

Segment results, assets and liabilities include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Reportable segments

The Group is organised into business units based on their products and services. During the current period, the Group has not changed the organisation of their reportable segments from the last annual financial statements.

Segment 1:	Oil refinery
Segment 2:	Lube base oil refinery
Segment 3:	Aromatics and LAB
Segment 4:	Power generation
Segment 5:	Solvent
Segment 6:	Ethanol
Segment 7:	Olefins
Segment 8:	Others

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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The following tables present assets, revenue, and operating results information regarding the Group's operating segments for the years ended 31 December 2023 and 2022:

(Unit: Million Baht)

Consolidated financial statements for the year ended 31 December 2023

	Oil refinery	Lube base oil refinery	Aromatics and LAB	Power generation	Solvent	Ethanol	Olefins	Others	Adjustments	Total
Revenue from sales										
- External customers	391,432	18,208	24,372	5,230	19,225	935	-	-	-	459,402
- Inter - segment	100,623	7,107	54,602	7,558	156	944	5	7,068	(178,063)	-
Subsidy from oil fuel fund	9,842	-	-	-	-	-	-	-	-	9,842
Cost of sales of goods	(477,488)	(22,768)	(77,387)	(10,402)	(17,817)	(1,831)	-	(6,781)	178,310	(436,164)
Gross Profit	24,409	2,547	1,587	2,386	1,564	48	5	287	247	33,080
Dividend income	6,906	-	-	-	-	20	-	4	(6,729)	201
Gain (loss) from financial instruments	(2,874)	-	168	(108)	15	-	-	(51)	-	(2,850)
Gain (loss) on exchange	254	(1)	(66)	11	14	-	1	-	-	213
Other income	3,477	147	272	54	76	14	-	14	(2,916)	1,138
Selling and distribution expenses	(109)	(104)	(376)	-	(583)	(21)	-	-	243	(950)
Administrative expenses	(3,097)	(72)	(102)	(40)	(399)	(115)	(10)	(72)	1,336	(2,571)
Share of profit (loss) from investments in joint ventures and associates	-	-	-	-	-	-	(195)	279	-	84
Profit (loss) before finance costs and income tax expense	28,966	2,517	1,483	2,303	687	(54)	(199)	461	(7,819)	28,345
Finance cost	(3,755)	(50)	(181)	(489)	(157)	(23)	-	-	567	(4,088)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Consolidated financial statements for the year ended 31 December 2023

	Oil refinery	Lube base oil refinery	Aromatics and LAB	Power generation	Solvent	Ethanol	Olefins	Others	Adjustments	Total
Profit (loss) before income tax expense	25,211	2,467	1,302	1,814	530	(77)	(199)	461	(7,252)	24,257
Income tax income (expenses)	(3,698)	(483)	(271)	(76)	(104)	(16)	-	(24)	-	(4,672)
Profit (loss) for the year	21,513	1,984	1,031	1,738	426	(93)	(199)	437	(7,252)	19,585

Profit (loss) for the year attributable to:

- Equity holder of the Company	21,513	1,984	873	1,738	402	(53)	(199)	437	(7,252)	19,443
- Non-controlling interests of the subsidiaries	-	-	158	-	24	(40)	-	-	-	142
Profit (loss) for the year	21,513	1,984	1,031	1,738	426	(93)	(199)	437	(7,252)	19,585

Timing of revenue recognition

- At a point in time	492,055	25,315	78,974	11,439	19,381	1,879	5	7,068	(177,578)	458,538
- Over time	-	-	-	1,349	-	-	-	-	(485)	864
Total Revenue	492,055	25,315	78,974	12,788	19,381	1,879	5	7,068	(178,063)	459,402

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Consolidated financial statements for the year ended 31 December 2022

	Oil refinery	Lube base oil refinery	Aromatics and LAB	Power generation	Solvent	Ethanol	Olefins	Others	Adjustments	Total
Revenue from sales										
- External customers	428,210	20,078	27,752	6,211	22,397	1,055	-	-	-	505,703
- Inter - segment	116,582	7,695	61,185	5,504	190	741	2	6,647	(198,546)	-
Subsidy from oil fuel fund	23,886	-	-	-	-	-	-	-	-	23,886
Cost of sales of goods	(526,995)	(24,376)	(89,489)	(10,065)	(20,802)	(1,624)	-	(6,702)	198,916	(481,137)
Gross Profit (loss)	41,683	3,397	(552)	1,650	1,785	172	2	(55)	370	48,452
Dividend income	2,778	-	-	-	-	12	-	5	(2,715)	80
Gain (loss) from financial instruments	(16,128)	-	100	-	13	-	-	10	-	(16,005)
Gain (loss) on exchange	(24)	30	(10)	6	(58)	-	(1)	(7)	-	(64)
Gain on disposal of investment in associate	10,487	-	-	-	-	-	-	-	(449)	10,038
Gain on reclassification of investment	7,539	-	-	-	-	-	-	-	(242)	7,297
Other income	2,596	114	314	18	40	5	-	3	(2,308)	782
Selling and distribution expenses	(68)	(98)	(346)	-	(703)	(21)	-	-	184	(1,052)
Administrative expenses	(2,820)	(69)	(806)	(39)	(322)	(98)	(9)	(67)	1,099	(3,131)
Share of profit (loss) from investments in joint ventures and associates	-	-	-	-	-	-	(806)	293	-	(513)
Profit (loss) before finance costs and income tax expense	46,043	3,374	(1,300)	1,635	755	70	(814)	182	(4,061)	45,884
Finance cost	(3,491)	(58)	(162)	(293)	(121)	(19)	-	-	284	(3,860)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Consolidated financial statements for the year ended 31 December 2022

	Oil refinery	Lube base oil refinery	Aromatics and LAB	Power generation	Solvent	Ethanol	Olefins	Others	Adjustments	Total
Profit (loss) before income tax expense	42,552	3,316	(1,462)	1,342	634	51	(814)	182	(3,777)	42,024
Income tax income (expenses)	(8,887)	(665)	688	(1)	(107)	(4)	-	58	-	(8,918)
Profit (loss) for the year	33,665	2,651	(774)	1,341	527	47	(814)	240	(3,777)	33,106

Profit (loss) for the year attributable to:

- Equity holder of the Company	33,665	2,651	(1,183)	1,341	527	18	(814)	240	(3,777)	32,668
- Non-controlling interests of the subsidiaries	-	-	409	-	-	29	-	-	-	438
Profit (loss) for the year	33,665	2,651	(774)	1,341	527	47	(814)	240	(3,777)	33,106

Timing of revenue recognition

- At a point in time	544,792	27,773	88,937	10,656	22,587	1,796	2	6,647	(198,350)	504,840
- Over time	-	-	-	1,059	-	-	-	-	(196)	863
Total Revenue	544,792	27,773	88,937	11,715	22,587	1,796	2	6,647	(198,546)	505,703

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries
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(Unit: Million Baht)

Consolidated financial statements for the year ended 31 December 2023

	Oil refinery	Lube base oil refinery	Aromatics and LAB	Power generation	Solvent	Ethanol	Olefins	Others	Adjustments	Total
Segment assets	397,830	9,142	27,282	17,303	11,168	2,309	220	111,414	(188,714)	387,954
Investments in associated companies	-	-	-	-	-	-	30,323	982	734	32,039
Total segment assets	397,830	9,142	27,282	17,303	11,168	2,309	30,543	112,396	(187,980)	419,993
Total segment liabilities	253,726	3,143	11,781	12,446	6,000	661	122	110,097	(146,295)	251,681

(Unit: Million Baht)

Consolidated financial statements for the year ended 31 December 2022

	Oil refinery	Lube base oil refinery	Aromatics and LAB	Power generation	Transportation service	Solvent	Ethanol	Olefins	Others	Adjustments	Total
Segment assets	408,566	10,142	26,746	16,590	4	10,407	2,720	71	114,247	(177,515)	411,978
Investments in associated companies	-	-	-	-	-	-	-	30,924	982	697	32,603
Total segment assets	408,566	10,142	26,746	16,590	4	10,407	2,720	30,995	115,229	(176,818)	444,581
Total segment liabilities	276,643	3,336	12,275	10,159	-	5,411	707	119	112,915	(135,642)	285,923

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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Major customer

Revenue from two customers represents Baht 273,222 million (2022: revenue from two customers represented Baht 289,804 million) of the Group's revenue from sales.

Geographical segments

In presenting geographical information by segments, segment revenue is based on the geographical location of customers and segment assets are based on the geographical location of the assets.

Geographical information

(Unit: Million Baht)

	For the year ended		As at	
	31 December		31 December	
	Revenue		Non-current assets	
	2023	2022	2023	2022
Thailand	429,057	479,996	262,375	257,851
Indonesia	3,430	2,743	30,371	30,996
Other countries	36,757	46,850	1,875	1,906
Total	469,244	529,589	294,621	290,753

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Thai Oil Public Company Limited and its subsidiaries

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34. Dividends

Dividends	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)
Final dividends for 2021	Annual General Meeting of the shareholders on 7 April 2022	4,080	2.00
The Interim dividends for 2022	Board of Directors' meeting on 28 October 2022	4,467	2.00
Total for 2022		8,547	4.00
Final dividends for 2022	Annual General Meeting of the shareholders on 10 April 2023	3,798	1.70
The Interim dividends for 2023	Board of Directors' meeting on 25 August 2023	1,451	0.65
Total for 2023		5,249	2.35

35. Commitments and contingent liabilities

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Capital commitments				
Project construction agreements	13,629	16,088	13,170	15,411
Total	13,629	16,088	13,170	15,411
Other commitments				
Letters of guarantee issued by financial institutions	1,830	2,142	1,224	1,519
Crude oil and raw material purchase agreements	73,383	78,188	73,383	78,188
Total	75,213	80,330	74,607	79,707

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Thai Oil Public Company Limited and its subsidiaries

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Investment in Clean Fuel Project

The Company has engaged contractors for construction of Clean Fuel Project (CFP) which has been approved in the Extraordinary General Meeting of Shareholders held on 27 August 2018, with the investment project value of not exceeding US Dollar 4,825 million or equivalent to Baht 160,279 million. The project cost includes the investment of Energy Recovery Unit (ERU). The ERU is an electrical power plant, with the designed generating capacity of 250 megawatts and steam, to supply the production process of the CFP.

Interest Rate Swap Contracts

The Company has entered into interest rate swap contracts with various financial institutions to manage exposure and fluctuations in interest rate on long-term loans in Thai Baht. As at 31 December 2023, the Company had contracts with a notional amount of Baht 14,500 million to exchange the fixed interest rate to floating interest rate based on THOR plus certain fixed margin per annum. (2022: Baht 14,500 million, exchange the fixed interest rate to floating interest rate based on THOR plus certain fixed margin per annum) The swap contracts are effective from July 2021 to March 2027.

A subsidiary has entered into interest rate swap contracts with various financial institutions to manage exposure and fluctuations in interest rate on long-term loans in Thai Baht. In April 2023, A subsidiary cancelled the interest rate swap contracts with all financial institutions due to the repayment of the hedge loan in full (31 December 2022: Baht 5,373 million).

Cross Currency Swap Contracts

The Company has entered into cross currency swap contracts with local financial institutions for hedging foreign exchange and interest rate exposure of long-term debts in US Dollar currency. As at 31 December 2023, the Company had notional amount totalling US Dollar 623 million (2022: US Dollar 623 million). A counterparty agrees to pay the interest and the notional amount according to the terms and conditions in the contracts. The swap contracts are effective from March 2020 to October 2035.

Forward Foreign Exchange Contracts

The Company has entered into forward foreign exchange contracts with local financial institutions for hedging foreign exchange exposure of long-term debts in US Dollar currency. In January 2023, the Company had completely made payment according to the terms and conditions in the contracts (31 December 2022: Outstanding US Dollar 196 million).

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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Oil Price Crack Spread Swap Contracts

The Group and the Company have oil price crack spread swap and time spread swap contracts with foreign companies and related parties (counterparties). The Company has or the counterparties have commitments to make payments for the differences between the fixed price and floating price of each period.

As at 31 December 2023, the Group had oil volume under the contracts totalling 9.80 million barrels and 0.13 million metric tons and the Company had oil volume totalling 9.81 million barrels and 0.27 million metric tons (2022: The Group had oil volume under the contracts totalling 21.78 million barrels and 0.001 million metric tons and the Company had oil volume totalling 21.78 million barrels and 0.01 million metric tons).

36. Financial risk management

36.1 Financial risk factors

The Group is exposed to a variety of financial risks, which are market risk (including foreign exchange risk and interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group uses derivative financial instruments to hedge certain exposures.

Risk management is integral to the whole business of the Group. The Group has a control system in place to create an acceptable balance between the cost of risks and the cost to manage the risks. The management continually monitors the Group's risk management process to ensure that an appropriate balance between risk and control is achieved.

Where all relevant criteria are met, hedge accounting is applied to remove the accounting mismatch between the hedging instrument and the hedged item. This will effectively result in recognising interest expense at a fixed interest rate for the hedged floating rate loans and financial liabilities at the fixed foreign currency rate for the hedged liabilities.

Notes to consolidated financial statements

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Hedging reserve

The Group and the Company's hedging reserves comprise of the followings:

(Unit: Million Baht)

	Consolidated financial statements					
	Cash flow hedge reserve					
	Cross currency swaps	Cost of hedging reserve	Forward foreign exchange contracts	Interest rate swaps	Hedge on foreign currency proceeds	Total hedge reserves
Opening balance 1 January 2023	(2,051)	(671)	(16)	(47)	(3,172)	(5,957)
Add: Change in fair value of hedging						
instrument recognised in OCI	899	-	20	59	819	1,797
Costs of hedging deferred and recognised in OCI	-	14	-	-	-	14
Less: Deferred tax	(180)	(3)	(4)	(12)	(119)	(318)
Closing balance 31 December 2023	(1,332)	(660)	-	-	(2,472)	(4,464)
Opening balance 1 January 2022	(101)	(139)	(20)	(253)	(1,878)	(2,391)
Add: Change in fair value of hedging						
instrument recognised in OCI	(2,437)	-	5	258	(1,686)	(3,860)
Costs of hedging deferred and recognised in OCI	-	(665)	-	-	-	(665)
Less: Deferred tax	487	133	(1)	(52)	392	959
Closing balance 31 December 2022	(2,051)	(671)	(16)	(47)	(3,172)	(5,957)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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(Unit: Million Baht)

	Separate financial statements				
	Cash flow hedge reserve				
	Cross currency swaps	Cost of hedging reserve	Forward foreign exchange contracts	Hedge on foreign currency proceeds	Total hedge reserves
Opening balance 1 January 2023	(2,051)	(671)	(16)	(3,172)	(5,910)
Add: Change in fair value of hedging instrument recognised in OCI	(899)	-	20	(819)	(1,738)
Costs of hedging deferred and recognised in OCI	-	14	-	-	14
Less: Deferred tax	(180)	(3)	(4)	(119)	(306)
Closing balance 31 December 2023	(1,332)	(660)	-	(2,472)	(4,464)
Opening balance 1 January 2022	(101)	(139)	(20)	(1,878)	(2,138)
Add: Change in fair value of hedging instrument recognised in OCI	(2,437)	-	5	(1,686)	(4,118)
Costs of hedging deferred and recognised in OCI	-	(665)	-	-	(665)
Less: Deferred tax	487	133	(1)	392	1,011
Closing balance 31 December 2022	(2,051)	(671)	(16)	(3,172)	(5,910)

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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36.1.1 Market risk

a) Foreign exchange risk

The Group is exposed to foreign exchange risk from future commercial transactions, net monetary assets and liabilities that are denominated in a currency that is not the entity's functional currency.

The Group uses forward foreign exchange contracts, cross currency swaps in a consistent manner and hedge on foreign currency proceeds to hedge and anticipated foreign exchange commitments and manage their foreign exchange risk arising from future commercial transactions. The Group are required to manage their foreign exchange risk against their functional currency. Foreign currency borrowings are swapped into the entity's functional currency using cross-currency swaps except where the foreign currency borrowings are repaid with cash flows generated in the same foreign currency. The purpose of these hedges is to mitigate the impact of movements in foreign exchange rates on assets and liabilities and the profit and loss account of the Group.

The Group hedges the foreign currency proceeds by hedging the fluctuations arisen from the foreign exchange rate occurring from the certain revenue in US Dollar with the long-term loans which has the same currency as revenue occurred. Under the Group's policy, the critical terms of the forwards and options must align with the hedged items.

The Group uses a combination of forward foreign exchange contracts and cross currency swaps to hedge its exposure to foreign currency risk. Under the Group's policy, the critical terms of the forwards and options must align with the hedged items.

The Group only designates the spot component of forward foreign exchange contracts in hedge relationships. The spot component is determined with reference to relevant spot market exchange rates. The differential between the contracted forward rate and the spot market exchange rate is defined as the forward points and include currency basis spread fees. It is discounted based on time period of the contract where material.

The changes in the forward element of the forward foreign exchange contracts and foreign currency basis spreads that relate to hedged items are deferred in the costs of hedging reserve.

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For the year ended 31 December 2023

As at 31 December 2023 and 2022, the Group and the Company were exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
US Dollars				
Cash and cash equivalents	8,327	16,900	6,238	15,360
Short-term investments in financial assets	5,944	-	5,775	-
Trade receivables	4,630	2,190	3,185	430
Other receivables	1,027	2,074	1,058	2,099
Derivative assets	188	739	188	739
Trade payables	(326)	(2,533)	(194)	(1,539)
Other payables	(548)	(1,000)	(1,063)	(1,590)
Loans and debentures	(104,151)	(122,464)	(104,463)	(122,866)
Derivative liabilities	-	(193)	(19)	(204)
	(84,909)	(104,287)	(89,295)	(107,571)
Other currencies				
Cash and cash equivalents	1,223	435	1,087	319
Trade receivables	1,112	1,064	-	-
Other receivables	21	17	-	-
Trade payables	(136)	(110)	-	-
Other payables	(92)	(69)	(60)	(44)
Loans	(309)	(452)	-	-
	1,819	885	1,027	275
Gross exposure in the statement of				
financial position	(83,090)	(103,402)	(88,268)	(107,296)
Forward foreign exchange contracts	-	6,111	-	6,111
Cross currency swaps	19,782	19,797	19,782	19,797
Net exposure	(63,308)	(77,494)	(68,486)	(81,388)

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Effects of hedge accounting on the financial position and performance

The effects of the foreign currency-related hedging instruments on the Group and the Company's financial position and performance are as follows:

(Unit: Million Baht)

	Consolidated and Separate financial statements	
	2023	2022
Forward foreign exchange contracts		
Carrying amount (liability) (Million Baht)	-	658
Notional amount (Million US Dollars)	-	196
Maturity date	-	January 2023
Hedge ratio	-	1 : 1
Weighted average hedged rate for outstanding hedging instruments (including forward points)	-	31.18
Cross currency swaps contracts		
Carrying amount (liability) (Million Baht)	(960)	(1,536)
Notional amount (Million US Dollars)	623	623
Maturity date	October 2030 to October 2035	March 2030 to October 2035
Hedge ratio	1 : 1	1 : 1
Weighted average hedged rate for outstanding hedging instruments (including forward points)	31.77	31.79

In term of the hedge on foreign currency proceed with the loans denominated in foreign currency, as at 31 December 2023, the Company's fully drawdown loans amounted to Baht 58,846 million were used in the hedging activities. The loans notional amount was US Dollar 1,716 million with maturity from November 2028 to November 2048. The Company's exchange rate for hedge instrument was Baht 32.193 per one US Dollar.

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Sensitivity

As shown in the table above, the Group is primarily exposed to changes in Baht and US Dollar exchange rates. The sensitivity of profit or loss to changes in the exchange rates arises mainly from financial assets and financial liabilities denominated in US Dollar and the impact on other components of equity arises from foreign forward exchange contracts and cross currency swap designated as cash flow hedges.

(Unit: Million Baht)

	Consolidated financial statements			
	Impact to net profit		Impact to other components of equity	
	2023	2022	2023	2022
Baht to US Dollar exchange rate				
- increase 10% *	(370)	(718)	(3,918)	(4,321)
Baht to US Dollar exchange rate				
- decrease 10% *	370	718	3,918	4,313

* Holding all other variables constant

(Unit: Million Baht)

	Separate financial statements			
	Impact to net profit		Impact to other components of equity	
	2023	2022	2023	2022
Baht to US Dollar exchange rate				
- increase 10% *	(573)	(769)	(6,465)	(7,025)
Baht to US Dollar exchange rate				
- decrease 10% *	573	769	6,465	7,017

* Holding all other variables constant

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b) Cash flow and fair value interest rate risk

The Group's main interest rate risk arises from long-term borrowings with variable rates, which expose the Group to cash flow interest rate risk. Generally, the Group enters into long-term borrowings at floating rates and swaps them into fixed rates that are lower than those available if the Group borrowed at fixed rates directly. During 2022 and 2023, the Group's borrowings at variable rate were mainly denominated in Baht and US dollars.

The borrowings are carried at amortised cost. The borrowings rate is based on market interest rates which detailed in Note 24 Therefore, the Group is exposed to the risk of future changes in market interest rates.

The exposure of long-term loans interest rate changes at the end of the reporting period are as follows:

(Unit: Million Baht)

	Consolidated financial statements			
	2023		2022	
	Million Baht	% of total loans	Million Baht	% of total loans
Variable rate borrowings	19,287	12	22,907	13

As at 31 December 2023, the percentage of total loans shows the proportion of long-term loans that are currently at variable rates in relation to the total amount of long-term loans 163,117 million (2022: Baht 173,751 million). An analysis by maturities is provided in note 36.1.3.

The Company has low interest rate risk since the Company's borrowings are at a fixed interests rate. The sensitivity impact to the increase or decrease in interest expenses from borrowings, as a result of changes in interest rates is immaterial on separate financial statements.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

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Instruments used by the Group

During the year 2023, The Group cancelled the interest rate swap contracts with all financial institutions due to the repayment of the hedge loan in full. (2022: The Group entered into interest rate swaps covering approximately 23% of the variable loan principal outstanding. The fixed interest rates of the swaps range between 4.21% and 4.42%, and the variable rates of the loans are 2.81% at the end of the reporting period.

The swap contracts require settlement of net interest receivable or payable every 90 days. The settlement dates coincide with the dates on which interest is payable on the underlying debt.

The Group applies hedge accounting for certain interest rate swaps.

Effect of hedge accounting on the financial position and performance

The effects of the interest rate-related hedging instruments on the Group's financial position and performance are as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	2023	2022
<i>Interest rate swaps contracts</i>		
Carrying amount (liabilities)	-	(59)
Notional amount	-	5,373
Maturity date	-	March 2028
Hedge ratio	-	1 : 1
Weighted average strike rate for outstanding hedging instruments for the year	-	4.34%

Sensitivity

Profit or loss is sensitive to higher or lower interest expenses from borrowings as a result of changes in interest rates. Other components of equity changes as a result of an increase or decrease in the fair value of the cash flow hedges of borrowings.

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(Unit: Million Baht)

	Consolidated financial statements			
	Impact to net profit		Impact to other components of equity	
	2023	2022	2023	2022
Interest rate - increase 1% *	(155)	(143)	(4)	(173)
Interest rate - decrease 1% *	155	143	4	173

* Holding all other variables constant

c) Price risk of petroleum products

The Group's and the Company's exposure to price risk arises from time to time by volatility and cyclical movement in the market prices for crude oil, petroleum, and petrochemical products. The Group manages this risk by using derivative financial instruments, for example, oil price crack spread swap and time spread swap as appropriated.

Sensitivity

The table below summarises the impact of increases or decreases of the index on net profit for the year.

(Unit: Million Baht)

	Impact to net profit			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Price increases by 1 % *	(12)	(49)	(12)	(49)
Price decreases by 1 % *	12	49	12	49

* Holding all other variables constant

Notes to consolidated financial statements

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36.1.2 Credit risk

The Group's credit risk arises from cash and cash equivalents, contractual cash flows of debt investments carried at FVPL, derivative financial instruments as well as credit exposures to customers, including outstanding receivables.

a) Risk management

The Group manages its credit risk by categorising into level of risks. For banks and financial institutions, the Group only transacts with those that are rated at least within investment grade accredited by a reliable independence credit rating agency.

For transaction with other customers, the Group will consider the credit rating accredited by a reliable independence credit rating agency. If the credit rating is not available, the Group assesses the creditability of the customer by considering its financial position, past experience and other factors. Individual credit limits are set based on these assessments and in accordance with credit limits set by the Board of Director. The compliance with credit limits by customers is regularly monitored by line management.

The Group has no significant credit risk with any single counterparty or group of counterparties since the Group maintains business with large customers in petroleum and power industries and requires first class collateral for the rest.

The Group's investments in debt instruments are considered to be low risk investments. The Group regularly monitors the credit ratings of the investments for credit deterioration.

b) Security

For some trade receivables the Group may obtain security in the form of guarantees or letters of credit which can be called upon if the counterparty is in default under the terms of the agreement.

c) Impairment of financial assets

The Group considers that impairment of financial assets does not have significant financial impact.

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Other financial assets measured at amortised cost

Other financial assets measured at amortised cost include short-term investment which the Group considered that short-term investment's credit risk is low.

Debt investments

Debt investments are measured at amortised cost include other receivables and loans to related parties.

All of the debt investments at amortised cost and FVOCI are considered to have low credit risk, and the loss allowance recognised during the year was therefore limited to 12 months expected losses. Management consider 'low credit risk' for listed bonds to be an investment grade credit rating with at least one major rating agency. Other instruments are considered to have low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

Financial asset measured at fair value through profit or loss (FVPL)

The Group is also exposed to credit risk in relation to debt investments that are measured at FVPL. The maximum exposure at the end of the reporting period is the carrying amount of these investments of Baht 722 million (2022: Baht 798 million).

36.1.3 Liquidity risk

Prudent liquidity risk management is to maintaining sufficient cash and the availability of funding through an adequate amount of committed credit facilities to meet obligations when due and to close out market positions. At the end of the reporting period the Group held deposits at call of Baht 28,432 million (2022: Baht 43,576 million) that are expected to readily generate cash inflows for managing liquidity risk.

Due to the dynamic nature of the underlying businesses, the Group Treasury maintains flexibility in funding by maintaining availability under committed credit lines.

Management regularly monitors i) rolling forecasts of the Group's liquidity reserve (comprising the undrawn borrowing facilities); and ii) cash and cash equivalents. In addition, the Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets and monitoring balance sheet liquidity ratios and maintaining appropriate financing plans.

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a) Financing arrangements

The Group has undrawn credit facilities as at 31 December as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Floating rate				
Expiring within one year				
- Short-term committed credit facilities	7,200	7,955	6,700	6,700
- Short-term uncommitted credit facilities	10,070	8,575	6,198	4,730
Expiring beyond one year				
- Long-term loans credit facilities	7,099	6,074	7,000	6,000
	24,369	22,604	19,898	17,430

b) Maturity of financial liabilities

The tables below analyse the Group's financial liabilities into relevant maturity based on their contractual maturities for:

- (a) all non-derivative financial liabilities; and
- (b) net and gross settled derivative financial instruments for which the contractual maturities are essential for an understanding of the timing of the cash flows.

The tables below present the maturity of financial liabilities classified by their contractual maturities.

The amounts disclosed are the contractual undiscounted cash flows. Balances due within 12 months equals their carrying balances as the impact of discounting is not significant. For interest rate swaps and cross currency swap, the cash flows have been estimated using forward interest rates applicable at the end of the reporting period.

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2023	Consolidated financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Non-derivatives					
Short-term loan from financial institutions	3,198	-	-	3,198	3,198
Trade and other payables	51,901	-	-	51,901	51,901
Accrued interest	7,764	24,367	70,249	102,380	1,187
Lease liabilities	1,402	5,558	14,130	21,090	21,090
Long-term loans from financial institutions	3,090	19,941	16,160	39,191	19,095
Long-term loans from related and other parties	-	-	191	191	191
Debentures	7,000	25,989	108,434	141,423	140,632
Other financial liabilities	320	3,268	31	3,619	3,619
Total non-derivatives	74,675	79,123	209,195	362,993	240,913

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2023	Consolidated financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Forward foreign exchange contracts					
- trading (assets)	(46)	-	-	(46)	(46)
Forward foreign exchange contracts					
- trading (liabilities)	1	-	-	1	1
Oil price crack spread swap and time					
spread swap - trading (assets)	(173)	-	-	(173)	(173)
Interest rate swaps					
(Cash inflows)	(468)	(851)	-	(1,319)	177
Cash outflows	619	1,120	-	1,739	-
Cross currency swaps - cash flow hedge					
(Cash inflows)	(852)	(3,402)	(24,578)	(28,832)	960
Cash outflows	747	2,984	22,640	26,371	-
Hedging foreign currency income - cash flow hedge					
(Cash inflows)	(2,925)	(25,316)	(79,011)	(107,252)	-
Cash outflows	2,738	23,700	73,969	100,407	-
Total derivatives	(359)	(1,765)	(6,980)	(9,104)	919
Total	74,316	77,358	202,215	353,889	241,832

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2022	Consolidated financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Non-derivatives					
Short-term loan from financial institutions	1,892	-	-	1,892	1,892
Trade and other payables	76,704	-	-	76,704	76,704
Accrued interest	7,837	23,718	73,850	105,405	1,365
Lease liabilities	1,401	5,449	15,658	22,508	22,508
Long-term loans from financial institutions	2,924	14,696	5,228	22,848	22,691
Long-term loans from related and other parties	-	-	216	216	216
Debentures	17,318	16,500	115,963	149,781	148,952
Other financial liabilities	235	3,243	63	3,541	3,541
Total non-derivatives	108,311	63,606	210,978	382,895	277,869

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2022	Consolidated financial statements				
	Within 1 year	1 - 5 years	Over 5 years	Total	Carrying amount of (Assets/ Liabilities)
Derivatives					
Forward foreign exchange contracts - trading	(12)	-	-	(12)	(12)
Oil price crack spread swap and time spread swap - trading (assets)	(739)	-	-	(739)	(739)
Oil price crack spread swap and time spread swap - trading (liabilities)	193	-	-	193	193
Forward foreign exchange contracts - cash flow hedge					
(Cash inflows)	(6,808)	-	-	(6,808)	(658)
Cash outflows	6,111	-	-	6,111	-
Interest rate swaps					
(Cash inflows)	(732)	(1,319)	-	(2,051)	385
Cash outflows	648	1,167	-	1,815	-
- Cash flow hedge					
(Cash inflows)	(164)	(562)	(29)	(755)	59
Cash outflows	224	764	40	1,028	-
Cross currency swaps - cash flow hedge					
(Cash inflows)	(859)	(3,437)	(27,770)	(32,066)	1,536
Cash outflows	753	3,010	25,853	29,616	-
Hedging foreign currency income					
- cash flow hedge					
(Cash inflows)	(2,925)	(17,452)	(89,811)	(110,188)	-
Cash outflows	2,738	10,952	89,455	103,145	-
Total derivatives	(1,572)	(6,877)	(2,262)	(10,711)	764
Total	106,739	56,729	208,716	372,184	278,633

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2023	Separate financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Non-derivatives					
Trade and other payables	55,900	-	-	55,900	55,900
Accrued interest	8,231	26,130	77,042	111,403	1,260
Lease liabilities	1,356	5,502	14,364	21,222	21,222
Long-term loans from financial institution	2,400	11,088	1,313	14,801	16,212
Long-term loans from related party	-	13,621	85,338	98,959	98,652
Debentures	7,000	12,300	23,129	42,429	42,292
Other financial liabilities	116	3,130	28	3,274	3,274
Total non-derivatives	75,003	71,771	201,214	347,988	238,812

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2023	Separate financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Derivatives					
Forward foreign exchange contracts - trading	(15)	-	-	(15)	(15)
Oil price crack spread swap and time spread swap					
- trading (assets)	(173)	-	-	(173)	(173)
Oil price crack spread swap and time spread swap					
- trading (liabilities)	19	-	-	19	19
Interest rate swaps					
(Cash inflows)	(468)	(851)	-	(1,319)	177
Cash outflows	619	1,120	-	1,739	-
Cross currency swaps - cash flow hedge					
(Cash inflows)	(852)	(3,403)	(24,578)	(28,833)	960
Cash outflows	747	2,984	22,640	26,371	-
Hedging foreign currency income - cash flow hedge					
(Cash inflows)	(2,925)	(25,316)	(79,012)	(107,253)	-
Cash outflows	2,738	23,700	73,969	100,407	-
Total derivatives	(310)	(1,766)	(6,981)	(9,057)	968
Total	74,693	70,005	194,233	338,931	239,780

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2022	Separate financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Non-derivatives					
Trade and other payables	80,650	-	-	80,650	80,650
Accrued interest	8,126	24,561	80,381	113,068	1,445
Lease liabilities	1,341	5,416	15,849	22,606	22,606
Long-term loans from financial institution	1,700	10,300	-	12,000	11,906
Long-term loans from related party	9,851	-	99,954	109,805	109,483
Debentures	7,516	16,500	15,989	40,005	39,871
Other financial liabilities	85	3,119	39	3,243	3,243
Total non-derivatives	109,269	59,896	212,212	381,377	269,204

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(Unit: Million Baht)

Maturity of financial liabilities as at 31 December 2022	Separate financial statements				Carrying amount of (Assets/ Liabilities)
	Within 1 year	1 - 5 years	Over 5 years	Total	
Derivatives					
Oil price crack spread swap and time spread swap - trading (assets)	(739)	-	-	(739)	(739)
Oil price crack spread swap and time spread swap - trading (liabilities)	204	-	-	204	204
Forward foreign exchange contracts					
- cash flow hedge					
(Cash inflows)	(6,808)	-	-	(6,808)	(658)
Cash outflows	6,111	-	-	6,111	-
Interest rate swaps					
(Cash inflows)	(732)	(1,319)	-	(2,051)	385
Cash outflows	648	1,167	-	1,815	-
Cross currency swaps - cash flow hedge					
(Cash inflows)	(859)	(3,437)	(27,770)	(32,066)	1,536
Cash outflows	753	3,010	25,853	29,616	-
Hedging foreign currency income					
- cash flow hedge					
(Cash inflows)	(2,925)	(17,452)	(89,811)	(110,188)	-
Cash outflows	2,738	10,952	89,455	103,145	-
Total derivatives	(1,609)	(7,079)	(2,273)	(10,961)	728
Total	107,660	52,817	209,939	370,416	269,932

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36.2 Capital management

Risk management

The objectives when managing capital are to:

- safeguard the ability to continue as a going concern, to provide returns for shareholders and benefits for other stakeholders, and
- maintain an optimal capital structure to reduce the cost of capital.

Consistent with others in the industry, the Group monitors capital based on gearing ratio which is determined by dividing net debt with equity.

During the year 2023, the Group's strategy, which remains unchanged, was to maintain a gearing ratio within 1.0 time and a Baa3 credit rating for Moody's and BBB credit rating for S&P's. In order to increase the strength of capital structure and to maintain an investment grade credit rating. As at 31 December 2023 and 2022, the gearing ratios of the Group are as follows:

(Unit: Million Baht)

	Consolidated financial statements	
	2023	2022
Net debt (including lease liabilities)	149,832	152,340
Equity (including non-controlling interests)	168,312	158,657
Net debt to equity ratio	0.9 times	1.0 times

Loan covenants

Under the terms of the major borrowing facilities, the Group and the Company are required to comply with certain criteria and condition; for example, maintaining shareholders' portion, maintaining debt to equity ratio at the level as specified in the contract and providing financial supports based on ownership percentage. As at 31 December 2023, the Group and the Company has complied with certain criteria and condition as specified in the contract.

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37. Fair Value

The following table presents fair value of financial assets and liabilities recognised or disclosed by their fair value hierarchy excluding those with the carrying amount approximates fair values.

(Unit: Million Baht)

	Consolidated financial statements				
	as at 31 December 2023				
	Carrying amount	Level 1	Level 2	Level 3	Total
Assets					
Financial assets at fair value through profit or loss					
Debt investments	722	314	-	408	722
Financial assets at fair value through other comprehensive income					
Equity investments of listed company	14,059	14,059	-	-	14,059
Equity investments of non-listed company	194	-	-	194	194
Derivatives					
Current					
Oil price crack spread swap and time spread swap	173	-	173	-	173
Forward foreign exchange contracts	46	-	46	-	46
Liabilities					
Current					
Interest rate swap	28	-	28	-	28
Forward foreign exchange contracts	1	-	1	-	1

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(Unit: Million Baht)

	Consolidated financial statements				
	as at 31 December 2023				
	Carrying amount	Level 1	Level 2	Level 3	Total
Non-current					
Interest rate swap	149	-	149	-	149
Derivatives used for hedge accounting					
Cross currency swap	960	-	960	-	960
Financial liabilities not measured at fair value					
Debentures	140,632	-	123,170	-	123,170

(Unit: Million Baht)

	Consolidated financial statements				
	as at 31 December 2022				
	Carrying amount	Level 1	Level 2	Level 3	Total
Assets					
Financial assets at fair value through profit or loss					
Debt investments	798	381	-	417	798
Financial assets at fair value through other comprehensive income					
Equity investments of listed company	21,287	21,287	-	-	21,287
Equity investments of non-listed company	107	-	-	107	107

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Consolidated financial statements				
	as at 31 December 2022				
	Carrying amount	Level 1	Level 2	Level 3	Total
Derivatives					
Current					
Oil price crack spread swap and time spread swap	739	-	739	-	739
Forward foreign exchange contracts	11	-	11	-	11
Derivatives used for hedge accounting					
Forward foreign exchange contracts	658	-	658	-	658
Liabilities					
Derivatives					
Current					
Oil price crack spread swap and time spread swap	193	-	193	-	193
Non-current					
Interest rate swap	385	-	385	-	385
Derivatives used for hedge accounting					
Interest rate swap	59	-	59	-	59
Cross currency swap	1,536	-	1,536	-	1,536
Financial liabilities not measured at fair value					
Debentures	148,952	-	123,029	-	123,029

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Separate financial statements				
	as at 31 December 2023				
	Carrying amount	Level 1	Level 2	Level 3	Total
Assets					
Financial assets at fair value through profit or loss					
Debt investments	314	314	-	-	314
Financial assets at fair value through other comprehensive income					
Equity investments of listed company	13,676	13,676	-	-	13,676
Equity investments of non-listed company	2	-	-	2	2
Derivatives					
Current					
Oil price crack spread swap and time spread swap	173	-	173	-	173
Forward foreign exchange contracts	15	-	15	-	15
Liabilities					
Derivatives					
Current					
Oil price crack spread swap and time spread swap	19	-	19	-	19
Interest rate swap	28	-	28	-	28
Non-current					
Interest rate swap	149	-	149	-	149
Derivatives used for hedge accounting					
Cross currency swap	960	-	960	-	960
Financial liabilities not measured at fair value					
Debentures	42,292	-	42,040	-	42,040

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

(Unit: Million Baht)

	Separate financial statements				
	as at 31 December 2022				
	Carrying amount	Level 1	Level 2	Level 3	Total
Assets					
Financial assets at fair value through profit or loss					
Debt investments	381	381	-	-	381
Financial assets at fair value through other comprehensive income					
Equity investments of listed company	20,584	20,584	-	-	20,584
Equity investments of non-listed company	2	-	-	2	2
Derivatives					
Current					
Oil price crack spread swap and time spread swap	739	-	739	-	739
Derivatives used for hedge accounting					
Forward foreign exchange contracts	658	-	658	-	658
Liabilities					
Derivatives					
Current					
Oil price crack spread swap and time spread swap	204	-	204	-	204
Non-current					
Interest rate swap	385	-	385	-	385
Derivatives used for hedge accounting					
Cross currency swap	1,536	-	1,536	-	1,536
Financial liabilities not measured at fair value					
Debentures	39,871	-	39,345	-	39,345

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

During the current year, there were no changes in the methods and the assumptions used to estimate the fair value of financial instruments and there were no transfers between the levels of the fair value hierarchy.

Fair value measurement of financial assets and liabilities is in accordance with accounting policy disclosed in Note 4.

Valuation techniques used in measuring level 2 fair values

Type	Valuation technique
Interest rate swap	Future cash flow projection discounted by the market yield which based on Bloomberg at the reporting date.
Forward foreign exchange contracts	Future cash flow projection discounted by the market yield which based on commercial bank report for short-term transactions and future cash flow projection discounted by the market yield which based on Bloomberg at the reporting date for long-term transactions.
Cross currency swap	Future cash flow projection discounted by the market yield which based on Bloomberg at the reporting date.
Oil price crack spread swap and time spread swap	Market comparison technique: The fair values are based on broker quotes. Similar contracts that are traded in an active market and the quotes reflect the actual transactions in similar financial instruments.
Debt investment measure at fair value through profit or loss	Thai Bond Market Association Government Bond Yield Curve as of the reporting date.
Debentures and Long-term loans	Market comparison technique: The valuation model is based on ask prices or latest price of comparable market securities.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Valuation techniques used in measuring level 3 fair values

Changes in level 3 financial instruments for the period ended 31 December 2023 is as follows:

(Unit: Million Baht)

	Consolidated financial statements		
	Debt investment	Equity investment	Total
Beginning balance as at 1 January 2023	417	107	524
Additions	45	99	144
Loss recognised in profit or loss	(51)	(10)	(61)
Exchange differences	(3)	(2)	(5)
Ending balance as at 31 December 2023	408	194	602

The Group considers the significant unobservable inputs used in level 3 fair value measurements and concludes that fair value approximates carrying amount. For the fair value measurement of contingent consideration from the investment acquisitions, the Group considers by using future cash flow projection discounted with cost of debt and the assumptions of relating probabilities of conditions in the share purchase agreements.

The Group did not have any transfers between levels during the year.

The following table shows financial assets and liabilities measured at amortised cost with the carrying amount approximates fair value. The carrying amount of long-term loans from financial institutions, long-term loans from a third party, and long-term loans from a related party approximates their fair value, since their interest rates are close to market rate.

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

Consolidated financial statements	Separate financial statements
Financial assets	Financial assets
<ul style="list-style-type: none"> - Cash and cash equivalents - Deposits at a financial institution used as collaterals - Short-term investments - Trade receivables - Other receivables - Finance lease receivables - Other non-current assets 	<ul style="list-style-type: none"> - Cash and cash equivalents - Short-term investments - Trade receivables - Other receivables - Finance lease receivables - Short-term loan to related parties - Current portion of long-term loans to related parties - Other non-current assets
Financial liabilities	Financial liabilities
<ul style="list-style-type: none"> - Short-term loans from financial institutions - Trade payables - Other payables - Long-term loans from financial institutions - Long-term loans from a third party - Long-term loans from a related party - Lease liabilities - Other non-current liabilities 	<ul style="list-style-type: none"> - Short-term loans from related parties - Trade payables - Other payables - Long-term loans from financial institutions - Long-term loans from related parties - Lease liabilities - Other non-current liabilities

Notes to consolidated financial statements

Thai Oil Public Company Limited and its subsidiaries

For the year ended 31 December 2023

38. Oil spill incident

On 3 September 2023, the incident resulting in an oil spill during the oil discharge occurred at the Single Buoy Mooring of the Company's refinery in Chonburi. The Company, with cooperation and support from both government agencies and private sectors, promptly initiated oil spill cleanup efforts to prevent the oil from reaching the shoreline. At the present, the Company has completed the clean-up of the spilled oil. The assessment of long-term impacts and any required rehabilitation actions in the affected areas is ongoing process, which will require cooperative assessment involving government authorities, external experts and communities. At present, the Company's refinery operations are proceeding normally.

The Company has established a recovery plan to provide assistance to those who have been affected by this situation. Simultaneously, the Company is engaged in negotiations with the insurance company to determine the claim value under the insurance policies.

The Company has recognised related expenses in the statement of income for the year ended 31 December 2023, approximately Baht 224 million, as part of the administrative expenses. Such expenses and provisions mainly consist of costs incurred in resolving and mitigating the consequences of oil spill, as well as offering compensation and the financial relief extended to affected parties.

As of 31 December 2023, the related expenses included the provision for the oil spill incident and the Company anticipates the potential for incurring additional expenditures in the future.

39. Events after the reporting period

The Company's dividend announcement

At the Board of Directors' meeting of the Company held on 14 February 2024, the Company's Board of Directors passed a resolution to propose to the Annual General Meeting of Shareholders to consider and approve the dividend payment for the year 2023 at the rate of Baht 3.40 per share, totaling Baht 7,595 million. Such a dividend included the interim dividends of Baht 0.65 per share, which the Company has already paid to the shareholders of the Company in September 2023. Therefore, the additional dividend of Baht 2.75 per share, totaling Baht 6,143 million. The dividends were scheduled to be paid on 30 April 2024. The dividend payment is subject to the approval of the Company's Annual General Meeting of Shareholders which is to be held on 11 April 2024.

40. Approval of financial statements

These financial statements were authorised for issue by the Company's Board of Director on 14 February 2024.

Auditors' Fees for 2023

1. Audit Fee

The Company, subsidiaries and the Member Companies of Thai Oil Group-Registered Provident Fund paid for the audit fees to the auditors' company for the latest period amounting to Baht 7.48 million.

2. Non-Audit Fee

The Company and Subsidiaries also paid for other services, including verification of compliance with the BOI Investment Promotion Certificate to the auditor's company for the latest period amounting to Baht 0.30 million and Non-Audit Fee amounting to 5.01 million.



● Professionalism

● Ownership and
Commitment

● Social
Responsibility

● Integrity

● Teamwork and
Collaboration

● Innovation

● Vision Focus

● Excellence
Striving

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