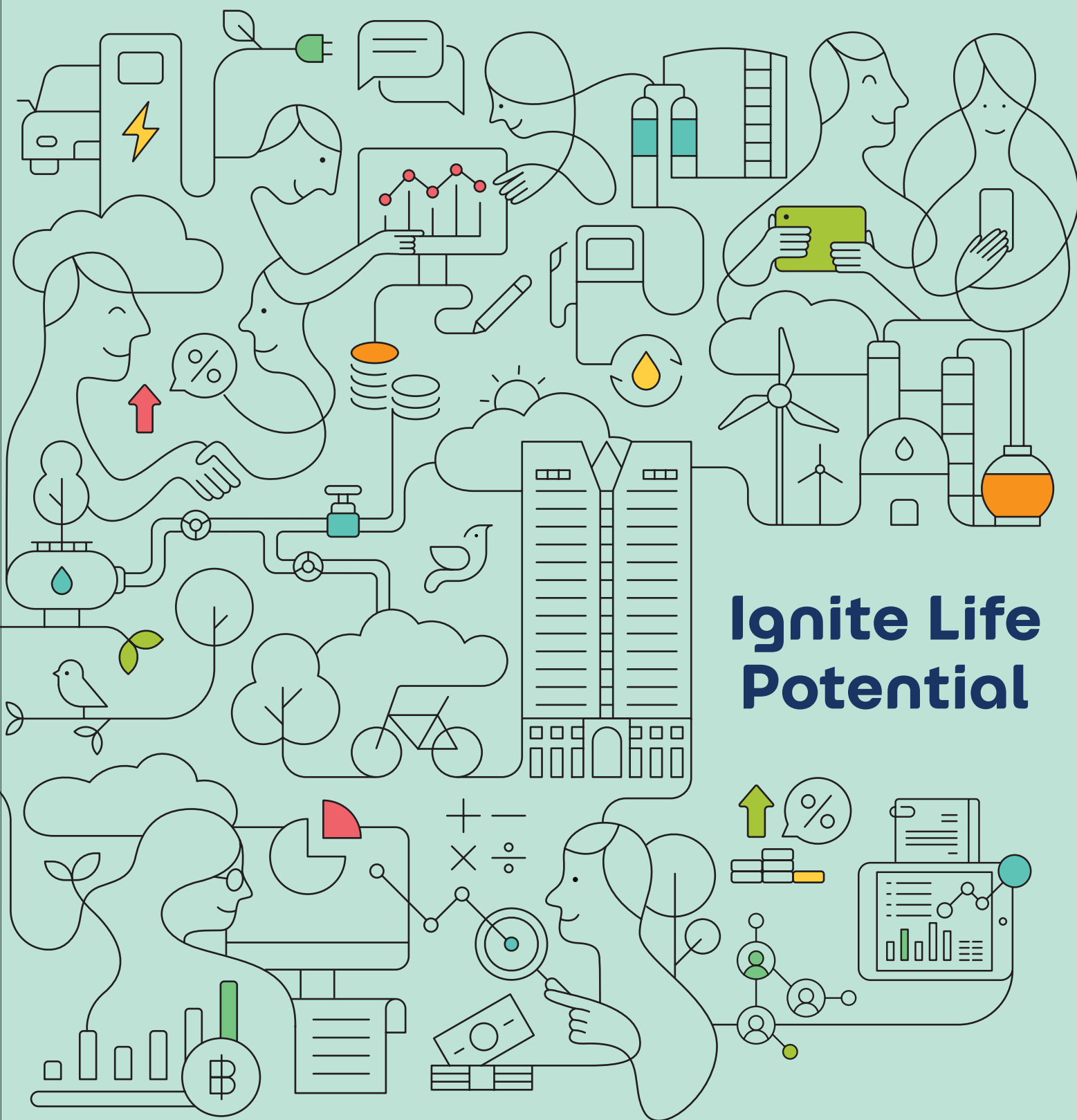


PTT Public Company Limited



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Report of Board of Directors' Responsibilities for the Financial Reporting

To Shareholders,

The Board of Directors is responsible for the consolidated financial statements of PTT Public Company Limited and its subsidiaries and the separate financial statements of PTT Public Company Limited. The aforementioned financial statements are prepared in accordance with Thai Financial Reporting Standards. The financial statements are prepared under appropriated accounting policies and applied consistently by using careful judgment and the best estimation. Important information is adequately and transparently disclosed in the notes to financial statements for the company's shareholders and investors.

The Board of Directors provides good corporate governance and maintains the risk management system and internal controls to ensure that accounting records are accurate, reliable, free from material misstatement, timely and adequate to protect the company's assets as well as to prevent fraud and significant irregular operations.

The Board of Directors has appointed an Audit Committee comprising independent directors to be responsible for reviewing the reliability and correctness of financial reports, evaluating the effectiveness and efficiency of internal control process and governing the effectiveness of internal audit function. The audit committee's comments on these issues are presented in the audit committee report included in this annual report.

The Board of Directors considers that the internal control system and the internal audit of the company provide credibility and reliability to the consolidated financial statements of PTT Public Company Limited and its subsidiaries and the separate financial statements of PTT Public Company Limited for the year ended December 31, 2023. The Board of Directors also believes that the financial position, financial results and cash flows, audited by the independent auditors (EY Office Limited), are fairly and accurately presented in all material respects with Thai Financial Reporting Standards. The auditors' opinion is presented in the auditors' report as part of this annual report.

Mr. Chatchai Phromlert
Chairman

Mr. Auttapol Rerkpiboon
President & CEO



Independent Auditor's Report

To the Shareholders of PTT Public Company Limited

Opinion

I have audited the accompanying consolidated financial statements of PTT 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 PTT 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 PTT Public Company Limited and its subsidiaries and of PTT 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 the State Audit Standards and 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 State Audit Standards issued by the State Audit Commission and 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 State Audit Standards and 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.

Use of accounting judgments and estimates during oil price volatility caused by the global energy crisis

The economic fluctuations in 2023 had a substantial impact on energy supply and demand, as well as global oil price. In addition, this has contributed to volatility in the overall domestic economy and across various business sectors, including energy industry. This situation may bring uncertainty and affect the environment in which the Group operates. As a result, I focused on considering the impairment of certain assets: namely, goodwill, property, plant and equipment, other intangible assets, and exploration and evaluation assets and related provisions, since impairment assessments of assets and associated provisions constitute significant accounting estimates, which require management to exercise judgment and make accounting estimates, particularly with respect to the identification of cash-generating units, the estimates of future cash flows that the Group expects to receive from those groups of assets and determination of an appropriate discount rate. The circumstances described above affect these judgments and estimates.

I have gained an understanding of the Group's business environment and of the process for assessing the impact of the oil price volatility on considerations regarding the impairment testing of assets and related provisions, including the recording of relevant accounting transactions, by making inquiries with the Group's management and examining supporting documents. I have assessed the identification of cash-generating units, having gained an understanding of and evaluated the key assumptions selected by management in making estimates of the expected future cash flows and determining the discount rate by making inquiry of the responsible persons and performing comparative analysis with different sources of information regarding both the Group and the industry. Moreover, I compared the cash flow projections for previous periods with actual operating results, including relevant variables, in order to assess management's use of judgment in estimating the expected future cash flows. For this purpose, I have been following the Group's assessment of the impact of these circumstances up to the date of this report. In addition, I reviewed the disclosure of the impact of the oil price volatility on the impairment testing of assets and related provisions.

Other Matter

The State Audit standards as described in the *Basis for Opinion* section and the *Auditor's Responsibilities for the Audit of the Financial Statements* section are relevant only to the audit of the financial statements, which are prepared by management in accordance with Thai Financial Reporting Standards.



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. The annual report of the Group is expected to be made available to me after the date of this auditor's report.

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.

When I read the annual report of the Group, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance for correction of the misstatement.

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 the State Audit Standards and 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 the State Audit Standards and 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 the State Audit Standards and 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.

Kittiphun Kiatsomphob
Certified Public Accountant
(Thailand) No. 8050

EY Office Limited
Bangkok: 15 February 2024



Statement of Financial Position

PTT Public Company Limited and Its Subsidiaries
As at 31 December 2023



Unit: Baht

	Notes	Consolidated financial statements		Separate financial statements	
		31 December 2023	31 December 2022	31 December 2023	31 December 2022
<u>Assets</u>					
Current assets					
Cash and cash equivalents	4	417,133,806,030	340,054,258,218	87,570,265,246	52,787,983,676
Short-term investments in financial assets	5	32,391,687,023	12,600,203,556	7,253,799,697	3,468,734,142
Trade accounts receivable	6	259,812,941,241	219,054,350,287	164,396,639,591	161,459,456,807
Other accounts receivable	7	77,425,088,404	142,265,877,656	14,404,349,282	35,695,995,643
Short-term lending	8.1	2,216,448,581	2,173,584,524	35,911,427,586	2,043,911,233
Inventories	10	210,998,887,158	222,347,607,982	25,860,502,540	27,192,390,126
Supplies	11	52,499,741,288	49,506,527,001	5,756,215,875	5,488,234,310
Current derivative assets		8,789,069,042	14,764,120,162	1,094,275,319	824,582,845
Other current financial assets		878,470,903	1,924,001,716	297,266,749	297,045,802
Other current assets		12,555,510,627	13,592,699,390	2,585,661,430	2,346,735,149
Assets held for sale	12	7,037,087,436	22,579,601,336	-	-
Total current assets		1,081,738,737,733	1,040,862,831,828	345,130,403,315	291,605,069,733
Non-current assets					
Other long-term investments in financial assets	13	45,731,813,255	54,092,774,460	6,572,148,032	13,028,827,422
Investments in subsidiaries	14.1, 14.4	-	-	456,480,548,540	435,703,629,724
Investments in joint ventures	14.2, 14.5	62,257,698,552	60,356,655,237	4,979,465,773	4,959,465,773
Investments in associates	14.3	110,064,700,457	104,658,121,922	-	-
Long-term lending	8.2	6,942,728,134	8,045,563,028	21,122,682,866	56,066,587,558
Investment properties	15	11,233,561,947	10,736,084,109	4,075,966,962	3,927,382,145
Property, plant and equipment	16	1,541,209,163,515	1,499,329,679,429	248,057,048,807	248,276,170,223
Right-of-use assets	17	116,099,084,852	124,052,955,042	23,422,826,073	24,869,287,411
Goodwill	18	183,730,773,538	188,963,836,957	-	-
Other intangible assets	19	130,311,569,781	137,051,494,679	2,591,564,344	2,702,425,852
Exploration and evaluation assets	20	94,330,965,080	106,160,968,871	-	-
Deferred tax assets	22.3	42,477,564,169	50,759,602,063	3,384,646,490	-
Non-current derivative assets		813,281,470	1,632,692,190	266,564,746	406,331,243
Other non-current financial assets		15,632,743,220	11,424,805,434	208,677,207	178,496,135
Other non-current assets	23	17,887,510,657	17,504,226,657	1,098,419,274	48,127,759
Total non-current assets		2,378,723,158,627	2,374,769,460,078	772,260,559,114	790,166,731,245
Total assets		3,460,461,896,360	3,415,632,291,906	1,117,390,962,429	1,081,771,800,978



Statement of Financial Position (Continued)

PTT Public Company Limited and Its Subsidiaries
As at 31 December 2023



Unit: Baht

Notes	Consolidated financial statements		Separate financial statements	
	31 December 2023	31 December 2022	31 December 2023	31 December 2022
Liabilities and shareholders' equity				
Current liabilities				
Bank overdrafts and short-term loans from financial institutions	27	96,511,469,339	90,757,365,238	-
Trade accounts payable	24	243,384,549,126	230,366,158,328	149,327,338,219
Other accounts payable	25	80,097,334,648	88,322,204,627	22,724,182,590
Current portion of long-term borrowings	27	97,399,050,676	73,237,306,068	39,351,394,973
Current portion of lease liabilities	27	16,076,557,254	16,190,978,583	1,511,122,775
Short-term borrowings	27	6,500,000,000	784,118,026	18,296,900,877
Income tax payable		26,264,225,327	30,846,381,120	1,405,370,245
Short-term provision for decommissioning costs	29	2,107,376,664	10,889,461,758	-
Current derivative liabilities		5,731,674,969	23,012,778,342	1,516,823,712
Other current financial liabilities		523,720,119	6,069,311,742	211,399,392
Other current liabilities	26	11,226,197,391	16,712,910,561	3,773,394,646
Liabilities directly associated with assets held for sale	12	2,887,602,463	5,351,425,781	-
Total current liabilities		588,709,757,976	592,540,400,174	238,117,927,429
Non-current liabilities				
Long-term borrowings	27	863,303,142,247	924,943,365,018	192,727,722,780
Lease liabilities	27	81,652,219,254	87,680,577,734	7,560,567,997
Deferred tax liabilities	22.3	82,694,578,159	90,971,519,778	-
Provision for employee benefits	28	33,815,506,957	32,355,934,190	6,791,664,086
Long-term provision for decommissioning costs	29	134,277,903,113	99,161,887,598	25,257,398
Deposits on LPG cylinders		12,951,851,352	12,683,944,332	-
Non-current derivative liabilities		4,229,382,581	7,642,867,621	2,841,022,982
Other non-current financial liabilities	30	4,991,841,829	4,661,683,967	1,487,181,799
Other non-current liabilities	31	28,860,307,823	29,297,346,561	5,049,634,701
Total non-current liabilities		1,246,776,733,315	1,289,399,126,799	216,483,051,743
Total liabilities		1,835,486,491,291	1,881,939,526,973	454,600,979,172



Statement of Financial Position (Continued)

PTT Public Company Limited and Its Subsidiaries
As at 31 December 2023



Unit: Baht

	Notes	Consolidated financial statements		Separate financial statements	
		31 December 2023	31 December 2022	31 December 2023	31 December 2022
Liabilities and shareholders' equity (Continued)					
Shareholders' equity					
Share capital					
Registered share capital					
28,562,996,250 ordinary shares of Baht 1 each		28,562,996,250	28,562,996,250	28,562,996,250	28,562,996,250
Issued and fully paid-up share capital					
28,562,996,250 ordinary shares of Baht 1 each		28,562,996,250	28,562,996,250	28,562,996,250	28,562,996,250
Share premium		29,211,131,966	29,211,131,966	29,211,131,966	29,211,131,966
Surplus from the change in the ownership interests					
in subsidiaries		39,461,080,386	10,068,142,437	-	-
Retained earnings					
Appropriated - legal reserve	32	2,857,245,725	2,857,245,725	2,857,245,725	2,857,245,725
Appropriated - self-insurance fund reserve	32	1,330,420,740	1,293,274,044	1,330,420,740	1,293,274,044
Unappropriated		1,003,378,317,116	957,167,125,835	598,772,263,337	563,628,611,939
Other components of shareholders' equity		16,396,692,627	23,430,961,528	2,055,925,239	3,240,285,292
Equity attributable to owners of the Company		1,121,197,884,810	1,052,590,877,785	662,789,983,257	628,793,545,216
Non-controlling interests of the subsidiaries		503,777,520,259	481,101,887,148	-	-
Total shareholders' equity		1,624,975,405,069	1,533,692,764,933	662,789,983,257	628,793,545,216
Total liabilities and shareholders' equity		3,460,461,896,360	3,415,632,291,906	1,117,390,962,429	1,081,771,800,978

Phannalin Mahawongtikul
Chief Financial Officer



Statement of Income



PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023

Unit: Baht

	Notes	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Sales and service income	34	3,144,550,828,528	3,367,202,701,454	1,890,654,384,044	2,128,816,674,894
Cost of sales and services	36	2,767,102,233,563	2,906,725,865,808	1,845,325,866,893	2,071,743,772,189
Gross profit		377,448,594,965	460,476,835,646	45,328,517,151	57,072,902,705
Other income	35	40,705,246,648	24,420,164,771	70,311,569,997	52,478,489,606
Loss on derivatives		(13,194,035,415)	(74,913,812,974)	(5,865,627,527)	(18,318,184,587)
Gain on foreign exchange rates		22,284,818,507	5,552,364,342	17,083,565,651	8,446,958,150
Profit before expenses		427,244,624,705	415,535,551,785	126,858,025,272	99,680,165,874
Selling and distribution expenses	36	45,403,674,182	46,212,116,583	9,954,180,012	9,509,855,968
Administrative expenses	36	86,889,482,578	98,015,113,077	22,815,020,021	24,576,044,278
Petroleum royalties		15,987,300,914	27,504,417,516	-	-
Operating profit		278,964,167,031	243,803,904,609	94,088,825,239	65,594,265,628
Share of profit from investments in joint ventures and associates	14.6	3,012,624,956	5,848,984,585	-	-
Profit before finance costs and income taxes		281,976,791,987	249,652,889,194	94,088,825,239	65,594,265,628
Finance costs	37	45,383,423,008	37,090,860,839	9,482,053,425	8,231,278,971
Profit before income taxes		236,593,368,979	212,562,028,355	84,606,771,814	57,362,986,657
Income tax expenses	22.1	81,313,167,804	90,462,362,303	6,222,907,267	4,782,466,799
Profit for the year		155,280,201,175	122,099,666,052	78,383,864,547	52,580,519,858
Profit attributable to					
Equity holders of the Company		112,023,880,947	91,174,857,528	78,383,864,547	52,580,519,858
Non-controlling interests of the subsidiaries		43,256,320,228	30,924,808,524	-	-
		155,280,201,175	122,099,666,052	78,383,864,547	52,580,519,858
Basic earnings per share	33	3.92	3.20	2.74	1.84

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PTT Public Company Limited



Statement of Comprehensive Income



PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Profit for the year	155,280,201,175	122,099,666,052	78,383,864,547	52,580,519,858
Other comprehensive income (loss)				
Other comprehensive income to be reclassified to profit or loss in subsequent periods				
Exchange differences on translation of financial statements				
in foreign currency	(6,394,033,596)	9,951,723,600	-	-
Loss on debt investments measured at fair value				
through other comprehensive income	(553,092)	(26,848,618)	-	-
Income taxes related to debt investments measured at fair value				
through other comprehensive income	(1,989,381)	5,369,723	-	-
Gain (loss) on cash flow hedges	137,421,887	(37,962,354)	-	-
Income taxes related to cash flow hedges	42,717,064	61,702,344	-	-
Share of other comprehensive loss from joint ventures				
and associates	(470,706,027)	(1,512,199,412)	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods				
Gain (loss) on remeasurements of defined benefits plans	(492,310,853)	5,800,241,814	(460,678,896)	1,091,617,640
Income taxes related to remeasurements of defined benefits plans	157,481,076	(1,331,725,929)	92,150,922	(218,323,528)
Loss on equity investments designated at fair value				
through other comprehensive income	(2,624,546,930)	(4,393,068,700)	(1,524,009,148)	(2,508,962,938)
Income taxes related to equity investments designated at fair value				
through other comprehensive income	3,374,613,301	1,038,149,025	339,649,095	501,792,588
Share of other comprehensive income (loss) from joint ventures				
and associates	(1,031,979,142)	502,522,795	-	-
Other comprehensive income (loss) for the year, net of income taxes	(7,303,885,693)	10,057,904,288	(1,552,888,027)	(1,133,876,238)
Total comprehensive income for the year	147,976,315,482	132,157,570,340	76,830,976,520	51,446,643,620
Total comprehensive income attributable to				
Equity holders of the Company	103,986,347,737	97,177,433,881	76,830,976,520	51,446,643,620
Non-controlling interests of the subsidiaries	43,989,967,745	34,980,136,459	-	-
	147,976,315,482	132,157,570,340	76,830,976,520	51,446,643,620



Statement of Changes in Shareholders' Equity

PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023



Consolidated financial statements												Unit: Baht	
Notes	Equity attributable to owners of the Company												
	Retained earnings				Other components of shareholders' equity								
	Appropriated		Surplus from the change in the ownership interests in subsidiaries	Exchange differences on translation of financial statements in foreign currency	Investments in other long-term financial assets	Cash flow hedges	Share of other comprehensive income (loss) from joint ventures and associates	Put option over non-controlling interest of the subsidiary	Total other components of shareholders' equity	Total equity attributable to owners of the Company	Equity attributable to non-controlling interests of the subsidiaries		
	Issued and fully paid-up share capital	Share premium										Legal reserve	Self-insurance fund reserve
28,562,986,250	29,211,131,966	3,065,604,331	2,857,245,725	1,272,724,959	11,778,009,158	8,377,553,951	(321,985,998)	393,533,887	(622,712,347)	19,804,800,651	1,006,696,222,041	466,243,499,953	1,472,939,721,994
Changes in shareholders' equity for the year													
Reserve for self-insurance fund	-	-	-	20,549,085	-	-	-	-	-	-	-	-	-
Redemption of subordinated capital debentures	-	-	-	320,294,860	-	-	-	-	-	-	320,294,860	(4,811,693,179)	(4,491,398,319)
Interest expenses for subordinated capital debentures	-	-	-	(94,726,685)	-	-	-	-	-	-	(94,726,685)	(50,365,703)	(145,092,398)
Income taxes for subordinated capital debentures	-	-	-	(9,324,666)	-	-	-	-	-	-	(9,324,666)	(4,957,878)	(14,282,544)
Dividends paid	-	-	-	(59,982,106,341)	-	-	-	-	-	-	(59,982,106,341)	-	(59,982,106,341)
Dividends paid of subsidiaries	-	-	-	-	-	-	-	-	-	-	-	(26,070,043,928)	(26,070,043,928)
Change in the ownership interests in subsidiaries	-	-	6,972,538,106	-	57,999,390	-	-	-	622,712,347	680,711,737	7,589,623,498	(9,342,816,379)	(1,754,192,881)
Increase in share capital of subsidiaries	-	-	-	-	-	-	-	-	-	-	-	8,465,594,576	8,465,594,576
Non-controlling interest arising from business combinations	-	-	-	-	-	-	-	-	-	-	-	11,740,600,309	11,740,600,309
Profit for the year	-	-	-	-	91,174,857,528	-	-	-	-	-	91,174,857,528	30,924,808,524	122,099,666,052
Other comprehensive income (loss) for the year	-	-	-	-	3,751,588,410	6,825,941,535	(3,255,020,459)	245,296,101	(670,768,037)	3,145,449,140	6,897,037,550	4,007,260,853	10,904,298,403
Balance as at 31 December 2022	28,562,986,250	29,211,131,966	10,068,142,437	2,857,245,725	1,293,274,044	857,167,125,835	(76,287,897)	-	-	23,430,961,528	1,052,590,877,785	481,101,887,148	1,533,692,764,933
Balance as at 1 January 2023													
Changes in shareholders' equity for the year	28,562,986,250	29,211,131,966	10,068,142,437	2,857,245,725	1,293,274,044	857,167,125,835	(76,287,897)	5,122,533,492	-	23,430,961,528	1,052,590,877,785	481,101,887,148	1,533,692,764,933
Reserve for self-insurance fund	-	-	-	-	37,146,696	(37,146,696)	-	-	-	-	-	-	-
Foreign exchange difference from repayment of subordinated perpetual loan	-	-	-	-	-	(1,126,041,097)	-	-	-	-	(1,126,041,097)	(598,710,400)	(1,724,751,497)
Dividends paid	-	-	-	-	-	(42,844,232,880)	-	-	-	-	(42,844,232,880)	-	(42,844,232,880)
Dividends paid of subsidiaries	-	-	-	-	-	-	-	-	-	-	-	(19,449,171,784)	(19,449,171,784)
Change in the ownership interests in subsidiaries	-	-	29,392,937,949	-	-	(21,390,884,515)	-	-	-	-	8,002,053,434	(1,477,372,303)	6,524,681,131
Increase in share capital of subsidiaries	-	-	-	-	-	-	-	-	-	-	-	210,919,853	210,919,853
Profit for the year	-	-	-	-	-	112,023,880,947	-	-	-	-	112,023,880,947	43,256,320,228	155,280,201,175
Other comprehensive income (loss) for the year	-	-	-	-	-	(414,394,478)	(5,454,484,246)	(421,898,471)	(15,908,460)	(1,141,989,724)	(7,448,653,379)	733,647,517	(6,715,005,862)
Balance as at 31 December 2023	28,562,986,250	29,211,131,966	39,461,080,386	2,857,245,725	1,330,420,740	1,003,378,317,116	(13,207,465,837)	4,700,647,021	-	16,396,692,627	1,121,197,864,810	583,777,520,259	1,624,975,405,069

The accompanying notes are an integral part of these financial statements.



Statement of Changes in Shareholders' Equity (Continued)

PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023



	Separate financial statements							Unit: Baht	
	Notes	Issued and fully paid-up share capital	Share premium	Retained earnings			Other components of shareholders' equity		
				Appropriated			Unappropriated		Other comprehensive income (loss)
				Legal reserve	Self-insurance fund reserve	Investments in other long-term financial assets			
Balance as at 1 January 2022		28,562,996,250	29,211,131,966	2,857,245,725	1,272,724,959	570,355,191,388	5,247,455,642	637,506,745,930	
Changes in shareholders' equity for the year									
Reserve for self-insurance fund	32	-	-	-	20,549,085	(20,549,085)	-	-	
Dividends paid		-	-	-	-	(59,982,106,341)	-	(59,982,106,341)	
Profit for the year		-	-	-	-	52,580,519,858	-	52,580,519,858	
Other comprehensive income (loss) for the year		-	-	-	-	695,556,119	(2,007,170,350)	(1,311,614,231)	
Balance as at 31 December 2022		28,562,996,250	29,211,131,966	2,857,245,725	1,293,274,044	563,628,611,939	3,240,285,292	628,793,545,216	
Balance as at 1 January 2023		28,562,996,250	29,211,131,966	2,857,245,725	1,293,274,044	563,628,611,939	3,240,285,292	628,793,545,216	
Changes in shareholders' equity for the year									
Reserve for self-insurance fund	32	-	-	-	37,146,696	(37,146,696)	-	-	
Dividends paid	40	-	-	-	-	(42,844,232,880)	-	(42,844,232,880)	
Profit for the year		-	-	-	-	78,383,864,547	-	78,383,864,547	
Other comprehensive loss for the year		-	-	-	-	(358,833,573)	(1,184,360,053)	(1,543,193,626)	
Balance as at 31 December 2023		28,562,996,250	29,211,131,966	2,857,245,725	1,330,420,740	598,772,263,337	2,055,925,239	662,789,983,257	

The accompanying notes are an integral part of these financial statements.



Statement of Cash Flows

PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023



Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Cash flows from operating activities				
Profit before income taxes	236,593,368,979	212,562,028,355	84,606,771,814	57,362,986,657
Adjustment of profit before income taxes to net cash provided by (used in) operating activities				
Depreciation and amortization expenses	173,065,107,955	167,329,599,023	19,458,750,362	18,826,520,033
(Gain) loss on disposal of assets	(4,614,440,135)	(1,084,638,265)	32,776,399	(7,586,459)
(Gain) loss on disposal of investments	(1,495,778,296)	(801,567,034)	-	641,700,056
Gain on change in status of investments	(2,443,353,174)	(847,962,520)	-	-
Gain from early redemption of debentures	(2,159,784,892)	-	-	-
(Reversal of) loss on impairment of assets	4,942,291,326	12,303,617,084	142,647,292	(3,177,757)
(Reversal of) loss on impairment of investment	-	305,292,173	(18,040,273,315)	24,442,324
Share of profit from investments in joint ventures and associates	(3,012,624,956)	(5,848,984,585)	-	-
Provision for employee benefits	3,171,836,456	2,931,108,247	578,788,530	589,068,480
(Gain) loss on exchange rates	(1,320,417,021)	11,648,818,620	(1,776,702,281)	85,158,978
(Gain) loss on derivatives	(5,479,263,746)	10,243,204,814	(604,461,797)	3,869,015,872
Unrealized (gain) loss on fair value of commodity contracts	(7,015,057,249)	7,920,457,008	274,793,802	(198,775,269)
(Gain) loss on investments measured at fair value through profit and loss	(355,496,916)	(277,215,121)	143,373,642	53,100,575
(Reversal of) expected credit loss of accounts receivable and other assets	401,017,699	298,185,044	(62,837,308)	(81,478,676)
Write-off exploration assets	2,070,459,400	1,178,276,436	-	-
(Reversal of) allowance for changes in value of inventories	(2,380,872,405)	5,885,937,848	224,840,513	980,802,135
(Reversal of) allowance for obsolete supplies	(2,075,657,346)	(360,855,737)	3,964,202	20,613,334
Dividend income	(2,189,933,632)	(467,202,903)	(36,251,431,619)	(37,760,947,300)
Interest income	(12,219,394,219)	(3,920,530,559)	(3,143,805,410)	(2,256,153,482)
Finance costs	45,383,423,008	37,090,860,839	9,482,053,425	8,231,278,971
Others	133,588,961	63,131,567	(504,915,629)	(173,436,390)
Profit from operating activities before changes in operating assets and liabilities	418,999,019,797	456,151,560,334	54,564,332,622	50,203,132,082



Statement of Cash Flows (Continued)



PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Operating assets (increase) decrease				
Trade accounts receivable	(41,080,162,013)	(20,361,023,129)	(3,374,702,675)	(47,611,506,352)
Other accounts receivable	65,904,510,775	(76,304,298,610)	20,580,529,175	(14,746,969,833)
Inventories and supplies	13,413,635,693	(63,378,486,718)	824,293,389	(16,179,915,362)
Other current assets	3,995,794,250	(2,789,886,875)	(232,360,401)	(448,412,755)
Other non-current assets	(4,709,239,314)	(7,501,078,584)	(20,310,550)	85,233,353
Operating liabilities increase (decrease)				
Trade accounts payable	13,778,494,050	15,370,767,864	5,569,143,758	41,255,197,922
Other accounts payable	23,111,840,720	(10,265,408,725)	3,624,060,356	(12,304,819,704)
Other current liabilities	(19,954,539,586)	6,106,470,203	(4,180,585,159)	3,992,446,681
Other non-current liabilities	(8,213,633,334)	(19,847,285,785)	(557,476,958)	(650,138,258)
	46,246,701,241	(178,970,230,359)	22,232,590,935	(46,608,884,308)
Cash received from operating activities	465,245,721,038	277,181,329,975	76,796,923,557	3,594,247,774
Income taxes paid	(83,200,557,966)	(85,481,632,089)	(9,584,103,564)	(7,198,139,063)
Net cash provided by (used in) operating activities	382,045,163,072	191,699,697,886	67,212,819,993	(3,603,891,289)



Statement of Cash Flows (Continued)



PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Cash flows from investing activities				
Cash payment of property, plant and equipment and investment properties	(163,734,257,811)	(161,874,422,998)	(16,513,907,762)	(15,083,182,995)
Cash payment of intangible assets	(7,880,907,987)	(7,468,541,637)	(163,684,278)	(320,646,834)
Cash payment of exploration and evaluation assets	(5,514,324,433)	(3,336,028,022)	-	-
Cash payment of right-of-use assets	(428,904,399)	(566,421,603)	(2,608,941)	(954,798)
Cash payment for other long-term investments in financial assets	(2,534,042,926)	(15,013,044,044)	(1,137,552,584)	(962,596,895)
Net cash payment for business acquisitions	-	(14,507,984,823)	-	-
Cash payment for contingent considerations from business acquisition	(24,925,374)	(33,397,028)	-	-
Cash payment of investments in subsidiaries	-	-	(4,298,645,500)	(65,601,093,913)
Decrease in cash from loss of control in a subsidiary	(334,168,185)	(537,264,908)	-	-
Cash payment of investments in joint ventures and associates	(8,863,789,437)	(35,299,053,450)	(20,000,000)	-
Cash payment of long-term lending	(2,436,197,906)	(2,126,050,738)	(30,000,000)	(16,774,913,287)
Cash payment for derivatives	(1,075,480,196)	(190,076,424)	(1,075,480,196)	(190,076,424)
Cash proceeds from disposals of property, plant and equipment, intangible assets, investment properties and right-of-use assets	4,669,649,945	1,432,797,919	58,707,960	44,135,118
Net cash proceeds from disposals of assets	7,243,583,449	-	-	-
Cash proceeds from disposals of other long-term investments in financial assets	3,915,881,476	3,268,672,808	2,090,502,923	1,280,910,942
Cash proceeds from disposals of investments in subsidiaries	10,301,388,493	1,407,144,481	-	5,291,649,930
Cash proceed from capital decrement of subsidiary	-	-	1,562,000,000	-
Cash proceeds from long-term lending	931,628,811	903,588,647	1,074,844,400	81,552,254,869
Cash proceeds from lease installments	-	-	35,773,288	-
Decrease (increase) in short-term lending	(228,897,870)	(43,730,633)	192,403,279	1,141,653,527
Decrease (increase) in short-term investments in financial assets	(14,555,468,810)	37,030,827,040	791,071,138	2,903,067,958
Interests received	10,092,900,771	2,826,111,188	3,186,271,635	2,298,489,039
Dividends received	9,211,576,993	7,436,536,573	36,251,431,619	37,776,859,079
Net cash provided by (used in) investing activities	(161,244,755,396)	(186,690,337,652)	22,001,126,981	33,355,555,316



Statement of Cash Flows (Continued)



PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023

Unit: Baht

	Notes	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Cash flows from financing activities					
Cash proceeds from issuance of ordinary shares of subsidiaries		246,288,051	9,033,732,110	-	-
Cash proceeds from long-term borrowings		99,624,080,307	289,780,174,199	13,478,230,000	50,950,250,340
Cash proceeds from derivatives		177,031,490	85,691,200	-	75,949,367
Cash proceeds from change in ownership in subsidiaries		8,477,054,983	-	-	-
Cash payment for decrease in ordinary shares of subsidiaries		(39,265,070)	(258,018,108)	-	-
Cash repayment of long-term borrowings		(130,292,891,236)	(181,104,685,480)	(16,016,076,886)	(6,000,000,000)
Cash payment for lease installments		(18,219,626,556)	(15,022,171,386)	(1,162,747,354)	(2,128,870,388)
Cash payment for derivatives		(95,812,221)	(1,668,200,159)	(95,812,221)	(96,557,169)
Cash payment for redemption of subordinated capital debentures		-	(4,988,476,412)	-	-
Cash payment for change in ownership in subsidiaries		(3,430,623,776)	(554,213,758)	-	-
Increase in short-term borrowings		6,272,591,000	718,110,869	8,849,423,318	2,230,107,961
Increase in bank overdrafts and short-term loans from financial institutions		5,984,753,469	76,767,770,502	-	-
Finance costs paid		(48,494,490,958)	(36,198,375,070)	(16,143,373,744)	(7,871,128,111)
Dividends paid		(62,368,307,948)	(85,922,867,075)	(42,847,021,907)	(59,977,197,660)
Net cash provided by (used in) financing activities		(142,159,218,465)	50,668,471,432	(53,937,378,794)	(22,817,445,660)
Effects of exchange rates on cash and cash equivalents		(3,279,610,457)	697,586,885	(494,286,610)	373,572
Exchange differences on translation		2,018,940,120	(20,287,400,777)	-	-
Cash and cash equivalents classified as held for sale		(300,971,062)	(8,763,879,253)	-	-
Net increase in cash and cash equivalents		77,079,547,812	27,324,138,521	34,782,281,570	6,934,591,939
Cash and cash equivalents at beginning of year		340,054,258,218	312,730,119,697	52,787,983,676	45,853,391,737
Cash and cash equivalents at end of year	4	417,133,806,030	340,054,258,218	87,570,265,246	52,787,983,676
Non-cash items					
Accounts payable from purchases of fixed assets		29,721,930,065	28,030,190,729	1,987,320,967	2,575,466,692
Accounts payable from purchases of intangible assets		287,880,999	497,407,210	70,284,196	76,964,930



Notes to Financial Statements

PTT Public Company Limited and Its Subsidiaries
For the year ended 31 December 2023



1. General information

PTT Public Company Limited (the Company) is incorporated as a public limited company in Thailand, and is listed on the Stock Exchange of Thailand.

The Head Office of the Company is located at 555 Vibhavadi-Rangsit Road, Chatuchak, Bangkok, Thailand.

The Company has a status of a state enterprise while the Ministry of Finance is the largest shareholder and is under the supervision of Ministry of Energy.

The Company's principal activity is the operation of its petroleum business. The Company has invested in subsidiaries, joint arrangements and associates (the Group), which are engaged in upstream petroleum and natural gas, downstream petroleum, new business and infrastructure, and other related businesses as described in Note 38 Operating segments.

2. Basis for the preparation of financial statements

The consolidated and the separate financial statements have been prepared in accordance with Thai Financial Reporting Standards under the Accounting Act, B.E. 2543. These are Thai Financial Reporting Standards under the Accounting Profession Act, B.E. 2547, 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 Company has presented the financial statements in compliance with the notification of the Department of Business Development "Definition of the abbreviated components required in the financial statements (No.3), B.E. 2562", dated 26 December 2019, under the third paragraph of section 11 of the Accounting Act, B.E. 2543.

The consolidated and the separate financial statements have been prepared under the historical cost convention with the exception of certain amounts, which are accounted for using the fair value method as disclosed in Note 3.3 Significant accounting policies.

The financial statements of subsidiaries have been prepared using the same significant accounting policies of the Company. The significant transactions arising between the Company and its subsidiaries have been eliminated from the consolidated financial statements.

The consolidated and the separate financial statements are prepared and presented in Thai Baht and are rounded in the notes to financial statements to the nearest million Baht unless otherwise stated.



2. Basis for the preparation of financial statements (Continued)

This English translation of the financial statements has been prepared from the statutory financial statements that were issued in Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

3. Accounting policies

3.1 Financial reporting standards that became effective in current year

During the year, the Group has adopted the revised financial reporting standards and interpretations 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 TAS 12, Income Taxes - International Tax Reform - Pillar Two Model Rules.

The amendment requires that entities shall neither recognize 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 Group has applied the mandatory exception by not recognising and not disclosing information about deferred tax assets and liabilities arising from Pillar Two income taxes. The management of the Group is currently in the process of assessing the potential exposure to Pillar Two income taxes on the financial statements.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.1 Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, deposits held at call with banks and other short-term highly liquid investments which have original maturities within three months and without withdrawal restrictions. Bank overdrafts and short-term loans from financial institutions are included in current liabilities in the statements of financial position.

3.3.2 Inventories

Inventories are stated at the lower of cost and net realizable value. The cost is calculated by using the weighted average cost method. The cost of inventory comprises total purchasing costs, direct payments related to inventories, discounts, quantity discounts, as well as contributions to or compensation from taxes and several funds. Net realizable value is calculated from estimated selling price in the ordinary course of business, less the costs of completion and related selling expenses. When net realizable value of inventories is lower than cost of acquisition, it is presented under cost of goods sold in profit or loss. An allowance for obsolescence of inventories will be recognized when inventories are obsoleted or defected.

Inventories using the commodity broker-traders' method are presented at fair value less costs to sell through profit or loss.

3.3.3 Supplies

Supplies are stated at cost calculated by using the weighted average cost method, less allowance for obsolescence of supplies when there are obsolete, defective or unserviceable items, and shall be accounted as part of production cost upon withdrawal.

3.3.4 Non-current assets and liabilities held for sale

Disposed assets or asset groups, including non-current assets and liabilities held for sale, are classified as asset held for sale if their carrying amounts will be recovered through a sale transaction rather than through continuing use. This condition is met only when the sale is highly probable and the asset is available for immediate sale in its present condition, subject only to terms that are usual and customary for sales of such assets. Management must commit to the sale of the assets and they must be actively marketed at a price that is reasonable compared to their current fair value, with the expectation that sale should be recorded as completed within one year from the date of classification. These disposed assets or asset groups are measured at the lower of carrying amount and fair value less costs to sell.

The Group ceases to depreciate and amortize property, plant and equipment and intangible assets from the date the assets meet the criteria for classification as assets held for sale. The Group continues to recognize liabilities, including interests and other expenses attributable to liabilities classified as held for sale.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.5 Investments in subsidiaries

Subsidiaries are those companies which directly or indirectly controlled by the parent company. Control exists when the parent company has the power over the subsidiaries so as to obtain variable returns from the involvement with the subsidiaries and has the ability to affect those returns through the power over the subsidiaries. In case of the parent company has voting rights less than half of total voting rights in subsidiaries, the parent company will reconsider the related facts and circumstances in order to determine whether the parent company has the power to control over such subsidiaries or not.

The financial statements of subsidiaries are included in the consolidated financial statements from the date that the control commences until the date that the control ceases.

The parent company allocates profit or loss and each component of other comprehensive income or loss to the equity attributable to owners of the parent and the non-controlling interests even if this results in a deficit non-controlling interest balance.

The purchase method of accounting is used to account for business combinations, except the business combination under common control. The cost of a business combination is measured as the sum of fair value of any consideration transferred, the recognized amount of any non-controlling interest in the acquiree, and the fair value of the existing equity interest as of the purchasing date (if the business combination is achieved in stages).

- For each business combination, the Group measures the recognized amount of any non-controlling interest in the acquiree at either the fair value or the non-controlling interest's proportionate share of the net of identifiable assets of the acquiree.
- In the case of a business combination achieved in stages, the Group measures the acquisition-date fair value of the acquirer's previously-held equity interest in the acquiree and recognized gains or losses profit or loss.
- Costs related to the acquisition, including professional fees, appraisal fees and other consulting fees, are recognized as expenses in profit or loss.

The Group measures the identifiable assets and liabilities acquired at fair value as of the acquisition date.

Any changes in the equity interest in subsidiaries of the Group while control is retained are recorded as surplus (deficit) from the changes in the interests in subsidiaries in equity.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.5 Investments in subsidiaries (Continued)

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.

Investments in subsidiaries have been presented in the separate financial statements under the cost method.

The list of investments in subsidiaries of the Group and proportion of ownership interests have been set out in Note 14.

3.3.6 Investments in joint ventures and associates

Joint ventures are joint arrangement whereby the Group has joint control of the arrangement and has rights to the net assets of the arrangement. The joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Associates are those companies whereby the Group has significant influence, but not control or joint control, over the financial and operating policies.

The Group uses the purchase method to record the acquisition of joint ventures and associates, except for business combinations under common control. Cost includes the purchase price and other costs directly attributable to the acquisition as of the acquisition date. Any difference between the cost of the investment and the entity's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as follows:

- Goodwill related to an associate or a joint venture is included in the carrying amount of the investment. Goodwill is not amortised.
- Any excess of the entity's share of the net fair value of the investee's identifiable assets and liabilities over the cost of the investment is treated as income in determining the entity's share of the associate or joint venture's profit or loss.

The consolidated financial statements of the Group include the share of profit and loss from joint ventures and associates under equity method, from the date that significant influence commences until the date that significant influence ceases. Unrealized gains or losses on transactions between the Group and its joint ventures and associates are eliminated to the extent of the Group's interest in the joint ventures and associates unless the transactions provide evidence of impairment of the transferred assets.

The Group records share of profit or loss from joint ventures and associates in proportion to the Group's equity interest in those gains and losses. Any dividends received from joint ventures and associates are deducted from the book value of the investments.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.6 Investments in joint ventures and associates (Continued)

When the Group's share of loss in joint ventures and associates equals or exceeds its interest in the joint ventures and associates, the Group does not recognize further losses, unless the Group has incurred collateral or constructive obligations or made payments on behalf of the joint ventures and associates.

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.

Investments in joint ventures and associates have been presented under the cost method in the separate financial statements and under the equity method in the consolidated financial statements.

The list of investments in joint ventures and associates of the Group and proportion of ownership interests have been set out in Note 14.

3.3.7 Joint operations

Joint operations are joint arrangement whereby the Group has rights to assets and obligations relating to the joint arrangement. The Group has recognized assets, liabilities, revenues and expenses by the portion of joint operations in the consolidated financial statements from the date that joint control commences until the date that joint control ceases.

The list of joint operations of the Group and transactions relating to its involvements have been set out in Note 14.

3.3.8 Related parties

Related parties of the Company are those enterprises or individuals that control or are controlled by the Company, or are under common control with the Company, including holding companies of subsidiaries and fellow Group subsidiaries, as well as those that have equity interests in the Company that result in significant influence or joint control over the Company. In addition, related parties include associates, joint ventures, the management and directors of the Company, and entities which the management or directors of the Company, directly or indirectly, control, jointly controlled, or have significant influence.

In considering each possible related party relationship, attention is directed more to the substance of the relationship than to the legal form.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.9 Foreign currency translation

The consolidated financial statements and the separate financial statements have been presented in Thai Baht, which is the Company's functional currency. Transactions of each company included in the consolidated financial statements are recorded in their own functional currencies.

Foreign currency transactions are translated into functional currency at the exchange rates prevailing at the transaction date. Monetary assets and liabilities at the statements of financial position date denominated in foreign currencies are translated into functional currency at the exchange rate prevailing at that date. Gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies are recognized in profit or loss.

Assets and liabilities of foreign operations, that presentation currencies are foreign currencies, are translated into Thai Baht using the closing rate at the statements of financial position date. Revenues and expenses are translated into Thai Baht using the average rate during the period. Differences arising from currency translation are included in other comprehensive income and accumulated differences are presented in other components of equity under equity.

Upon the disposal of self-sustaining foreign entities, accumulated currency translation differences under shareholders' equity are recognized as gains or losses on disposal.

3.3.10 Borrowing costs

Borrowing costs comprise interest and other costs associated with the borrowings. Borrowing costs incurred on qualifying assets are capitalized as a cost of the qualifying property until all the activities necessary to prepare the property for its intended use are substantially completed. When funds are specifically borrowed for the construction or the production of asset, the amount of borrowing costs capitalized is determined from the actual borrowing costs during the year less any income on the temporary investment of those borrowings. When funds are borrowed for general purpose, the Group multiplies the capitalization rate by the capital expenditure in allocating borrowing costs to costs of assets.

All other borrowing costs are expensed in the period they incurred.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.11 Investment properties

Investment properties are initially recognized at cost, including expenses directly associated with the asset acquisition, less accumulated depreciation and allowance for impairment.

The Group has selected the cost model for accounting for its investment properties. This model is in accordance with that described in the accounting policy for property, plant and equipment.

Depreciation is recorded as expenses in profit or loss and is calculated using the straight-line method over the estimated useful lives of the assets, which range from 2 to 32 years. Land and construction in progress are not depreciated.

The Group recognizes the difference between the net disposal proceeds and the carrying amount of the asset in profit or loss in the period of the disposal.

3.3.12 Property, plant and equipment

Property, plant and equipment are initially recognized at cost less accumulated depreciation and accumulated impairment losses (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.

Repair and maintenance costs are recognized in profit or loss during the financial period in which they are incurred. The costs of significant asset improvements, major turnarounds and inspections are included in the carrying amount of the asset. In case of replacement, the Group writes off carrying value of replaced items.

The Group depreciates each significant component of property, plant and equipment separately.

The Group estimates the residual value of the property, plant and equipment based on current assessment of the amount that would currently obtain from disposal of the assets, after deducting the estimated costs of disposal, if the assets were already of the age and in the condition expected at the end of its useful life.

The Group reviews the residual value, the useful lives and depreciation methods of assets at least once a year.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.12 Property, plant and equipment (Continued)

Depreciation is recorded as expenses in profit or loss and is calculated using the straight-line method or unit of production method over the estimated useful lives of the assets, which are as follows:

Buildings and building improvements	2 - 53 years
Machinery and equipment	2 - 50 years or unit of production
Petroleum exploration and production properties	5 - 30 years or unit of production
Mining properties	Unit of production
Other assets	2 - 40 years

Land and construction in progress are not depreciated.

Gains or losses on disposal of property, plant and equipment are determined by comparing the proceeds from sales with the carrying amounts on the disposal dates, and are recorded in profit or loss when incurred.

Petroleum exploration and production properties

The petroleum exploration and production business accounts for its petroleum exploration and production properties in accordance with the successful efforts method for which the accounting policies are as follows:

Cost of properties

The cost of properties comprises the total acquisition costs of petroleum rights or the acquisition costs of the portion of properties, decommissioning costs, as well as support equipment and facilities.

Exploratory drilling costs are capitalized as petroleum exploration and evaluation assets, and will be classified as petroleum exploration and production properties of the projects if their exploratory wells have identified proved reserves that have been found to be commercially producible. However, if the exploratory wells have not identified proved reserves or have identified proved reserves but have not been found to be commercially producible, such drilling costs will be expensed in the statements of income.

Exploratory costs, comprising geological and geophysical costs as well as area reservation fees during the exploration stage, are charged as expenses in profit or loss when incurred.

Development costs, whether relating to successful or unsuccessful development wells, are capitalized and classified as assets.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.12 Property, plant and equipment (Continued)

Petroleum exploration and production properties (Continued)

Depreciation

The capitalized acquisition costs of petroleum rights are depreciated using the unit of production method based on proved reserves. Depreciation of exploratory wells, development costs as well as decommissioning costs, except unsuccessful projects, are calculated using the unit of production method based on proved reserves or proved developed reserves. The Group recognizes changes in reserve estimates prospectively.

Proved reserves and proved developed reserves are calculated by the Group's own engineers and are based on the information received from the joint operators.

Depreciation of support equipment, facilities and others are determined using the straight-line method over the useful lives of assets.

Mining properties

The coal business accounts for its coal exploration and production properties, including coal mining property rights and deferred mining exploration and development expenditures, by the accounting policies as follows:

Coal mining property rights

Coal mining property rights comprise the total acquisition costs of concession rights in coal mining including both coal mining exploration and development expenditures.

Deferred mining exploration and development expenditures

Development expenditures and costs of area development are capitalized as mining properties under exploration and evaluation assets and will be classified as mining properties under property, plant and equipment if they meet the criteria and it is highly probable that they can create future economic benefit. However, if it is proved that they cannot create future economic benefit, development expenditures and costs of area development will be fully expensed in profit or loss when incurred.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.12 Property, plant and equipment (Continued)

Mining properties (Continued)

Depreciation

The capitalized acquisition costs of mining properties are depreciated using the unit of production method based on proved reserves.

The volume of proportional production and the useful lives of coal mining concessions are estimated and reviewed by the Group.

3.3.13 Goodwill

The Group initially records goodwill at cost, which equals to the excess of the acquisition costs over the fair value of the net assets acquired, and carries out a test for impairment of goodwill at least once a year or when there are circumstances indicate that an investment might be impaired. Where the fair value of the net assets exceeds the cost of acquisition at the acquisition date, the excess is recognized as a gain in profit or loss.

To test for impairment, the Group allocates goodwill from business combinations to each cash-generating unit (or group of cash-generating units) that is expected to receive benefit from the synergies of the combination. The Group evaluates the recoverable amount of each cash-generating unit (or group of cash-generating units) and if it is lower than the carrying amount of the unit, the Group recognizes impairment losses in profit or loss. Impairment losses of goodwill will not be reversed.

3.3.14 Intangible assets

Intangible assets are initially recognized at cost less accumulated amortization and accumulated impairment losses (if any).

The Group records the initial costs of intangible assets from business combination at the acquisition-date fair value of the assets. Intangible assets from other sources are initially recognized at costs.

Intangible assets include computer software licenses, customer contracts, copyrights and trademarks and other intangible assets such as other operating rights.



3. Accounting policies (Continued)

3.2 Significant accounting policies (Continued)

3.3.14 Intangible assets (Continued)

Intangible assets are amortized and recorded as expenses in profit or loss using the straight-line method over the useful lives of the assets which range from 2 to 35 years.

The Group reviews the residual value, useful lives and amortization methods of intangible assets at least once a year.

3.3.15 Exploration and evaluation assets

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Petroleum exploration and evaluation assets

Petroleum exploration and evaluation expenditures are capitalized at cost as exploration and evaluation assets. If the projects have identified the proved reserves that have been found to be commercially producible, the capitalized exploration and evaluation expenditures under these projects will be transferred to petroleum exploration and production properties under property, plant and equipment, which are subsequently measured as stated in Note 3.3.12.

The capitalized exploration and evaluation expenditure is charged to profit or loss in the period in which the projects have not identified proved reserves or have identified proved reserves, but have not been found to be commercially producible.

Mining properties

Exploration and evaluation expenditures are capitalized as assets at cost, where:

- Such costs are expected to be recovered when the areas are successfully developed and mining operations commence, or from the sales of the areas of interest, or.
- Exploration activities in the areas of interest have not reached the stage which permits a reasonable assessment of the existence of commercial recoverable reserves, and exploration activities in the areas of interest are continuing.

Exploration and evaluation expenditures which do not meet the above criteria will be fully expensed in profit or loss. If the areas are developed and mining operations commence, exploration and evaluation expenditures that capitalized as assets will reclassify to mining properties under property, plant and equipment, which are subsequently measured as stated in Note 3.3.12.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.16 Impairment of non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the investment in subsidiaries, joint ventures and associates, property, plant and equipment, right-of-use asset, investment properties or 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 and intangible assets with indefinite useful lives. An impairment loss is recognized 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. In determining value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used. These calculations are corroborated by a valuation model that, based on information available, reflects the amount that the Group could obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal.

The impairment losses are recognized in profit or loss.

In the assessment of asset impairment (except for goodwill), if there is any indication that previously recognized impairment losses may no longer exist or may have decreased, the Group estimates the asset's recoverable amount. A previously recognized 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 recognized. 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 recognized for the asset in prior years. Such reversal is recognized in profit or loss.

3.3.17 Leases

At inception of contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group as a lessee

The Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. At the commencement date of the lease (i.e. the date the underlying asset is available for use), the Group recognizes right-of-use assets representing the right to use underlying assets and lease liabilities based on lease payments.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.17 Leases (Continued)

The Group as a lessee (Continued)

Right-of-use assets

Right-of-use assets are measured at cost, less accumulated depreciation, any accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities initially recognized, initial direct costs incurred, and lease payments made at or before the commencement date of the lease less any lease incentives received.

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	2 - 96 years
Buildings	2 - 99 years
Machinery and equipment	2 - 40 years
Motor vehicles	2 - 51 years
Others	2 - 58 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.

Right-of-use assets which are classified as investment properties are presented as part of investment properties in the statement of financial position.

Lease liabilities

Lease liabilities are measured at the present value of the lease payments to be made over the lease term. The lease payments include fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be payable under residual value guarantees. Moreover, the lease payments include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising an option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses in the period in which the event or condition that triggers the payment occurs.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.17 Leases (Continued)

The Group as a lessee (Continued)

Lease liabilities (Continued)

The Group discounted the present value of the lease payments by the interest rate implicit in the lease or the Group's incremental borrowing rate. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

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 recognized as expenses on a straight-line basis over the lease term.

The Group as a lessor

Finance leases

A lease that transfers substantially all the risks and rewards incidental to ownership of an underlying asset to a lessee is classified as finance leases. As at the commencement date, an asset held under a finance lease is recognized as a receivable at an amount equal to the net investment in the lease or the present value of the lease payments receivable and any unguaranteed residual value. Subsequently, finance income is recognized over the lease term to reflect a constant periodic rate of return on the net investment in the lease.

Operating leases

A lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership of an underlying asset to a lessee. Lease receivables from operating leases is recognized as income in profit or loss 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 assets and recognized as an expense over the lease term on the same basis as the lease income.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.18 Income taxes

Income taxes comprise of current tax and deferred tax.

Current tax

The Group calculates income tax on its non-promoted businesses pursuant to the Revenue Code of Thailand, the Petroleum Income Tax Act, B.E. 2514 and Amendment, B.E. 2532 and other laws and regulations related to corporate income tax of other countries in which the Group has invested.

Current tax is the expected tax payable on the taxable profit for the year, using tax rates enacted at the statements of financial position date in the taxable period, and any adjustment to tax payable in respect of previous years.

Deferred tax

Deferred tax is recognized in the statements of financial position using the liability method for temporary differences between tax base of assets and liabilities and the carrying amounts in the financial statements. The principal temporary differences in consolidated financial statements arise from property, plant and equipment, provisions for employee benefit, provision for decommissioning costs, and cumulative loss carried forward.

Deferred tax is measured using the tax rates enacted at the statements of financial position date.

The Group recognizes deferred tax liabilities for all taxable temporary differences. However, deferred tax assets are recognized for all deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized. The Group reviews the carrying amounts of deferred tax assets at the end of each reporting period and they are reduced to the extent that the tax benefits can be utilized.

The Group recognized deferred tax as income or an expense and included in profit or loss for the year, except to the extent that the tax arises from a transaction or event which is recognized outside profit or loss, either in other comprehensive income or directly in equity, or a business combination.

Deferred tax assets and liabilities can only be offset if the entity has the legal right to settle on a net basis and the deferred tax balances relate to the same taxation authority.

The Group offsets deferred tax assets and deferred tax liabilities for presentation in the statement of financial position.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.19 Advance payments for gas purchase under take-or-pay agreements

The Company has entered into gas purchase agreements with natural gas producers, under which the Company is required to take delivery of natural gas at annual minimum quantities. During each contract year, if the Company cannot accept natural gas according to the minimum quantities under the agreements, it is required to pay for the volume of natural gas which it cannot actually take (Take-or-Pay). After the end of each contract year, the Company and the natural gas producers have to agree on and accept the volume of gas that should be taken into the calculation of Take-or-Pay for that contract year, which is subject to the basis and conditions in the agreements. Under the agreements, the Company can take certain volumes of prepaid gas (Make-up) in subsequent years after taking delivery of natural gas at the minimum quantities for that given contract year. The Company recognizes its obligations under the agreements as advance payments for gas purchase.

3.3.20 Provision for decommissioning costs

The Group records a provision for decommissioning costs whenever it is highly probable that an obligation will arise as a result of a past event and the amount of the obligation can be reliably estimated.

The Group recognizes a provision for decommissioning costs based on an estimate of the eventual costs relate to the removal of petroleum exploration and production properties and plant and equipment. These costs are included as part of the cost of the assets and are amortized based on proved reserves using the unit of production method and the straight-line method over the estimated useful lives of the assets, respectively. The estimates of decommissioning costs are determined based on reviews and estimates by the Group's engineers and management's judgment.

3.3.21 Provisions for employee benefits

Provisions for employee benefits of the Group are measured and recognized as follows:

- Short-term employee benefits are recognized in profit or loss as expenses when incurred.
- Post-employment benefits - defined contribution plans

The Group and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Group. The fund's assets are held in a separate trust fund and the Group's contributions are recognized as expenses in profit or loss when incurred.

- Post-employment benefits - defined benefit plans

The provisions under the defined benefit plan is determined based on actuarial techniques, using the projected unit credit method, in order to determine present value of the provisions and be recognized as a liability in the statements of financial position. Current service cost, past service cost, net interest on the net defined benefit liability are recognized as expenses in profit or loss. Remeasurements of the net defined benefit liability or asset, including actuarial gains and losses are recognized in other comprehensive income and accumulated amounts are recognized as retained earnings in equity.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.21 Provisions for employee benefits (Continued)

- Other long-term employment benefits

The provisions under the defined benefit plan is determined based on actuarial techniques, using the projected unit credit method, in order to determine present value of the provisions and be recognized as a liability in the statements of financial position. Current service cost, past service cost, net interest on the net defined benefit liability are recognized as expenses in profit or loss. Remeasurements of the net other long-term benefit liability or asset, including actuarial gains and losses are recognized in profit or loss immediately.

- Termination benefits are recognized as a liability and an expense when, and only when, the Company is demonstrably committed to either:

- Terminate the employment of an employee or a group of employees before the normal retirement date; or
- Provide termination benefits as a result of an offer made in order to encourage voluntary redundancy.

3.3.22 Revenue and expense recognition

Sales and service income

The Group recognizes revenue upon completion and the delivery of promised goods or services to customers at the transaction price which is entitled in exchange for transferring goods or services. Service income shall be recognized throughout the service duration with consideration to percentage of completion.

Interest income

Interest income is recognized using the effective interest rate ("EIR") method by multiplying initial carrying amount of the financial asset with EIR, except subsequently credit-impaired financial assets in which net carrying amount of such assets (net of allowance for expected credit loss) shall be multiplied by EIR.

Finance cost

Interest expenses arising from financial liabilities measured at amortized cost is calculated using the effective interest rate method.

Dividend income

Dividend income is recognized as revenue when rights on such dividend is obtained by the Group.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.23 Government grants

Government grants, including non-monetary grants, are recognized where there is reasonable assurance that the recipient will comply with all attached conditions and that the grant will be received. The Group recognizes the grants as income on a systematic basis over the periods for which the costs that the government grants are compensating. The Group recognizes the grants as a part of income in profit or loss.

3.3.24 Earnings per share

Basic earnings per share is calculated by adjusting the profit attributable to owners of the Company (exclude other comprehensive income) with interests and other items related to subordinated capital debentures net of taxes related to such debentures and dividing the adjusted profit by the weighted average number of ordinary shares held by third parties during the year.

3.3.25 Financial instruments

The Group initially measures financial assets at its fair value plus, in the case of financial assets that are not measured at fair value through profit or loss, transaction costs. However, trade receivables, that do not contain a significant financing component, are measured at the transaction price as disclosed in the accounting policy relating to revenue recognition.

Classification and measurement of financial assets

Financial assets are classified, at initial recognition, as to be subsequently measured at amortized cost, fair value through other comprehensive income ("FVOCI"), or fair value through profit or loss ("FVTPL"). The classification of financial assets at initial recognition is driven by the Group's business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.

Financial assets at amortized cost

The Group measures financial assets at amortized cost if the financial asset is held in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortized cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified, or impaired.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.25 Financial instruments (Continued)

Classification and measurement of financial assets (Continued)

Financial assets at FVOCI (debt instruments)

The Group measures financial assets at FVOCI if the financial asset is held to collect contractual cash flows and selling and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Interest income, gain or loss from foreign exchange revaluation and impairment losses or reversals are recognized in profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in other comprehensive income. Upon derecognition, the cumulative fair value change recognized in other comprehensive income is recycled to profit or loss.

Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to irrevocably classify its equity investments which are not held for trading as equity instruments designated at FVOCI. The classification is determined on an instrument-by-instrument basis.

Gains and losses recognized in other comprehensive income on these financial assets are never recycled to profit or loss.

Dividends are recognized as other income in profit or loss, except when the dividends clearly represent a recovery of part of the cost of the financial asset, in which case, the gains are recognized in other comprehensive income.

Equity instruments designated at FVOCI are not subject to impairment assessment.

Financial assets at FVTPL

Financial assets measured at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognized in profit or loss.

These financial assets include derivatives, security investments held for trading, equity investments which the Group has not irrevocably elected to classify at FVOCI and financial assets with cash flows that are not solely payments of principal and interest.

Dividends on listed equity investments are recognized as other income in profit or loss.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.25 Financial instruments (Continued)

Classification and measurement of financial liabilities

Except for derivative liabilities, at initial recognition the Group's financial liabilities are recognized at fair value net of transaction costs and classified as liabilities to be subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process. In determining amortized cost, the Group takes into account any discounts or premiums on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in profit or loss.

Recognition and derecognition of financial instruments

Regular way purchases and sales of financial assets are recognized or derecognized on the trade date, i.e., the date on which the Group becomes a party to contractual provisions of the instrument

A financial asset is primarily derecognized when the rights to receive cash flows from the asset have expired or have been transferred and either the Group has transferred substantially all the risks and rewards of the asset, or the Group has transferred control of the asset.

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in profit or loss.

Impairment of financial assets

The Group recognizes an allowance for expected credit losses ("ECLs") for all debt instruments not held at FVTPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.

For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure (a lifetime ECL).



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.25 Financial instruments (Continued)

Impairment of financial assets (Continued)

The Group considers a significant increase in credit risk to have occurred when contractual payments are more than 30 days past due and considers a financial asset as credit impaired or default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to have a significant increase in credit risk and to be in default using other internal or external information, such as credit rating of issuers.

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. ECLs are calculated based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

3.3.26 Derivatives and hedge accounting

The Group uses derivatives, such as forward currency contracts, cross currency swaps, interest rate swaps and commodity forward contracts, to hedge its foreign currency risks, interest rate risks and commodity price risks, respectively.

Derivatives are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. The subsequent changes including interest income are recognized in profit or loss unless the derivative is designated and effective as a hedging instrument under cash flow hedge. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.



3. Accounting policies (Continued)

3.3 Significant accounting policies (Continued)

3.3.27 Fair value measurement

The Group has measured fair value and disclosed the information relating to fair value measurement in accordance with TFRS 13 “Fair Value Measurement”. The guidance under this standard will be applied when the Group requires to measure any assets and liabilities at fair value under relevant standards.

Fair value is the price that would be received to sell an asset or paid to transfer 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.

Fair value hierarchy

In applying the above-mentioned valuation techniques, the Group endeavors to use relevant observable inputs as much as possible by determining a fair value hierarchy that categorizes inputs into three levels as follows:

Level 1	Use of quoted market prices in an observable 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	Used of unobservable inputs for such assets or liabilities such as the Group’s 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 recurring basis.

3.3.28 Operating segment

The operating segment information is reported by business segments and based on the internal management reports that are received and regularly reviewed by the Chief Operating Decision Maker (CODM) for allocating resources to the segments and assessing its performance.



3. Accounting policies (Continued)

3.4 Use of significant estimates and assumptions

The preparation of financial statements in conformity with Thai Financial Reporting Standards requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses.

The estimates and underlying assumptions used in the preparation of financial statements are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about significant estimates and assumptions are as follows:

3.4.1 Provisions

The Group recognizes a provision in the statements of financial position if, as a result of a past event, the Group has a present obligation that can be estimated reliably and it is probable that an outflow of economic benefits will be required to settle the obligation.

The Group records provisions for decommissioning costs when it is highly probable that a commitment will arise as a result of past circumstances and the amount can be estimated reliably. The Group recognizes the provisions for decommissioning costs based on estimated cost of decommissioning of completed construction that is ready for its intended use. These costs are recorded as assets and are amortized using the units of production method based on estimated proved reserves and the straight-line method over the estimated useful lives of the assets. The provision for decommissioning costs is determined based on reviews and estimates by the Group's engineers, together with the management's judgment.

The provisions are based on the current situation such as regulations, technologies and prices. The actual results could differ from these estimates as future confirming events occur.

3.4.2 Income tax

The Group is responsible for the payment of tax in various countries. In estimating income tax payable, the Group uses significant judgment since numerous transactions and calculations occur as a result of the Group's operations.

The Group recognizes income tax payable based on estimated incremental tax payments. Differences between the actual tax payments and the estimates affects income tax and deferred tax in the period the difference occurs.

A deferred tax asset is recognized when it is highly probable that the Group will have sufficient net income against which to utilize a temporary difference. Assumptions related to future taxable income are uncertain and may change, affecting the recognition of deferred tax assets.



3. Accounting policies (Continued)

3.4 Use of significant estimates and assumptions (Continued)

3.4.3 Estimates of petroleum reserves

Petroleum reserves are key elements in the petroleum exploration and production businesses' investment decision-making process. They are also important elements in testing for impairment. Changes in proved reserves will also affect the present value of the net cash flows and depreciation calculated using the unit-of-production method.

Proved reserves are the quantities of petroleum that are demonstrated with reasonable certainty to be commercially producible in future years from known reservoirs under existing economic and operating conditions including government rules and regulations. The proved reserves have to be examined and assessed annually by the Group's geologists and reservoir engineers.

3.4.4 Impairment of non-financial assets

The Group considers recording allowance for impairment of assets when events or circumstances indicate that the carrying amount of an asset is higher than its recoverable amount, which is the higher of the anticipated discounted cash flows from the continuing use of the asset or the fair value of the asset less any costs of disposal. The carrying amount of the asset is then written down immediately to its recoverable amount, with the decrease recorded in profit or loss. Losses on impairment of assets other than goodwill recognized in a prior period may be reversed if the estimate of an asset's recoverable amount changes.

The Group has established selling prices based on global oil market prices, the expected amount of future petroleum production and gross margins as key factors in impairment testing for the petroleum exploration and production businesses. The Group believes that these are the most appropriate indicators for estimating future cash flows which are the recoverable amount for measuring value in use. Future petroleum production comprises both proved reserves and unproved reserves.

Estimates of discounted future cash flows used in considering asset impairment are dependent on various factors such as the expected amount of future production, future selling prices, demand and supply in the market, risk factors and gross margins. The discount rates used in calculating the present value of future cash flows depend on the cost of capital of the asset unit.

3.4.5 Consolidation of subsidiaries that Company holds less than half of shares

The management of the Company determined that the Company has control over many subsidiaries, even though the Company holds shares and voting rights that is less than half of shares and voting rights. This is because the Company is a major shareholder and has the ability to direct the significant activities, while other shareholders are only minor shareholders. Therefore, such companies are deemed to be subsidiaries of the Company and have to be included in the consolidated financial statements from the date on which the Company assumed control.



3. Accounting policies (Continued)

3.4 Use of significant estimates and assumptions (Continued)

3.4.6 Use of significant estimates and assumptions related with the Group as a lessee

Determining the lease term with extension and termination options

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 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.

Lease classification

In determining whether a lease is to be classified as an operating lease or finance lease, the management is required to exercise judgement as to whether significant risk and rewards of ownership of the leased asset has been transferred, taking into consideration terms and conditions of the arrangement.



4. Cash and cash equivalents

Cash and cash equivalents as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Cash	142	136	12	20
Bank deposits	292,715	254,236	56,373	47,772
Fixed deposits within 3 months	110,799	65,381	25,797	4,996
Treasury bills	1,200	-	-	-
Promissory notes	-	7,700	-	-
Bonds	5,388	281	5,388	-
Other investments	6,890	12,320	-	-
Total	417,134	340,054	87,570	52,788

Bank deposits, fixed deposits within 3 months, treasury bills, promissory notes, bonds and other investments as at 31 December 2023 bear the interest at rates ranging from 0.00% - 10.00% per annum (31 December 2022: interest rates ranging from 0.00% - 12.93% per annum). As at 31 December 2023, cash and cash equivalents are comprised of financial instruments which are rated as investment grade level (31 December 2022: rated as investment grade level).



5. Short-term investments in financial assets

Short-term investments in financial assets as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Fixed deposits	20,855	4,321	1,000	1,343
Promissory notes	-	114	-	-
Bonds	6,707	2,780	5,910	2,054
Treasury bills	450	-	-	-
Other debt instruments	-	72	-	72
Money market fund	-	23	-	-
Other investments	4,380	5,290	344	-
Total	32,392	12,600	7,254	3,469

Short-term investments in financial assets as at 31 December 2023 bear the interest at rates ranging from 0.00% - 6.37% per annum (31 December 2022: interest at rates ranging from 0.00% - 8.50% per annum). As at 31 December 2023, short-term investments in financial assets are comprised of financial instruments which are rated as investment grade level (31 December 2022: rated as investment grade level).



6. Trade accounts receivable

Trade accounts receivable as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Trade accounts receivable - unrelated parties	255,390	215,481	77,497	69,662
<u>Less</u> Allowance for expected credit loss	(3,168)	(2,783)	(167)	(227)
Trade accounts receivable - unrelated parties - net	252,222	212,698	77,330	69,435
Trade accounts receivable - related parties (Note 9.1)	7,591	6,356	87,067	92,024
Total	259,813	219,054	164,397	161,459

Classified by aging as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Within credit terms	249,587	213,187	162,268	159,513
Overdue				
- Within 1 month	6,575	3,821	1,876	1,908
- Over 1 - 2 months	1,319	584	250	54
- Over 2 - 3 months	1,334	402	36	25
- Over 3 - 12 months	1,140	1,396	82	-
- Over 12 months	3,026	2,447	52	186
Total	262,981	221,837	164,564	161,686
<u>Less</u> Allowance for expected credit loss	(3,168)	(2,783)	(167)	(227)
Total - net	259,813	219,054	164,397	161,459

Trade accounts receivable - unrelated parties as at 31 December 2023 include receivables from government agencies and state enterprises in the consolidated financial statements amounting to Baht 17,255 million (31 December 2022: Baht 27,103 million), and in the separate financial statements amounting to Baht 15,359 million (31 December 2022: Baht 18,681 million).



6. Trade accounts receivable (Continued)

Trade accounts receivable as at 31 December 2023 and 2022 are as follows: (Continued)

Movements in trade accounts receivable - allowance for expected credit loss for the year ended 31 December 2023 and 2022 are as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Balance as at 1 January	2,783	2,482	227	303
- Net increase (decrease)	415	307	(60)	(76)
- (Gain) loss on exchange rates	(7)	18	-	-
- Business acquisitions	-	54	-	-
- Classified as assets held for sale	(22)	(36)	-	-
- Exchange differences on translation of financial statements	(1)	(42)	-	-
Balance as at 31 December	3,168	2,783	167	227



7. Other accounts receivable

Other accounts receivable as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Other accounts receivable	53,053	40,912	6,928	7,228
<u>Less</u> Allowance for expected credit loss	(522)	(522)	(418)	(420)
Other accounts receivable	52,531	40,390	6,510	6,808
Advance payments	8,463	13,035	763	645
Refund receivable from the Oil Stabilization Fund	7,737	80,383	4,321	25,387
Current withholding tax receivable	7,338	7,805	-	685
Other accounts receivable - unrelated parties				
- net	76,069	141,613	11,594	33,525
Other accounts receivable - related parties				
(Note 9.2)	1,219	621	2,776	2,139
Advance payments - related parties (Note 9.2)	137	32	34	32
Total	77,425	142,266	14,404	35,696

The refund receivable from the Oil Stabilization Fund mostly comprised of compensation for locally manufactured oil and liquefied petroleum gas (LPG) or imported LPG for local uses, as well as compensation for Natural Gas for Vehicles (NGV) prices. The compensation rates are determined by the Committee of Energy Policy Administration.



8. Lending

8.1 Short-term lending as at 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current portion of finance lease receivable - unrelated parties	1,886	1,433	-	-
Current portion of finance lease receivable - related parties (Note 9.2)	1	5	67	-
Short-term lending - unrelated parties	17	106	-	-
Short-term lending - related parties (Note 9.2)	312	630	35,844	2,044
Total	2,216	2,174	35,911	2,044

8.2 Long-term lending as at 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Long-term finance lease receivable - unrelated parties	2,164	3,823	-	-
Long-term finance lease receivable - related parties (Note 9.3)	2	37	103	-
Long-term lending - related parties (Note 9.3)	4,777	4,186	21,020	56,067
Total	6,943	8,046	21,123	56,067

As at 31 December 2023, lendings are mostly comprised of financial instruments with high credit rating (31 December 2022: comprised of financial instruments with high credit rating).



8. Lending (Continued)

8.3 Lending as at 31 December 2023 and 2022 including finance lease receivables are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Due date				
- Within 1 year	2,257	1,955	72	-
- Over 1 but not over 5 years	2,470	4,485	105	-
- Over 5 years	-	16	-	-
	4,727	6,456	177	-
<u>Less</u> Deferred interest	(674)	(1,159)	(7)	-
Total	4,053	5,297	170	-

Unit: Million Baht

9. Related party transactions

Significant transactions carried out with related parties are as follows:

9.1 Trade accounts receivable - related parties as at 31 December 2023 and 2022

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Subsidiaries	-	-	84,653	89,755
Joint ventures	4,409	3,559	1,613	1,092
Associates	2,940	2,075	561	458
Other related parties	242	722	240	719
Total (Note 6)	7,591	6,356	87,067	92,024

Unit: Million Baht



9. Related party transactions (Continued)

9.2 Other accounts receivable, advance payments, current portion of finance lease receivable, and short-term lending - related parties as at 31 December 2023 and 2022

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Other accounts receivable</u>				
Subsidiaries	-	-	2,761	1,876
Joint ventures	1,207	611	15	262
Associates	12	10	-	1
Total (Note 7)	1,219	621	2,776	2,139
<u>Advance payments</u>				
Subsidiaries	-	-	34	32
Joint ventures	137	32	-	-
Total (Note 7)	137	32	34	32
<u>Current portion of finance lease receivable</u>				
Subsidiaries	-	-	67	-
Joint ventures	1	5	-	-
Total (Note 8.1)	1	5	67	-
<u>Short-term lending</u>				
Subsidiaries	-	-	35,844	2,044
Joint ventures	312	630	-	-
Total (Note 8.1)	312	630	35,844	2,044



9. Related party transactions (Continued)

9.2 Other accounts receivable, advance payments, current portion of finance lease receivable, and short-term lending - related parties as at 31 December 2023 and 2022 (Continued)

Movements in short-term lending - related parties are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Balance as at 1 January	45	-	682	1,947
- Increase (decrease)	212	42	(192)	(1,142)
- Gain (loss) on exchange rate	5	4	(9)	(123)
- Exchange differences on translation of financial statements	(4)	(1)	-	-
Balance as at 31 December	258	45	481	682
<u>Add</u> Current portion (Note 9.3)	54	585	35,363	1,362
Balance as at 31 December - net	312	630	35,844	2,044

Unit: Million Baht

Short-term lending - related parties as at 31 December 2023 in the consolidated financial statements bear interest rate at 1.20% - 7.25% per annum (31 December 2022: 7.00% per annum), and in the separate financial statements bear interest rate at 4.78% per annum (31 December 2022: 3.17% per annum).

9.3 Long-term finance lease receivable and long-term lending - related parties as at 31 December 2023 and 2022

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
<u>Long-term finance lease receivable</u>				
Subsidiaries	-	-	103	-
Joint ventures	2	37	-	-
Total (Note 8.2)	2	37	103	-
<u>Long-term lending</u>				
Subsidiaries	-	-	21,020	56,067
Joint ventures	262	318	-	-
Associates	4,515	3,868	-	-
Total (Note 8.2)	4,777	4,186	21,020	56,067



9. Related party transactions (Continued)

9.3 Long-term finance lease receivable and long-term lending - related parties as at 31 December 2023 and 2022 (Continued)

Movements in long-term lending - related parties are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Balance as at 1 January	4,771	3,519	57,429	121,928
- Loans granted	1,907	2,126	30	16,775
- Repayment receipt	(932)	(904)	(1,075)	(81,552)
- Gain (loss) on exchange rates	(35)	30	-	278
- Exchange differences on translation of financial statements	(880)	-	-	-
Balance as at 31 December	4,831	4,771	56,383	57,429
<u>Less</u> Current portion (Note 9.2)	(54)	(585)	(35,363)	(1,362)
Balance as at 31 December - net	4,777	4,186	21,020	56,067

Long-term lending - related parties as at 31 December 2023 in the consolidated financial statements bear interest rates ranging from 3.90% - 11.72% per annum (31 December 2022: 1.56% - 9.00% per annum), and in the separate financial statements bear interest rates ranging from 1.42% - 4.43% per annum (31 December 2022: 1.42% - 4.43% per annum).

9.4 Trade accounts payable - related parties as at 31 December 2023 and 2022

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Subsidiaries	-	-	57,847	54,435
Joint ventures	601	681	290	281
Associates	347	376	-	-
Other related parties	43	-	-	-
Total (Note 24)	991	1,057	58,137	54,716



9. Related party transactions (Continued)

9.5 Other accounts payable, current portion of lease liabilities and short-term borrowings - related parties as at 31 December 2023 and 2022

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
<u>Other accounts payable</u>				
Subsidiaries	-	-	7,353	4,538
Joint ventures	1,028	110	37	13
Associates	177	306	9	9
Other related parties	33	33	32	32
Total (Note 25)	1,238	449	7,431	4,592
<u>Current portion of lease liabilities</u>				
Subsidiaries	-	-	120	57
Joint ventures	2,116	1,943	453	451
Total	2,116	1,943	573	508
<u>Short-term borrowings*</u>				
Subsidiaries	-	-	18,297	9,447
Joint ventures	6,500	-	-	-
Total (Note 27.1)	6,500	-	18,297	9,447

* The Company has liquidity management policies within the Group include the use of the cash pooling method. Inter-company borrowings were used for short-term financial management of cash surpluses or deficits of each affiliate. Interests on these were calculated by using market interest rates.



9. Related party transactions (Continued)

9.6 Lease liabilities and long-term borrowings - related parties as at 31 December 2023 and 2022

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Lease liabilities</u>				
Subsidiaries	-	-	546	195
Joint ventures	21,798	23,091	1,860	2,336
Total	21,798	23,091	2,406	2,531
<u>Long-term borrowings</u>				
Subsidiaries	-	-	49,379	50,260

Movements in long-term borrowings - related parties are as follows:

Unit: Million Baht

	Separate financial statements	
	2023	2022
Balance as at 1 January	50,260	49,490
- Repayments	(16)	-
- Amortized discount	6	6
- (Gain) loss on exchange rates	(871)	764
Balance as at 31 December	49,379	50,260
<u>Less</u> Current portion	-	-
Balance as at 31 December - net	49,379	50,260

Long-term borrowings - related parties as at 31 December 2023 in the separate financial statements bear interest rates ranging from 4.20% - 6.38% per annum (31 December 2022: 4.20% - 6.38% per annum).



9. Related party transactions (Continued)

9.7 Revenue and expense transactions carried out with related parties

For the years ended 31 December 2023 and 2022

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Revenue				
<u>Sales and service income</u>				
Subsidiaries	-	-	1,142,099	1,280,395
Joint ventures	34,293	41,399	14,420	21,006
Associates	24,920	25,608	5,145	6,167
Other related parties	2,621	4,738	2,595	4,671
<u>Interest income</u>				
Subsidiaries	-	-	1,657	1,852
Joint ventures	88	38	-	-
Associates	384	151	-	-
<u>Other income</u>				
Subsidiaries	-	-	28,316	9,186
Joint ventures	365	368	63	77
Associates	242	223	19	15
Other related parties	37	36	37	35



9. Related party transactions (Continued)

9.7 Revenue and expense transactions carried out with related parties (Continued)

For the years ended 31 December 2023 and 2022

Unit: Million Baht

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Expenses				
<u>Cost of goods purchased and services</u>				
Subsidiaries	-	-	568,749	597,141
Joint ventures	6,676	8,780	1,652	1,628
Associates	2,431	2,679	6	-
Other related parties	178	144	-	-
<u>Interest expenses</u>				
Subsidiaries	-	-	2,331	2,328
Joint ventures	677	234	33	38
Associates	-	1	-	-
<u>Other expenses</u>				
Subsidiaries	-	-	4,088	4,313
Joint ventures	311	401	4	-
Associates	112	69	-	4
Other related parties	267	17	16	14



9. Related party transactions (Continued)

9.8 Significant purchasing and selling of investment properties, property, plant and equipment, right-of-use assets and other intangible assets transactions carried out with related parties

For the years ended 31 December 2023 and 2022

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Purchasing				
Subsidiaries	-	-	43	-
Joint ventures	428	124	-	-
Associates	-	2	-	-
Selling				
Subsidiaries	-	-	55	75

The aforementioned related party transactions exclude transactions carried out with government agencies and state enterprises.

Stipulation prices between the Company and its related parties are based on normal prices for the same types of business transactions carried out with unrelated parties.

On 9 June 2023, a subsidiary of PTTEP Group repaid the subordinated perpetual loan of USD 487 million to another subsidiary of PTTEP Group. Such repayment constituted an intercompany transaction. However, as a result of this transaction, foreign exchange differences of Baht 1,126 million were recognized in the retained earnings in the consolidated financial statements.

9.9 Details of commitments to related parties are stated in Note 42.1.



9. Related party transactions (Continued)

9.10 Executive remunerations

Details of executive remunerations for the years ended 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
<u>Directors remuneration</u>				
Meeting remuneration and bonuses	424	542	69	80
<u>Managements remuneration</u>				
Salaries, bonuses, and other employee benefits	1,338	1,208	95	106
Post-employment benefits	25	18	2	2
Total	1,787	1,768	166	188

Managements are those persons who have authority and responsibility for planning, directing and controlling the activities of an entity, directly or indirectly.



10. Inventories

Inventories as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Oil products	144,530	140,852	20,424	19,843
Gas products	6,030	7,240	5,550	6,912
Petrochemicals products	50,207	67,515	819	1,144
Others	14,999	14,627	585	585
	215,766	230,234	27,378	28,484
<u>Less</u> Allowance for decline in value of inventories and obsolescence	(4,767)	(7,886)	(1,517)	(1,292)
Total	210,999	222,348	25,861	27,192

The Fuel Oil Trading Act B.E. 2543 was amended by The Fuel Oil Trading Act (No.2) B.E. 2550 in accordance with Notification of the Department of Energy Business "Determination of Types, Rates, Criteria, Methods, and Conditions for Calculation of Oil Reserves B.E. 2558". This Act prescribes that oil traders under section 7 must reserve crude oil and petroleum products at rates ranging from 1% - 20% of the total production output or imported volume. Inventories - legal reserves as at 31 December 2023 in the consolidated financial statements amounting to Baht 33,176 million (31 December 2022: Baht 34,148 million), and in the separate financial statements amounting to Baht 1,106 million (31 December 2022: Baht 1,167 million). These amounts were net of allowance for net realizable value.

Inventories that are measured at fair value less costs to sell through profit or loss as at 31 December 2023 in the consolidated financial statements amounting to Baht 19,139 million (31 December 2022: Baht 19,404 million) and in the separate financial statements amounting to Baht 18,756 million (31 December 2022: Baht 18,746 million).

11. Supplies

Supplies as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Spare parts, equipment and others	53,724	52,067	5,888	5,617
<u>Less</u> Allowance for obsolescence	(1,224)	(2,560)	(132)	(129)
Total	52,500	49,507	5,756	5,488



12. Assets held for sale

On 9 January 2024, Innobic (Asia) Company Limited (INBA), which is 100% indirectly owned by the Company, entered into a Share Purchase Agreement with Floki Holding S.à r.l. (Floki) to dispose of its investment in 77.08% of all issued shares of Alvogen Malta (Out-licensing) Holding Ltd. (AMOLH) at a selling price of approximately USD 300 million, in accordance with a resolution passed by a meeting of the Company's Board of Directors on 21 December 2023. The transaction is expected to be completed within the first quarter of 2024, subjected to conditions precedent specified in the Share Purchase Agreement. The Group classified assets and liabilities associated with those investments as assets held for sale and liabilities directly associated with assets held for sale in the 2023 financial statements.

On 30 January 2024, Nuovo Plus Ltd. (Nuovo Plus), which is 87.86% indirectly owned by the Company, entered into a Business Transfer Agreement with 24M Technologies, Inc. (24M) and 24M Technologies (Thailand) Limited to dispose of its assets at a price of USD 51.08 million and purchase preferred stocks of 24M at a price not exceeding USD 51.08 million. The transaction is expected to be completed within the second quarter of 2024. The Group classified assets and liabilities associated to those assets as assets held for sale and liabilities directly associated with assets held for sale in the 2023 financial statements.

The assets and liabilities which related to the discontinued operation and were reclassified as held for sale as at 31 December 2023 is as follows:

	Unit: Million Baht
	Consolidated
	financial statements
Cash and cash equivalents	301
Trade accounts receivable	1,212
Other accounts receivable	212
Inventories	47
Supplies	15
Other current assets	330
Other long-term investments in financial assets	43
Property, plant and equipment	1,838
Right-of-use assets	4
Goodwill	232
Other intangible assets	2,739
Deferred tax assets	3
Other non-current assets	61
Assets held for sale	7,037

**12. Assets held for sale (Continued)**

The assets and liabilities which related to the discontinued operation and were reclassified as held for sale as at 31 December 2023 is as follows: (Continued)

	Unit: Million Baht Consolidated financial statements
Bank overdrafts and short-term loans from financial institutions	774
Trade accounts payable	512
Other accounts payable	236
Income tax payable	3
Other current liabilities	433
Lease liabilities	4
Deferred tax liabilities	50
Other non-current liabilities	876
Liabilities directly associated with the assets held for sale	2,888
Net assets classified as assets held for sale	4,149

The assets and liabilities of AMOLH and Nuovo Plus were classified as held for sale in 2023 and measured at the lower of carrying amount and fair value less costs to sell at the time of the reclassification. The non-recurring fair value was determined using the market approach and is at level 2 in the fair value hierarchy.



13. Other long-term investments in financial assets

13.1 Details of other long-term investments in financial assets as at 31 December 2023 and 2022 :

	Consolidated financial statements				Separate financial statements				Unit: Million Baht
	Other long-term investments in financial assets after changes in value of investments		Dividend income		Other long-term investments in financial assets after changes in value of investments		Dividend income		
	2023	2022	2023	2022	2023	2022	2023	2022	
Investment at fair value through profit or loss									
Other Equity securities	3,099	2,409	4	5	-	-	-	-	
Foreign unit trust in mutual funds	426	320	-	-	120	-	-	-	
Domestic unit trust in mutual funds	970	1,171	24	23	328	395	8	8	
Other debt securities	180	134	-	-	-	-	-	-	
Total investment at fair value through profit or loss	4,675	4,034	28	28	448	395	8	8	
Investment at fair value through other comprehensive income									
Foreign unit trust in Corporate Venture Capital funds (CVC)	3,448	2,844	19	43	2,260	2,225	19	43	
Listed equity instruments	3,819	5,833	126	158	2,320	3,660	101	144	
Non-listed equity instruments	32,948	34,146	2,017	243	1,544	1,131	-	-	
Domestic private debt securities	842	1,618	-	-	-	-	-	-	
Total investment at fair value through other comprehensive income	41,057	44,441	2,162	444	6,124	7,016	120	187	
Investment at amortized cost									
Domestic private debt securities	-	462	-	-	-	462	-	-	
Foreign private debt securities	-	5,156	-	-	-	5,156	-	-	
Total investment at amortized cost	-	5,618	-	-	-	5,618	-	-	
Total other long-term investments in financial assets	45,732	54,093	2,190	472	6,572	13,029	128	195	

Equity instruments designated at FVOCI include listed and non-listed equity investments which the Group considers these investments to be strategic in nature.

As at 31 December 2023, investment at fair value through other comprehensive income - debt securities are rated in investment grade.



13. Other long-term investments in financial assets (Continued)

13.2 Movements in investment at fair value through profit or loss during the year ended 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Book value at the beginning of year	4,034	1,616	395	386
- Additional investments	266	985	124	-
- Business acquisition	-	1,004	-	-
- Fair value adjustment of investments	392	405	(71)	9
- Reclassifications	-	70	-	-
- Exchange differences on translation of financial statements	(17)	(46)	-	-
Total investment at fair value through profit or loss at 31 December	4,675	4,034	448	395



13. Other long-term investments in financial assets (Continued)

13.3 Movements in investment at fair value through other comprehensive income during the year ended 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Book value at the beginning of year	44,441	37,327	7,016	8,767
- Business acquisition	-	329	-	-
- Additional investments	1,887	13,277	644	891
- Disposals of investments	(1,785)	(2,799)	(12)	(133)
- Fair value adjustment of investments	(3,319)	(2,222)	(1,524)	(2,509)
- Reclassifications	-	(3,079)	-	-
- Exchange differences on translation of financial statements	(167)	1,608	-	-
Total investment at fair value through other comprehensive income at 31 December	41,057	44,441	6,124	7,016

13.4 Movements in investment at amortized cost during the year ended 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Book value at the beginning of year	5,618	7,521	5,618	7,521
- Additional investments	350	-	350	-
- Unrealized gain(loss) on exchange rates	(50)	172	(50)	172
- Amortized premium	(8)	(22)	(8)	(22)
- Reclassifications	(5,910)	(2,053)	(5,910)	(2,053)
Total investment at amortized cost at 31 December	-	5,618	-	5,618



14. Investments in subsidiaries, joint ventures and associates

14.1 Details of subsidiaries and joint operations of the subsidiaries

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTEP Group:</u>				
PTTEP International Limited (PTTEPI)	Thailand	Petroleum	100.00	100.00
PTTEP Offshore Investment Company Limited (PTTEPO)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Southwest Vietnam Company Limited (PTTEP SV)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Kim Long Vietnam Company Limited (PTTEP KV)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Hoang-Long Company Limited (PTTEP HL)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Hoan-Vu Company Limited (PTTEP HV)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Algeria Company Limited (PTTEP AG)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Services Limited (PTTEP Services)	Thailand	Human resource support	100.00	100.00
PTTEP Siam Limited (PTTEPS)	Thailand	Petroleum	100.00	100.00
PTTEP Holding Company Limited (PTTEPH)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Indonesia Company Limited (PTTEP ID)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Africa Investment Limited (PTTEP AI)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Australia Pty Limited (PTTEP AU)*	Australia	Petroleum	-	100.00
PTTEP South Asia Limited (PTTEP SA)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Australia Perth Pty Limited (PTTEP AP)	Australia	Petroleum	100.00	100.00
PTTEP International Holding Co., Ltd. (PTTEP IH)	Cayman Islands	Petroleum	100.00	100.00

* On 3 March 2023, PTTEP AU has already registered the dissolution and the liquidation has been completed.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTEP Group: (Continued)</u>				
PTTEP Southwest Vietnam Pipeline Co., Ltd. (PTTEP SVPC)	Cayman Islands	Gas transmission pipelines	100.00	100.00
PTTEP Netherland Holding Limited (PTTEP NL)	Cayman Islands	Petroleum	100.00	100.00
JV Marine Limited (JV Marine)	Cayman Islands	Petroleum	100.00	100.00
PTTEP South Mandar Limited (PTTEP SMD)*	Cayman Islands	Petroleum	-	100.00
PTTEP Malunda Limited (PTTEP ML)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Netherlands Coöperatie U.A. (PTTEP NC)	Netherlands	Petroleum	100.00	100.00
PTTEP Canada Limited (PTTEP CA)	Canada	Petroleum	100.00	100.00
PTTEP Canada International Finance Limited (PTTEP CIF)**	Canada	Funding services for the Group's business	-	100.00
PTTEP HK Holding Limited (PTTEP HK)	Hong Kong	Petroleum	100.00	100.00
PTTEP Netherlands Holding Coöperatie U.A. (PTTEP NH)	Netherlands	Petroleum	100.00	100.00
PTTEP Brazil Investment B.V. (PTTEP BI)	Netherlands	Petroleum	100.00	100.00
PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL)***	Brazil	Petroleum	-	100.00
PTTEP Australia Offshore Pty Ltd (PTTEP AO)****	Australia	Petroleum	-	100.00
PTTEP Australia Browse Basin Pty Ltd (PTTEP AB)	Australia	Petroleum	100.00	100.00
PTTEP Australia Timor Sea Pty Ltd (PTTEP AT)	Australia	Petroleum	100.00	100.00

* On 29 December 2023, PTTEP SMD has already received approval for dissolution from the registrar and the liquidation has been completed.

** On 31 December 2023, PTTEP CIF has already received approval for dissolution from the registrar and the liquidation has been completed.

*** On 23 February 2023, PTTEP NH and PTTEP BI have sold all investments in PTTEP BL.

**** On 3 March 2023, PTTEP AO has already registered the dissolution and the liquidation has been completed.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Subsidiaries of PTTEP Group: (Continued)				
PTTEP Australasia (Operations) Pty Ltd (PTTEP AAO)	Australia	Petroleum	100.00	100.00
PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA)	Australia	Petroleum	100.00	100.00
PTTEP Australasia (Staff) Pty Ltd (PTTEP AAS)	Australia	Petroleum	100.00	100.00
Cove Energy Limited (Cove)	England	Petroleum	100.00	100.00
Cove Energy East Africa Limited (CEEAL)	Cyprus	Petroleum	100.00	100.00
PTTEP Mozambique Area 1 Limited (PTTEP MZA1)	Cyprus	Petroleum	100.00	100.00
Sinphuhorm Holdings Limited (SHL)	Cayman Islands	Petroleum	100.00	100.00
PTTEP SP Limited (PTTEP SP)	England	Petroleum	100.00	100.00
PTTEP G7 Limited (PTTEP G7)*	Thailand	Petroleum	-	100.00
PTTEP HK Offshore Limited (PTTEP HKO)	Hong Kong	Petroleum	100.00	100.00
PTTEP Treasury Center Company Limited (PTTEP TC)	Thailand	Treasury center for the Group’s business	100.00	100.00
PTTEP Business Center Company Limited (PTTEP BC)	Thailand	Petroleum	100.00	100.00
PTTEP Mexico E&P Limited, S. de R.L. de C.V. (PTTEP MEP)	Mexico	Petroleum	100.00	100.00
PTTEP Energy Holding (Thailand) Company Limited (PTTEP EH)	Thailand	Petroleum	100.00	100.00
PTTEP Energy Development Company Limited (PTTEP ED)	Thailand	Petroleum	100.00	100.00
EP-Tech Ventures Holding Company Limited (EP-Tech)	Thailand	Petroleum related Technology	100.00	100.00
AI and Robotics Ventures Company Limited (ARV)	Thailand	Technology	100.00	100.00
PTTEP MENA Limited (PTTEP MENA)	Hong Kong	Petroleum	100.00	100.00
PTTEP Sabah Oil Limited (PTTEP SBO)	Bahamas	Petroleum	100.00	100.00
PTTEP Sarawak Oil Limited (PTTEP SKO)	Bahamas	Petroleum	100.00	100.00
PTTEP Group Holding B.V. (PGH)	Netherlands	Petroleum	100.00	100.00

* On 31 August 2023, PTTEP G7 has already liquidated after registering the dissolution with the Ministry of Commerce on 4 November 2022.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTEP Group: (Continued)</u>				
PTTEP (Kazakhstan) Corporation (PKC)	Cayman Islands	Petroleum	100.00	100.00
PTTEP (Angola) Corporation (PANG)	Cayman Islands	Petroleum	100.00	100.00
Partex (Brazil) Corporation (PBC)*	Cayman Islands	Petroleum	-	100.00
PTTEP Gas Corporation (PGC)	Panama	Petroleum	100.00	100.00
Partex Services Corporation (PSC)	Panama	Human resource support	100.00	100.00
PTTEP Oman E&P Corporation (POC)	Panama	Petroleum	100.00	100.00
Asia Power and Transportation SG Holding Pte. Ltd. (APT)	Singapore	Petroleum related business	100.00	100.00
Cariva (Thailand) Company Limited (CARIVA)	Thailand	Technology	100.00	100.00
Delta Gas Transportation SG Holding Pte. Ltd. (DGH)	Singapore	Gas pipeline service	100.00	100.00
Rovula (Thailand) Company Limited (ROVULA)	Thailand	Technology	100.00	100.00
Skyller Solutions Company Limited (SKYLLER)	Thailand	Technology	100.00	100.00
Varuna (Thailand) Company Limited (VARUNA)	Thailand	Technology	90.00	100.00
Delta Gas Transportation Limited (DGT)	Myanmar	Gas pipeline service	100.00	100.00
FutureTech Energy Ventures Company Limited (FEV)	Thailand	Renewable energy business and new related business	100.00	100.00
FutureTech Solar (Thailand) Company Limited (FST)	Thailand	Solar energy	100.00	100.00
Xplor Ventures Company Limited (XPV)	Thailand	Technology and innovation	100.00	100.00
Bedrock Analytics Company Limited (BEDROCK)	Thailand	Technology	100.00	-
Bind Systems Company Limited (BIND)	Thailand	Technology	100.00	-
S2 Robotics Co., Ltd. (S2)	Thailand	Technology	85.13	-
FutureTech SG Pte. Ltd. (FSG)	Singapore	Renewable energy business and new related business	100.00	-

* On 29 March 2023, PBC has been approved for dissolution from the registrar and the liquidation has been completed.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTNGD Group:</u>				
Amata Natural Gas Distribution Co., Ltd. (AMATA NGD)	Thailand	Natural gas	80.00	80.00
<u>Subsidiaries of PTTLNG Group:</u>				
PE LNG Co.,Ltd. (PE LNG)	Thailand	Provide management and maintenance services of port, LNG storage and LNG station. Cooling management and other related businesses.	100.00	-
<u>Subsidiaries of GPSC Group:</u>				
Combined Heat and Power Producing Co., Ltd. (CHPP)	Thailand	Production and distribution of electricity and chilled water/construction and installation of electricity generating system	100.00	100.00
Natee Synergy Co., Ltd. (NSC)	Thailand	Investing in other business	100.00	100.00
IRPC Clean power Co.,Ltd. (IRPCCP) (The Group holds 100% shareholding)	Thailand	Production and distribution of electricity, steam and water for industrial purpose	51.00	51.00
Houay Ho Power Company Limited (HHPC)*	Lao	Production and distribution of electricity power to EGAT and EDL	67.25	67.25
GPSC International Holdings Limited (GPSCIH)**	Hong Kong	Investing in other business	-	100.00
Glow Energy Public Company Limited (GEN)	Thailand	Production and distribution of electricity	99.83	99.83
GPSC Holding (Thailand) Co., Ltd. (GHT)	Thailand	Investing in other business	100.00	100.00
Energy Recovery Unit Co., Ltd. (ERU)	Thailand	Production and distribution of electricity	100.00	100.00

* On 31 December 2023 and 2022, GPSC group had pledged the ordinary shares certificate of HHPC as collateral for their long term loans. During the year 2023, HHPC had fully repaid its long-term loan to a financial institution. Currently, GPSC Group is in the process of withdrawing the collateral.

** On 17 November 2023, GPSCIH has been approved for dissolution from the registrar and the liquidation has been completed.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Subsidiaries of GPSC Group: (Continued)				
Glow Company Limited (GCO)	Thailand	Consultant management service for related companies	100.00	100.00
Glow SPP 2 Company Limited (GSPP2)	Thailand	Production and distribution of electricity power and steam for industrial	100.00	100.00
Glow SPP 3 Company Limited (GSPP3)	Thailand	Production and distribution of electricity power, steam and water for industrial	100.00	100.00
Glow SPP 11 Company Limited (GSPP11)	Thailand	Production and distribution of electricity power and water for industrial	100.00	100.00
Glow IPP 3 Company Limited (GIPP3)	Thailand	Development of electricity power production project	100.00	100.00
Glow IPP 2 Holding Company Limited (GIPP2)	Thailand	Investing in other business	100.00	100.00
Houay Ho Thai Company Limited (HHTC)	Thailand	Investing in other business	49.00	49.00
Glow IPP Company Limited (GIPP)	Thailand	Production and distribution of electricity to EGAT	95.00	95.00
GHECO-One Company Limited (GHECO1)*	Thailand	Production and distribution of electricity power to EGAT	65.00	65.00
Glow Energy Myanmar Company Limited (GEMM)**	Myanmar	Technical consultants for electricity businesses	100.00	100.00
GPSC Treasury Center Company Limited (GPSCTC)	Thailand	Financial service	100.00	100.00
Global Renewable Synergy Company Limited (GRSC)	Thailand	Investing in other business	100.00	100.00
Global Renewable Synergy Company Limited Taiwan (GRSCTW)	Taiwan	Investing in other business	100.00	100.00
BoreePlus Company Limited (BOREEPLUS)	Thailand	Wind power project development	51.00	51.00
EurusPlus Company Limited (EURUSPLUS)	Thailand	Wind power project development	51.00	51.00

* On 31 December 2023 and 2022, GPSC group had pledged the ordinary shares certificate of GHECO1 as collateral for their long term loans.

** During the fourth quarter of 2022, GEMM has registered its dissolution and currently on the process of liquidation.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of GPSC Group: (Continued)</u>				
Helios 1 Company Limited (HELIOS1)	Thailand	Production and distribution of electricity	50.00	50.00
Helios 2 Company Limited (HELIOS2)	Thailand	Production and distribution of electricity	50.00	50.00
Helios 3 Company Limited (HELIOS3)	Thailand	Production and distribution of electricity	50.00	50.00
Helios 4 Company Limited (HELIOS4)	Thailand	Production and distribution of electricity	50.00	50.00
Helios 5 Company Limited (HELIOS5)*	Thailand	Production and distribution of electricity	50.00	50.00
WindPower Development Co.,Ltd. (WPD)	Thailand	Develop electrical energy production projects	51.00	-
<u>Subsidiaries of OR Group:</u>				
PTT Retail Management Co., Ltd. (PTTRM)	Thailand	Petrol station and convenience store management	100.00	100.00
PTT Retail Service Co., Ltd. (PTTRS)	Thailand	Human resource management	100.00	100.00
Thai Lube Blending Co., Ltd. (TLBC)	Thailand	Blending and bottling of lube oil	100.00	100.00
PTT Philippines Trading Corporation (PTTTC)	Philippines	Oil marketing	100.00	100.00
PTT Philippines Corporation (PTTPC)	Philippines	Oil marketing	100.00	100.00
PTT (Cambodia) Limited (PTTCL)	Cambodia	Oil marketing	100.00	100.00
PTT Oil Myanmar Co., Ltd. (PTTOM)**	Myanmar	Business services	-	100.00
PTT (Lao) Co., Ltd. (PTT Lao)	Lao	Oil marketing	100.00	100.00
PTTOR China (Shanghai) Co., Ltd. (PTTOR China)	China	Lube products	100.00	100.00
PTTOR Singapore Pte. Ltd. (PTTORSG)	Singapore	Retail business	100.00	100.00
PTTOR Holdings Company Limited (ORHOLDCO)	Thailand	Investing in other business	100.00	100.00

* On 25 August 2023, HELIOS5 has registered its dissolution and currently on the process of liquidation.

** On 29 December 2023, PTOM has already registered the dissolution and the liquidation has been completed.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of OR Group: (Continued)</u>				
PTTOR International Holdings (Singapore) Pte. Ltd. (SGHOLDCO)	Singapore	Investing in other business	100.00	100.00
Modulus Venture Company Limited (MODULUS)	Thailand	Investing in other business	100.00	100.00
Peaberry Thai Company Limited (PEABERRYTHAI)	Thailand	Coffee and beverage business	81.00	81.00
Care For Car Co., Ltd. (CFC)	Thailand	Online car services	100.00	100.00
ORZON VENTURES, L.P. (ORZON)	United States of America	Investing in other business	99.00	99.00
Blue Wealth Land 1 Company Limited (BWL1)	Cambodia	Real estate	49.00	49.00
Blue Wealth Land 2 Company Limited (BWL2)	Cambodia	Real estate	49.00	-
PTTOR LAO IMPORT AND EXPORT CO., LTD (LAOIMEXCO)	Laos	Oil marketing	100.00	-
<u>Subsidiaries of PTTT Group:</u>				
PTT MEA Ltd. (PTTMEA)	United Arab Emirates	Petroleum	100.00	100.00
<u>Subsidiaries of PTTGC Group:</u>				
PTT Phenol Co., Ltd. (PPCL)*	Thailand	Manufacturing and distributing petrochemical products	100.00	100.00
GC Maintenance & Engineering Co., Ltd. (GCME)	Thailand	Factory maintenance and engineering services	100.00	100.00
NPC Safety and Environmental Service Co., Ltd. (NPC) (Former : NPCSE)	Thailand	Safety and environmental services	100.00	100.00
GC Styrenics Co., Ltd. (GCS)**	Thailand	Manufacturing and distributing petrochemical products	100.00	100.00
PTTGC International (Netherlands) B.V. (GCINTERNL)	Netherlands	Holding and operating international business	100.00	100.00
GC Glycol Co., Ltd. (Glycol)**	Thailand	Manufacturing and distributing petrochemical products	100.00	100.00

* During the year ended 31 December 2023, PPCL has been in the process of liquidation.

** During the year ended 31 December 2022, PTTGC acquired the entire business transfer of GCS and Glycol, both subsidiaries are in the process of liquidation.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTGC Group: (Continued)</u>				
Global Green Chemicals Plc. (GGC)	Thailand	Manufacturing, distributing and transport oleochemical products	72.29	72.29
Solution Creation Co., Ltd. (SOLUTIONCRE)	Thailand	Manufacturing and distributing petrochemical products and health and nutrition products	100.00	100.00
PTTGC International Private Limited (GC Inter)	Singapore	Holding and operating international business	100.00	100.00
GC Oxirane Co., Ltd. (GCO)*	Thailand	Manufacturing and distributing petrochemicals products	100.00	100.00
GC Polyols Co., Ltd. (GCP)	Thailand	Manufacturing and distributing petrochemicals products	82.10	82.10
GC Treasury Co., Ltd. (GCTC)	Thailand	Financial service management for the group	100.00	100.00
GC Logistics Solutions Co., Ltd. (GCL)**	Thailand	Transportation, warehouse and bagging packing management for chemical business and other products	-	100.00
GC Marketing Solutions Co., Ltd. (GCM)	Thailand	Investing in international business	100.00	100.00
GC International Corporation (GCI)	United States of America	Holding and operating international business	100.00	100.00
Thai Fatty Alcohols Co., Ltd. (TFA)	Thailand	Manufacturing and distributing biochemical products	100.00	100.00

* During the year ended 31 December 2023, GCO has been in the process of liquidation.

** On 20 December 2023, PTTGC sold 50% of GCL's common shares, which changed the status of investment in GCL from a subsidiary to a joint venture.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Subsidiaries of PTTGC Group: (Continued)				
GC America Sustainability Corporation (GCAS) (Former : PTTGC Innovation America Corporation (GCIA))	United States of America	Research and development of bio-based chemicals	100.00	100.00
PTTGC America Corporation (AMERICACORP)	United States of America	Holding and operating international business	100.00	100.00
PTTGC America LLC (AMERICALLC)	United States of America	Petrochemical	100.00	100.00
NPC S&E Security Guard Co., Ltd. (NPCSG)	Thailand	Safety services	100.00	100.00
Vencorex (Thailand) Co., Ltd. (VENCOREXTH)	Thailand	Manufacturing and distributing chemical specialties	100.00	100.00
Vencorex France S.A.S. (VCF)	France	Manufacturing and distributing chemical specialties	100.00	100.00
Vencorex Holding (VCR)	France	Manufacturing and distributing chemical specialties	100.00	100.00
PL Global Transport Co., Ltd. (PLGT)*	Thailand	Transportation of polyethylene	-	100.00
GCM Polymer Trading DMCC (GCM DMCC)	United Arab Emirates	Distributing polymer products and other polymers-related products	100.00	100.00
GC Marketing Solutions Vietnam Company Ltd. (GCM Vietnam)	Vietnam	Distributing polymer products and other polymers-related products	100.00	100.00
GC Estate Co., Ltd. (GCEC)	Thailand	Real estate development for rent and to invest in petrochemical and related industries	100.00	100.00

* On 20 December 2023, PLGT and GCLSVN, the subsidiaries of GCL have changed status to joint ventures because PTTGC sold 50% of GCL's common shares, which changed the status of investment in GCL from a subsidiary to a joint venture.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTGC Group: (Continued)</u>				
GC Ventures Co., Ltd. (GCV)	Thailand	Invest in form of Corporate Venture Capital (CVC)	100.00	100.00
GC Ventures America Corporation (GCVA)	United States of America	Invest in form of Corporate Venture Capital (CVC) outside Thailand	100.00	100.00
GC Marketing Solutions Myanmar Company Limited (GCM Myanmar)	Myanmar	Distributing polymer products and other polymers-related products	100.00	100.00
GC-M PTA Company Limited (GCMPTA)	Thailand	Manufacturing and distributing petrochemical products	74.00	74.00
Thai PET Resin Co., Ltd. (TPRC)	Thailand	Manufacturing and distributing petrochemical products	84.40	84.40
GGC Biochemicals Co., Ltd. (GGC Biochemicals)	Thailand	Holding and operating in Thailand	100.00	100.00
GC Logistics Solutions (Vietnam) Co., Ltd. (GCLSVN)*	Vietnam	Logistics, warehouse management and polyethylene resin containment	-	100.00
PT GCM Marketing Solutions Indonesia (GCMINDONESIA)	Indonesia	Distribution of polymers products and other polymers-related products	67.00	67.00
ENVICCO Limited (ENVICCO)	Thailand	Production, Distribution and development of Recycle Polyethylene terephthalate	70.00	70.00
GC Marketing Solutions (Shanghai) Company Limited (GCM CHINA)	China	Retail business	100.00	100.00

* On 20 December 2023, PLGT and GCLSVN, the subsidiaries of GCL have changed status to joint ventures because PTTGC sold 50% of GCL's common shares, which changed the status of investment in GCL from a subsidiary to a joint venture.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTGC Group: (Continued)</u>				
Allnex Holding GmbH (ALLNEX)	Germany	Manufacturing and sales of industrial coatings and additives	100.00	100.00
Allnex (Thailand) Ltd. (ALLNEXTH)	Thailand	Chemical	94.96	94.96
Allnex Austria GmbH (ALLNEXAUSTRIA)	Austria	Chemical	100.00	100.00
Allnex Belgium SA/NV (ALLNEXBELGIUM)	Belgium	Chemical	100.00	100.00
Allnex Malaysia Sdn Bhd (ALLNEXMALAYSIA)	Malaysia	Chemical	100.00	100.00
Allnex Australia Pty. Ltd (ALLNEXAUSTRALIA)	Australia	Chemical	100.00	100.00
PT Allnex Resins Indonesia (PTALLNEXRESINS)	Indonesia	Chemical	80.00	80.00
<u>Subsidiaries of TOP Group:</u>				
Thai Paraxylene Co., Ltd. (TPX)	Thailand	Paraxylene manufacturing and distribution	100.00	100.00
Thai Lube Base Public Company Limited (TLB)	Thailand	Lube base oil refining and distribution	100.00	100.00
Thaioil Ethanol Co., Ltd. (TET)	Thailand	Investment in ethanol business and alternative energy products	100.00	100.00
Thaioil Energy Services Co., Ltd. (TES)	Thailand	Providing human resource management	100.00	100.00
Thaioil Solvent Co., Ltd. (TOS)	Thailand	Investment in solvent and chemical businesses	100.00	100.00
TOP SPP Co., Ltd. (TOPSPP)	Thailand	Power and steam generation and distribution	100.00	100.00
Thaioil Treasury Center Co., Ltd. (TTC)	Thailand	Treasury center for the Group's business	100.00	100.00
Sapthip Co., Ltd. (SAPTHIP)	Thailand	Ethanol products manufacturing and distribution	50.00	50.00
TOPNEXT International Company Limited (TX)	Thailand	Distribution of solvent and chemical products	100.00	100.00



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of TOP Group: (Continued)</u>				
Sak Chaisidhi Co., Ltd. (SAKC)	Thailand	Solvent and chemical products manufacturing and distribution	80.52	80.52
TOP Solvent (Vietnam) LLC. (TSV)	Vietnam	Distribution of solvent and chemical products	100.00	100.00
LABIX Co., Ltd. (LABIX)	Thailand	Linear Alkyl Benzene manufacturing and distribution	75.00	75.00
Sapthip Green Energy Co., Ltd. (SGE)	Thailand	Biogas power generation and distribution	100.00	100.00
PT.Tirta Surya Raya (PTSR)	Indonesia	Distribution of solvent and chemical products	77.71	77.71
TOP Venture Company Limited (TVT)	Thailand	Invest in Corporate Venture Capital (CVC) and/or Startups business	100.00	100.00
TOP Ventures Hong Kong Limited (TVHK)	Hongkong	Invest in Corporate Venture Capital (CVC) and/or Startups business	100.00	100.00
TOP Ventures America LLC (TVUSLLC)	United States of America	Invest in Corporate Venture Capital (CVC) and/or Startups business	100.00	100.00
PT TOP Investment Indonesia (TII)	Indonesia	Invest in petrochemicals and olefins products	100.00	100.00
TOPNEXT India Private Limited (TXIN) (Former : TSCHEM India Private Limited (TSI))	India	Distribution of solvent and chemical products	100.00	100.00
JSKEM Private Limited (JSKEM)	Singapore	Distribution of solvent and chemical products	60.00	60.00
<u>Subsidiaries of IRPC Group:</u>				
IRPC A&L Company Limited (IRPCAL)	Thailand	Distributing petrochemical products	57.48	57.48
IRPC Oil Company Limited (OIRPC)	Thailand	Sales of oil products and gas	100.00	100.00
Rak Phasak Company Limited (RAKPHASAK)	Thailand	Oil vessel renting and fertilizer manufacturing and distribution	100.00	100.00
IRPC Technology Company Limited (TECHIRPC)	Thailand	Vocational school	100.00	100.00



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of IRPC Group : (Continued)</u>				
I-polymer Company Limited (IPOL)	Thailand	Distributing plastic resin and chemical products via E-Commerce system	55.00	55.00
Innopolymed Company Limited (IMD) (The Group holds 100% shareholding)	Thailand	Manufacturing and trading of non-woven fabrics and medical consumables	60.00	60.00
<u>Subsidiaries of PTTGM Group:</u>				
PTT Mining Limited (PTTML)*	Hong Kong	Investing in other business	-	100.00
Straits (Brunei) Pte. Ltd. (Straits (Brunei))*	Singapore	Investing in other business	-	100.00
Sakari Resources Ltd. (SAR)*	Singapore	Investing in coal mine business	-	95.82
Yoxford Holdings (YOXFORD)*	Mauritius	Investing in other business	-	100.00
Madagascar Consolidated Mining SA (MCM)*	Madagascar	Coal mines	-	80.00
Tiger Energy Trading Pte. Ltd. (TET)*	Singapore	Coal mine marketing	-	100.00
Sakari Energy Pte. Ltd. (SAEnergy)*	Singapore	Investing in other business	-	100.00
Reyka Wahana Digdjaya Pte. Ltd. (RWD)*	Singapore	Investing in other business	-	100.00
Sakari Energy Trading Pte. Ltd. (SET)*	Singapore	Investing in other business	-	100.00
Sakari Marine & Infrastructure Pte. Ltd. (SMI)*	Singapore	Marine engineering	-	100.00
PT Straits Consultancy Services (SCS)*	Indonesia	Management services	-	100.00
PT Bahari Perdana Persada (BPPD)*	Indonesia	Investing in other business	-	100.00
PT Bahari Putra Perdana (BPPN)*	Indonesia	Investing in other business	-	100.00
PT Reyka Wahana Digdjaya (PTRWD)*	Indonesia	Investing in other business	-	100.00
PT Bahari Cakrawala Sebuku (BCS)*	Indonesia	Coal mines	-	100.00
PT Bumi Borneo Metalindo (BBM)*	Indonesia	Investing in other business	-	100.00
PT Citra Pertiwi Nusantara (CPN)*	Indonesia	Coal transport equipment and delivery service	-	100.00
PT Bumiborneo Pertiwi Nusantara (BPN)*	Indonesia	Investing in other business	-	100.00

*Divestment 100% of investment in PTTML was completed on 15 February 2023. This transaction divested all of PTT's investment in the coal business.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTGM Group: (Continued)</u>				
PT Karbon Mahakam (KM)*	Indonesia	Coal mines	-	100.00
PT Metalindo Bumi Raya (MBR)*	Indonesia	Coal mines	-	100.00
PT Borneo Citrapertiwi Nusantara (BCN)*	Indonesia	Investing in other business	-	100.00
PT Separi Energy (SE)*	Indonesia	Investing in other business	-	100.00
PT Jembayan Muarabara (JMB)*	Indonesia	Coal mines	-	100.00
PT Kemilau Rindang Abadi (KRA)*	Indonesia	Coal mines	-	100.00
PT Arzara Baraindo Energitama (ABE)*	Indonesia	Coal mines	-	100.00
PT Cakrawala Abadi Jaya (CAJ)*	Indonesia	Investing in other business	-	100.00
PT Sakti Utama Luas (SUL)*	Indonesia	Investing in other business	-	100.00
Tri Tunggal Lestari Bersama (TTLB)*	Indonesia	Infrastructure business	-	100.00
PTT International Holding Limited (PTTIH)	Hong Kong	Investing in other business	100.00	100.00
PTT International Investment Limited (PTTII)	Hong Kong	Investing in other business	100.00	100.00
Global Management Holding Co., Ltd. (GMH)	Thailand	Domestic investment	100.00	100.00
Siam Management Holding Co., Ltd. (SMH)	Thailand	Domestic investment	100.00	100.00
PT Sentika Mitra Persada (SMP)*	Indonesia	Coal mines	-	100.00
PT Mutiara Kapuas (MK)*	Indonesia	Coal mines	-	100.00
Alpha Com Co., Ltd. (ALPHACOM)	Thailand	Develop prototype	100.00	100.00
Swap and Go Co., Ltd. (SWAPANDGO)	Thailand	Battery swap	100.00	100.00
Innobic (Asia) Company Limited (INBA)	Thailand	Life science	100.00	100.00
Innobic LL Holding Company Limited (INBL)	Thailand	Domestice investing	100.00	100.00
Global Renewable Power Co., Ltd. (GRP) (The Group holds 100% shareholding)	Thailand	Investing in other business	50.00	50.00
Global Renewable Power 1 Co.,Ltd. (GRP1)	Thailand	Investing in other business	100.00	100.00
Global Renewable Power Operating Co., Ltd. (GRPO)	Thailand	Operation service and solar power plant consultant	100.00	100.00
World X Change Asia Company Limited (WXA)	Thailand	Production and distribution of electricity	100.00	100.00

* Divestment 100% of investment in PTTML was completed on 15 February 2023. This transaction divested all of PTT's investment in the coal business.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Subsidiaries of PTTGM Group: (Continued)				
P.P. Solar Company Limited (PPS)	Thailand	Production and distribution of electricity	100.00	100.00
N.P.S. Stargroup Company Limited (NPS)	Thailand	Production and distribution of electricity	100.00	100.00
MEKHA V Co., Ltd. (MEKHAV)	Thailand	Public Cloud, Migration service and Maintenance	100.00	100.00
ARUN PLUS Co., Ltd. (ARUNPLUS)	Thailand	Stations and chargers for electric vehicles.	100.00	100.00
Sheng Yang Energy Co., Ltd. (SYE)	Taiwan	Solar power plant	90.00	90.00
EVME PLUS CO., LTD (EVME)	Thailand	Dealer, rent and sell electric vehicles	100.00	100.00
REACC Co., Ltd. (REACC)	Thailand	Clean energy and climate neutrality services	100.00	100.00
T-ECOSYS Company Limited(T-ECOSYS)	Thailand	Industrial Digital Platform	100.00	100.00
Nuovo Plus Co., Ltd. (NUOVOPLUS) (The Group holds 100% shareholding)	Thailand	Manufacture and sale of Lithium Ion batteries	51.00	51.00
Aztiq II HoldCo Limited (AZTIQIIHOLDCO)	Hongkong	Generic Drug Manufacturers and Traders of Drugs and Patents	77.08	71.23
Aztiq II Bidco Limited (AZTIQIIBIDCO)	Hong Kong	Investing in other business	100.00	100.00
Alvogen Emerging Markets Holdings Limited (ALVEMH)	Hong Kong	Investing in other business	100.00	100.00
Lotus Pharmaceutical Co., Ltd. (LOTUSTW) (The Group holds 47.83% shareholding)	Taiwan	Investing in other business	41.20	51.16
Avos Pharma Science Co., Ltd. (AVOSTW)	Taiwan	R&D, manufacturing and sales of generic pharmaceutical products	100.00	100.00
Lotus Japan Holdings Co., Ltd. (LOTUSJP)	Japan	R&D, manufacturing and sales of generic pharmaceutical products	100.00	100.00
Lotus International Pte. Ltd. (LOTUSSG)	Singapore	Invest in other business	100.00	100.00
Alvogen (Thailand) Ltd. (ALVTH)	Thailand	Investing in other business and sale of medicine	100.00	100.00



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Subsidiaries of PTTGM Group: (Continued)				
Lotus Healthcare Philippines Corp. (LOTUSPH)	Philippines	Investing in other business and sale of medicine	100.00	100.00
Lotus Healthcare Malaysia Sdn. Bhd. (LOTUSMY)	Malaysia	Investing in other business and sale of medicine	100.00	100.00
Lotus Pharmaceutical, HK Limited (LOTUSHK)	Hong Kong	Investing in other business and sale of medicine	100.00	100.00
Lotus Pharmaceutical (Shanghai) Health Management Consulting Limited (LOTUSSH)	China	Data collection and agent services in Hong Kong	100.00	100.00
Lotus Pharma ehf (LOTUSIS)	Iceland	Investing in other business and sale of medicine	100.00	100.00
Lotus Pharma Bulgaria EOOD (LOTUSBG)	Bulgaria	Investing in other business and sale of medicine	100.00	100.00
Lotus Alvogen Malta Ltd. (LOTUSMT)	Malta	Investing in other business and sale of medicine	100.00	100.00
Lotus Support Services SRL (LOTUSRO)	Romania	Investing in other business and sale of medicine	100.00	100.00
Alvogen Korea Holdings Ltd. (ALVKRH)	South Korea	Investing in other business and sale of medicine	100.00	100.00
Alvogen Korea Co. Ltd. (ALVKR)	South Korea	Investing in other business	100.00	100.00
Alvogen Pharma (India) Pvt. Ltd. (ALVIN)	India	Investing in other business	100.00	100.00
Norwich Clinical Services Pvt. Ltd. (NCSIN)	India	Investing in other business	100.00	100.00
Alvogen Malta (Out-Licensing) Holding Ltd. (ALVOLH)*	Malta	Investing in other business	100.00	100.00
Alvogen Malta Shared Services Limited (AMSS)*	Malta	Investing in other business	100.00	100.00
Adalvo Limited (ADALVOMT)*	Malta	Investing in other business	100.00	100.00
Adalvo Competence Center SRL (ADALVORO)*	Romania	Acquisition and licencing of pharmaceutical intellectual property and sale of pharmaceuticals and medicinal chemical products	100.00	100.00

* On 21 December 2023, Board of Directors of the Company approved INBA to sell 100% of the total issued shares of ALVOLH and signed the share purchase agreement on 9 January 2024. The transaction is expected to be completed within the first quarter of 2024.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Subsidiaries of PTTGM Group: (Continued)				
Adalvo EOOD (ADALVOBG)*	Bulgaria	Acquisition and licencing of pharmaceutical intellectual property and sale of pharmaceuticals and medicinal chemical products	100.00	100.00
Alvogen Spain SL (ALVES)*	Spain	Investing in other business	100.00	100.00
Adalvo UK Ltd. (ADALVOUK)*	England	Investing in other business	100.00	100.00
Alvogen Austria GmbH (ALVAT)*	Austria	Investing in other business	100.00	100.00
Adalvo India Private Limited (ADALVOIN)*	India	Investing in other business	100.00	100.00
Alvogen Holding (Thailand) Ltd. (ALVTHH)	Thailand	Investing in other business	100.00	100.00
Alvogen Hong Kong Limited (ALVHK)	Hong Kong	Investing in other business	100.00	100.00
Alvogen Singapore Pte. Ltd. (ALVSG)**	Singapore	Investing in other business	-	100.00
P-DICTOR Co., Ltd. (P-DICTOR)	Thailand	Predictive Maintenance and Machine Monitoring AI for Industrial Solution	100.00	100.00
Innobic Nutrition Co., Ltd. (INNT)	Thailand	Nutrition	100.00	100.00
Global Multimodal Logistics Company Limited (GML)	Thailand	Logistics	100.00	100.00
PTT Global LNG Company Limited (PTTGL)	Thailand	LNG business	100.00	100.00
PTTGL Investment Limited (PTTGIL)	Hong Kong	Investing in LNG business	100.00	100.00
GPSC Singapore PTE. LTD (GPSCSG)	Singapore	Investing in other business	100.00	100.00
MEISHI PHARMA SERVICES PRIVATE LIMITED (MEISHIIN)	India	R&D, manufacture and sale of pharmaceutical products	100.00	100.00
Meishi Pharma Service Pte. Ltd. (MEISHISG)	Singapore	R&D, manufacture and sale of pharmaceutical products	100.00	100.00
Global Renewable Power China (Shanghai) Co.,Ltd. (GRPCHINA)	China	Renewable energy	100.00	-

* On 21 December 2023, Board of Directors of the Company approved INBA to sell 100% of the total issued shares of ALVOLH and signed the share purchase agreement on 9 January 2024. The transaction is expected to be completed within the first quarter of 2024.

** On 5 June 2023, ALVSG has completed liquidation process.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
<u>Subsidiaries of PTTGM Group: (Continued)</u>				
Global Renewable Power Taiwan Company Limited (GRPTAIWAN)	Taiwan	Renewable energy	100.00	-
<u>Subsidiaries of PTTGE Group:</u>				
PTT Green Energy (Thailand) Co., Ltd. (PTTGE TH)	Thailand	Management services for PTTGE Group	100.00	100.00
<u>Subsidiaries of BSA Group:</u>				
Sport Services Alliance Co., Ltd. (SSS)	Thailand	Football club management	100.00	100.00
Business Professional Solutions Recruitments Co., Ltd. (BPS)	Thailand	Business management	100.00	100.00
<u>Indirect subsidiaries of the Group:</u>				
Chaibadan Community Power Plant 1 Co., Ltd. (CCPP1)*	Thailand	Community power plant	-	100.00
Chaibadan Community Power Plant 2 Co., Ltd. (CCPP2)*	Thailand	Community power plant	-	100.00

* Held by GPSC Group and TOP Group, both of which have approved the dissolution of CCPP1 and CCPP2. The liquidation and dissolution were completed on 27 March 2023.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.1 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company name	Country of Incorporation	Business	Ownership interest (%)	
			2023	2022
Joint operations of PTTEP Group:				
Carigali - PTTEPI Operating Company Sdn. Bhd. (CPOC)	Malaysia	Petroleum	50.00	50.00
Moattama Gas Transportation Company (MGTC)	Bermuda	Gas pipeline transportation	37.08	37.08
Taninthayi Pipeline Company LLC (TPC)*	Cayman Islands	Gas pipeline transportation	-	19.32
Orange Energy Limited (Orange)	Thailand	Petroleum	53.95	53.95
B8/32 Partners Limited (B8/32 Partners)	Thailand	Petroleum	25.00	25.00
Andaman Transportation Limited (ATL)	Cayman Islands	Gas pipeline transportation	80.00	80.00
Groupement Bir Seba (GBRS)	Algeria	Petroleum	35.00	35.00
Natuna 2 B.V. (Natuna 2)	Netherlands	Petroleum	50.00	50.00
Hoang-Long Joint Operating Company (HL JOC)	Vietnam	Petroleum	28.50	28.50
Hoan-Vu Joint Operating Company (HV JOC)	Vietnam	Petroleum	25.00	25.00
Petroleum Development Oman LLC (PDO)	Oman	Petroleum	2.00	2.00
Abu Dhabi Gas Industries Limited (AGP)	United Arab Emirates	Petroleum	2.00	2.00
Private Oil Holdings Oman Limited (POHOL)	England	Petroleum	5.00	5.00
Petroleum Development Oman Services LLC (PDOS)	Oman	Petroleum	2.00	2.00
Yadana Suboo Company Limited (YS)**	Myanmar	Community enterprise	-	37.08
Groupement Hassi Bir Rekaiz (GHBR)	Algeria	Petroleum	49.00	49.00

* On 29 April 2022, PTTEPO requested to terminate its 19.32% in TPC and proceeded to withdraw shares from TPC, which was completed on 31 May 2023.

** On 22 December 2023, YS registered the dissolution of the company and completed the liquidation.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.2 Details of investments in joint ventures in the consolidated financial statements as at 31 December 2023 and 2022

Company name	Country of Incorporation	Business	Consolidated financial statements								Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method		Dividends income			
			2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
<u>Joint Ventures</u>												
<i>The Company</i>												
Trans Thai-Malaysia (Thailand) Co., Ltd. (TTM(T))	Thailand	Natural gas	50.00	50.00	3,172	3,172	3,818	3,922	771	675		
Trans Thai-Malaysia (Malaysia) Sdn. Bhd. (TTM(M))	Malaysia	Natural gas	50.00	50.00	1,001	1,001	901	1,071	83	34		
District Cooling System and Power Plant Co., Ltd. (DCAP)	Thailand	Generation and supply of electricity and chilled water	35.00	35.00	585	585	767	712	70	255		
Veolia Sustainable Solution (Thailand) Co.,Ltd. (VSS)	Thailand	Hazardous waste management plant	40.00	40.00	23	23	5	6	-	-		
<i>PTTEP Group</i>												
Erawan 2 FSO Bahamas Limited (Erawan 2)	Singapore	FSO rental services	13.11	13.11	520	526	997	1,117	178	202		
APICO LLC (APICOLLC)	United States of America	Petroleum	72.82	72.82	4,570	4,615	3,326	3,285	405	650		
Oman LNG LLC (OLNG)	Oman	Petroleum	2.00	2.00	2,865	2,888	560	1,149	1,151	1,163		
ATI Technologies Co., Ltd. (ATI)	Thailand	Technology	50.00	50.00	10	10	-	-	-	-		
Zeaquest Co., Ltd. (ZEAQUEST)	Thailand	Technology	50.00	50.00	77	77	61	23	-	-		
AeroSky (Thailand) Company Limited (AEROSKY)	Thailand	Technology	33.00	33.00	10	10	1	4	-	-		
B-MED X Company Limited (BMEDX)	Thailand	Technology	50.00	50.00	10	10	5	10	-	-		
SkyVIV Company Limited (SKYVIV)	Thailand	Technology	23.20	23.20	20	20	17	19	-	-		
NILA Solutions Company Limited (NILA)	Thailand	Technology	50.00	-	10	-	10	-	-	-		
Green Aranya Co., Ltd. (GARY)	Thailand	Technology	10.00	-	200	-	200	-	-	-		

Notes to Financial Statements



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.2 Details of investments in joint ventures in the consolidated financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Consolidated financial statements						Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method		Dividends income	
			2023	2022	2023	2022	2023	2022	2023	2022
Joint Ventures (Continued)										
GPSC Group										
Thai Solar Renewable Co., Ltd. (TSR)	Thailand	Invest in other company	40.00	40.00	1,697	1,697	1,394	1,469	414	402
Nam Lik 1 Power Co., Ltd. (NL1PC)	Laos	Generate and supply electricity	40.00	40.00	494	494	839	843	-	-
Nava Nakorn Electricity Generating Co., Ltd. (NNEG)	Thailand	Generate and supply electricity	30.00	30.00	638	638	734	613	-	90
PTTGC Group										
Thai Ethoxylate Co., Ltd. (TEX)	Thailand	Manufacturing and distributing of chemical	50.00	50.00	210	210	687	660	32	102
NatureWorks LLC (NTR)	United States of America	Manufacturing and distributing of bioplastic products	50.00	50.00	4,793	4,793	4,518	4,599	-	330
PTT MCC Biochem Co., Ltd. (PTTMCC)	Thailand	Manufacturing and distributing of bioplastic	50.00	50.00	1,836	930	849	206	-	-
PTT Asahi Chemicals Co., Ltd. (PTTAC)	Thailand	Petrochemicals	50.00	50.00	6,909	6,909	9,450	10,467	-	750
HMC Polymers Co., Ltd. (HMC)	Thailand	Petrochemicals	41.44	41.44	9,117	9,117	9,681	11,792	-	124
GGC KTIS Bioindustrial Company Limited (GKBI)	Thailand	Manufacturing and distributing of electricity and ethanol from sugarcane	50.00	50.00	1,550	1,363	1,266	1,223	-	-
Revolve Group Limited (RGL)	England	Manufacturing and distributing of chemical	49.00	49.00	270	270	270	241	-	-
Emery Oleochemicals UK Ltd. (EOMUK)	England	Manufacturing and distributing of biochemical	50.00	50.00	2,141	2,141	3,096	2,938	-	26
ENTIS Co., Ltd. (ENTIS)	South Korea	Manufacturing and distributing of industrial coating products and additives	50.00	50.00	203	203	174	179	-	27
Synthese (Thailand) Co., Ltd. (SYNTHESE)	Thailand	Manufacturing and distributing of industrial coating products and additives	47.50	47.50	519	519	494	507	29	45



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.2 Details of investments in joint ventures in the consolidated financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Consolidated financial statements						Unit: Million Baht			
			Ownership interest (%)		Cost method		Equity method		Dividends income			
			2023	2022	2023	2022	2023	2022	2023	2022		
<u>Joint Ventures (Continued)</u>												
<i>PTTGC Group (Continued)</i>												
Thai Tank Terminal Limited (TTT)	Thailand	Storage and loading Liquid chemicals, oil and gas	36.43	36.43	459	459	2,687	2,826	1,002	-		
GC Logistics Solutions Co., Ltd. (GCL)*	Thailand	Logistics, warehouse management and polyethylene resin containment	50.00	-	819	-	3,973	-	-	-		
<i>IRPC Group</i>												
IRPC Polyol Co., Ltd. (IRPCP)	Thailand	Manufacturing and sales of chemical products for polyurethanes	50.00	50.00	185	185	89	83	-	-		
WHA Industrial Estate Rayong Co., Ltd. (WHA IER)	Thailand	Industrial estate development	40.00	40.00	320	284	304	274	-	-		
Mytex Polymers (Thailand) Co., Ltd. (MYTEX)	Thailand	Manufacturing and distributing of chemical	50.00	50.00	350	350	349	357	18	19		
Vajira Lab for Society Co., Ltd. (VLS)	Thailand	Analysis and certify medical equipments services	50.00	50.00	14	14	11	13	-	-		
<i>PTTGM Group</i>												
OGP Energy Solutions Company Limited (OGPS)	Thailand	Energy management and energy-related services	40.00	40.00	60	64	43	39	-	-		
PTT RAISE Co., Ltd. (PTTRAISE)	Thailand	Robotics and AI engineering	50.00	50.00	25	26	15	16	-	-		

* On 20 December 2023, PLGT and GCLSVN, the subsidiaries of GCL have changed status to joint ventures because PTTGC sold 50% of GCL's common shares, which changed the status of investment in GCL from a subsidiary to a joint venture.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.2 Details of investments in joint ventures in the consolidated financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Consolidated financial statements								Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method		Dividends income			
			2023	2022	2023	2022	2023	2022	2023	2022		
<u>Joint Ventures (Continued)</u>												
<i>PTTGM Group (Continued)</i>												
PTT and TGES Optec Company Limited (OPTEC)	Thailand	One-stop total improving efficiency technology solutions	51.00	51.00	31	31	18	21	-	-	-	-
Nutra Regenerative Protein Co., Ltd. (NRPT)	Thailand	Production and distribution of alternative protein	50.00	50.00	169	150	148	140	-	-	-	-
Horizon Plus Company Limited (HPLUS)	Thailand	Manufacture of parts and assemblies of electric vehicles	60.00	60.00	6,353	6,632	6,169	6,244	-	-	-	-
B. GRIMM POWER LNG JV LIMITED (BGPLNGJV)	Thailand	LNG	50.00	50.00	13	13	6	6	-	-	-	-
NV Gotion Company Limited (NVGOTION)	Thailand	Produce and sale of batteries	51.00	-	383	-	368	-	-	-	-	-
Renex Technology Co., Ltd. (RENEX)	Thailand	Develop and provide an electricity trading platform	33.33	-	63	-	62	-	-	-	-	-
Alonex Co., Ltd. (AIONEX)	Thailand	Distribute, produce and provide battery switching services for 2-wheel electric vehicles.	51.00	-	156	-	154	-	-	-	-	-
<i>OR Group</i>												
Brighter PTT Oil and Retail Business Company Limited (BOR)	Myanmar	Oil marketing and retail business	51.00	51.00	56	56	42	44	-	-	-	-
Brighter Energy Company Limited (BE)	Myanmar	Depot and wholesale of petroleum	35.00	35.00	995	1,005	727	815	-	-	-	-
ORC Coffee Passion Group Joint Stock Company (ORCG)	Vietnam	Retail business	60.00	60.00	226	187	116	133	-	-	-	-



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.2 Details of investments in joint ventures in the consolidated financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Consolidated financial statements						Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method			Dividends income
			2023	2022	2023	2022	2023	2022		
<u>Joint Ventures (Continued)</u>										
<u>OR Group (Continued)</u>										
Orbit Digital Company Limited (ORBIT)	Thailand	Information Technology and computer services and others	40.00	40.00	10	10	60	25	-	
Global Aero Associates Company Limited (GAA)	Thailand	Aircraft refueling services	45.00	45.00	545	405	537	398	-	
Phnom Penh Aviation Fuel Service Co., Ltd. (PPAFS)	Cambodia	Airport refueling services system	33.33	33.33	263	173	252	169	-	
K-nex Corporation Co., Ltd (KNEX)	Thailand	Laundry business	40.00	40.00	1,105	1,105	1,172	1,141	-	
Gowabi Thailand Co., Ltd. (GOWABI)	Thailand	Digital platform for health and beauty	18.18	18.18	142	142	126	137	-	
Drink Enterprise Co., Ltd (RTD)	Thailand	Beverage business	50.00	50.00	150	150	104	144	-	
Dusit Foods Co., Ltd. (DF)	Thailand	Food business	25.00	25.00	299	299	300	300	-	
<u>ENCO Group</u>										
One Origin EnCo Company Limited (ORIGINENCO)	Thailand	Hotel business	50.00	-	169	-	163	-	-	
<u>The Group</u>										
Map Ta Phut Air Products Company Limited (MAP)	Thailand	Production and distribution of industrial gas	51.00	51.00	179	179	398	282	63	
(The Company holds 49.00% shareholding)										
VISUP Company Limited (VISUP)	Thailand	Select research and researchers in VISTEC and invest in high-tech startup companies	55.55	-	50	-	50	-	-	
(The Company holds 22.22% shareholding)										
<u>Less Allowance for impairment</u>					57,039	54,140	62,563	60,662		
					(549)	(553)	(305)	(305)		
<u>Total</u>					56,490	53,587	62,258	60,357	4,894	



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.3 Details of investments in associates in the consolidated financial statements as at 31 December 2023 and 2022

Company name	Country of Incorporation	Business	Consolidated financial statements						Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method			Dividends income
			2023	2022	2023	2022	2023	2022		
<u>Associates</u>										
<i>PTTEP Group</i>										
PTTEP AP Group's associates*	Australia	Airbase services	50.00	50.00	51	52	189	191	-	23
Leismer Aerodrome Limited (LAL)	Canada	Air transportation	32.00	32.00	149	148	22	23	-	-
Moz LNG1 Holding Company Ltd. (HOLDCO)	United Arab Emirates	Petroleum	8.50	8.50	1,345	1,004	1,246	962	-	-
Hydrogen Duqm LLC (HYDUQM)	Oman	Renewable energy business and related new businesses	11.00	-	15	-	15	-	-	-
<i>GPSC Group</i>										
Bangpa-in Cogeneration Co., Ltd. (BIC)	Thailand	Generate and supply electricity	25.00	25.00	924	924	937	815	-	74
Xayaburi Power Co., Ltd. (XPCL)	Laos	Generate and supply electricity	25.00	25.00	6,994	6,994	8,751	8,366	123	121
Eastern Seaboard Clean Energy Company Limited (ESCE)	Thailand	Studying, generating and supply electricity for industrial use including generating electricity from renewable energy	33.33	33.33	339	339	356	337	8	47
Avaada Energy Private Limited (AEPL) (Former : AVAADA)	India	Generate and supply electricity	42.93	42.93	21,888	14,985	20,632	14,604	-	-
CI Changfang Limited (CF)	Taiwan	Generate and supply electricity	25.00	25.00	14,565	14,569	13,821	13,961	-	-
CI Xidao Limited (XD)	Taiwan	Generate and supply electricity	25.00	25.00	442	441	411	416	-	-

* Associates of PTTEP AP Group consist of North Kimberley Airport Pty Ltd and Troughton Island Pty Ltd.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.3 Details of investments in associates in the consolidated financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Consolidated financial statements						Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method			Dividends income
			2023	2022	2023	2022	2023	2022		
Associates (Continued)										
OR Group										
FST Aviation Services Limited (FST)	Hong Kong	Aircraft refuelling services	25.00	25.00	1	1	1	1	-	
Petro Asia (Thailand) Co., Ltd. (PAT)	Thailand	Oil marketing	35.00	35.00	131	131	10	8	-	
Pluk Phak Praw Rak Mae Company Limited (OKJ)	Thailand	Food and beverage	20.00	20.00	497	497	519	494	2	
Insurb Global Cuisine Co., Ltd. (ISGC)	Thailand	Food and beverage	25.00	25.00	191	191	177	186	-	
KAMU KAMU Co., Ltd. (KAMU)	Thailand	Beverage	25.00	25.00	468	468	472	468	5	
Polar Bear Mission Company Limited (POLARBEAR)	Thailand	Food online	27.36	27.36	482	482	358	433	-	
PTTGC Group										
Vinythai Plc. (VNT)*	Thailand	Petrochemicals	-	-	-	-	-	-	1,073	
S.P. Petpack Inter Group Co., Ltd. (SPPETPACK)	Thailand	Distribution of general products	25.00	25.00	50	50	47	35	-	
Kuraray GC Advanced Materials Co., Ltd. (KGC)	Thailand	Petrochemicals	33.40	33.40	1,870	1,870	1,579	1,801	-	
Dynachisso Thai Co., Ltd. (DYCT)	Thailand	Manufacturing and distributing of chemical	41.50	41.50	294	294	272	272	5	
AGC Vinythai Public Company Limited (AVT)*	Thailand	Petrochemicals	32.72	32.72	11,375	11,375	17,409	17,466	-	
TOP Group										
PT Chandra Asri Petrochemical Tbk (CAP)**	Indonesia	Manufacturing and distributing of chemicals	15.00	15.00	29,920	29,920	30,323	30,924	56	
IRPC Group										
UBE Chemicals (Asia) Public Co., Ltd. (UCHA)	Thailand	Petrochemicals	25.00	25.00	5,300	5,300	4,313	4,594	94	

* On 1 July 2022, VNT merged with a subsidiary of AGC Inc. (AGTH) to form a new company called AGC Vinythai Public Company Limited (AVT).

** The fair value of investment in CAP which is listed on the Stock Exchange of the Republic of Indonesia as at 31 December 2023 amounted to IDR 68,128 billion, or equivalent to Baht 151,700 million (2022: IDR 33,350 billion, or equivalent to Baht 73,847 million).



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.3 Details of investments in associates in the consolidated financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Consolidated financial statements								Unit: Million Baht	
			Ownership interest (%)		Cost method		Equity method		Dividends income			
			2023	2022	2023	2022	2023	2022	2023	2022		
Associates (Continued)												
PTTGM Group												
Inter Pharma Public Company Limited (IP)*	Thailand	Import, manufacture and sale of drugs and dietary supplement for people and animals	20.00	20.00	1,043	1,043	1,069	1,038	13	-		
PTT TANK Group												
Gulf MTP LNG Terminal Co., Ltd. (GMTP)	Thailand	Boat picking up service, Unloading and storage of liquefied natural gas, as well as transforming from liquid to gas	30.00	30.00	1,050	1,050	1,294	1,142	-	-		
GPC International Terminal Company Limited (GPC)	Thailand	Container port	30.00	30.00	1,200	1,200	1,208	1,200	-	-		
The Group												
Thai Petroleum Pipeline Co., Ltd. (THAPPLINE) (OR Group holds 40.53% shareholding)	Thailand	Oil transmission pipelines	49.21	49.21	4,107	4,106	4,846	5,136	1,150	514		
Eastern Fluid Transport Co., Ltd. (EFT)**	Thailand	Infrastructure	-	-	-	-	-	-	-	13		
Less Allowance for impairment					104,691	97,434	110,277	104,873				
Total					(1,286)	(331)	(212)	(215)	2,724	2,034		

* The fair value of investment in IP as at 31 December 2023 is Baht 671 million. (2022: Baht 1,103 million).

** On 7 December 2022, TTT has restructured its shareholding, resulting in PTTGC's shareholding in EFT decreasing from 22.65% to 15%. EFT was classified as FVOCI.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.4 Details of investments in subsidiaries in the separate financial statements as at 31 December 2023 and 2022

	Company name	Country of Incorporation	Business	Separate financial statements						Unit: Million Baht
				Ownership interest (%)		Cost method		Dividends income		
				2023	2022	2023	2022	2023	2022	
Subsidiaries										
PTT Exploration and Production Public Co., Ltd. (PTTEP) (The Group holds 65.29% shareholding)	Thailand	Petroleum exploration and production	63.79	63.79	69,751	69,751	23,424	18,360		
PTT LNG Co., Ltd. (PTTLNG)	Thailand	Natural gas	100.00	100.00	27,748	27,748	2,303	790		
PTT Natural Gas Distribution Co., Ltd. (PTTNGD)	Thailand	Natural gas	58.00	58.00	418	418	580	220		
Energy Complex Co., Ltd. (EnCo) (The Group holds 100% shareholding)	Thailand	Real estate development for rent	50.00	50.00	900	900	73	72		
PTT Energy Solutions Co., Ltd. (PTTES)* (The Group holds 100% shareholding)	Thailand	Technical and operational services	40.00	40.00	63	63	-	8		
Global Power Synergy Public Co., Ltd. (GPSC) (The Group holds 75.23% shareholding)	Thailand	Generation and supply of electricity, steam and water for industries	47.27	47.27	70,110	70,110	800	1,466		
PTT Oil and Retail Business Public Co., Ltd. (OR)	Thailand	Management services and oil marketing	75.00	75.00	90,000	90,000	3,600	4,860		
PTT Tank Terminal Co., Ltd. (PTT TANK)	Thailand	Terminal and warehouse	100.00	100.00	3,888	3,888	134	88		
PTT International Trading Pte. Ltd. (PTTT)	Singapore	International trading	100.00	100.00	3	3	253	25		
PTT International Trading London Limited (PTTT LDN)	England	International trading	100.00	100.00	348	348	130	18		
PTT Global Chemical Public Co., Ltd. (PTTGC) (The Group holds 48.18% shareholding)	Thailand	Petrochemicals and refining	45.18	45.18	44,473	44,473	510	5,093		
Thai Oil Public Co., Ltd. (TOP) (The Group holds 48.00% shareholding)	Thailand	Oil refining	45.03	45.03	15,110	15,110	2,364	3,849		

* On 29 August 2022, the Extraordinary General Meeting of Shareholders of PTTES passed a resolution to approve the dissolution of the business in accordance with the business restructuring policy of the Group. Subsequently, on 29 December 2022, PTTES has registered its dissolution with the Ministry of Commerce and in the process of liquidation.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.4 Details of investments in subsidiaries in the separate financial statements as at 31 December 2023 and 2022 (Continued)

Company name	Country of Incorporation	Business	Separate financial statements						Unit: Million Baht
			Ownership interest (%)		Cost method		Dividends income		
			2023	2022	2023	2022	2023	2022	
Subsidiaries (Continued)									
IRPC Public Co., Ltd. (IRPC)	Thailand	Petrochemicals and refining	45.05	45.05	39,696	39,696	276	1,657	
(The Group holds 48.05% shareholding)									
PTT Energy Resources Co., Ltd. (PTTER)*	Thailand	Investment consulting in energy and mining business	100.00	100.00	32,141	33,703	-	-	
PTT Global Management Co., Ltd. (PTTGM)	Thailand	Domestic and international investment	100.00	100.00	115,766	111,467	-	-	
PTT Green Energy Pte. Ltd. (PTTGE)	Singapore	Investing in palm oil business	100.00	100.00	12,403	12,403	-	-	
PTT Treasury Center Co., Ltd. (PTT TCC)	Thailand	Treasury services	100.00	100.00	20	20	-	-	
Business Services Alliance Co., Ltd. (BSA)	Thailand	Management services	25.00	25.00	1	1	591	70	
(The Group holds 100% shareholding)									
PTT Digital Solutions Co., Ltd. (PTT DIGITAL)	Thailand	Information technology and communication services	20.00	20.00	30	30	30	25	
(The Group holds 100% shareholding)									
PTT International Trading USA Inc. (PTTT USA)	United States of America	International trading	100.00	100.00	155	155	72	-	
Less Allowance for impairment									
					523,024	520,287			
					(66,543)	(84,584)			
Total					456,481	435,703	35,140	36,601	

Notes to Financial Statements

* On 28 December 2023, PTTER has registered its dissolution and currently in the process of liquidation.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.5 Details of investments in joint ventures in the separate financial statements as at 31 December 2023 and 2022

Company name	Country of Incorporation	Business	Separate financial statements						Unit: Million Baht
			Ownership interest (%)		Cost method		Dividends income		
			2023	2022	2023	2022	2023	2022	
Joint Ventures									
Trans Thai-Malaysia (Thailand) Co., Ltd. (TTM(T))	Thailand	Natural gas	50.00	50.00	3,172	3,172	771	676	
Trans Thai-Malaysia (Malaysia) Sdn. Bhd. (TTM(M))	Malaysia	Natural gas	50.00	50.00	1,001	1,001	83	34	
District Cooling System and Power Plant Co., Ltd. (DCAP)	Thailand	Generation and supply of electricity and chilled water	35.00	35.00	585	585	70	255	
Map Ta Phut Air Products Company Limited (MAP) (The Group holds 51.00% shareholding)	Thailand	Production and distribution of industrial gas	49.00	49.00	179	179	61	-	
Veolia Sustainable Solution (Thailand) Co.,Ltd. (VSS)	Thailand	Hazardous waste management plant	40.00	40.00	23	23	-	-	
VISUP Company Limited (VISUP) (The Group holds 55.55% shareholding)	Thailand	Select research and researchers in VISTEC and invest in high-tech startup companies	22.22	-	20	-	-	-	
Total					4,980	4,960	985	965	

Notes to Financial Statements



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.6 Movements in investments in the consolidated and the separate financial statements

14.6.1 Movements in investments in joint ventures under the equity method in the consolidated financial statements are as follows:

	Unit: Million Baht	
	2023	2022
As at 1 January	60,357	52,280
- Share of profit from investments in joint ventures	673	1,590
- Share of other comprehensive loss of joint ventures	(497)	(66)
- Dividend income	(4,216)	(4,894)
- Additional investments	5,964	11,376
- Loss on impairment	-	(305)
- Exchange differences on translation of financial statements	(23)	376
As at 31 December	62,258	60,357

14.6.2 Movements in investments in associates under the equity method in the consolidated financial statements are as follows:

	Unit: Million Baht	
	2023	2022
As at 1 January	104,658	76,499
- Share of profit from investments in associates	2,340	4,259
- Share of other comprehensive loss of associates	(343)	(1,624)
- Dividend income	(2,724)	(2,034)
- Additional investments	6,438	26,518
- Reclassifications	-	(20)
- Exchange differences on translation of financial statements	(304)	1,060
As at 31 December	110,065	104,658

**14. Investments in subsidiaries, joint ventures and associates (Continued)****14.6 Movements in investments in the consolidated and the separate financial statements (Continued)**

14.6.3 Movements in investments in subsidiaries and joint ventures under the cost method in the separate financial statements are as follows:

	Unit: Million Baht	
	2023	2022
As at 1 January	440,663	381,020
- Additional investments	4,319	64,878
- Disposal and capital reduction of investments	(1,562)	(5,211)
- Reversal of (loss on) impairment	18,040	(24)
As at 31 December	461,460	440,663



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.7 Summary financial information of the material joint ventures of the Group, adjusted for fair value adjustments and differences in accounting policies, are as follows:

Statements of financial position as at 31 December 2023 and 2022

	2023					2022					Unit: Million Baht
	TTM(T)	TTM(M)	HPLUS	PTTAC	HMC	TTM(T)	TTM(M)	HPLUS	PTTAC	HMC	
Current assets	6,519	2,037	8,428	4,802	7,617	6,047	2,384	10,539	4,397	9,100	
Non-current assets	4,719	1,247	1,947	21,181	30,748	6,691	1,913	9	22,545	32,733	
Current liabilities	(1,743)	(590)	(71)	(2,516)	(5,109)	(1,647)	(754)	(139)	(1,740)	(5,714)	
Non-current liabilities	(1,860)	(893)	(23)	(4,568)	(17,226)	(3,246)	(1,400)	(2)	(4,269)	(14,996)	
Net assets (100%)	7,635	1,801	10,281	18,899	16,030	7,845	2,143	10,407	20,933	21,123	
Shareholding (%)	50.00	50.00	60.00	50.00	41.44	50.00	50.00	60.00	50.00	41.44	
The Group's share of net assets	3,818	901	6,169	9,450	6,643	3,922	1,071	6,244	10,467	8,753	
Adjustment	-	-	-	-	3,038	-	-	-	-	3,039	
Carrying amount of interest in joint ventures	3,818	901	6,169	9,450	9,681	3,922	1,071	6,244	10,467	11,792	



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.7 Summary financial information of the material joint ventures of the Group, adjusted for fair value adjustments and differences in accounting policies, are as follows: (Continued)

Statements of comprehensive income for the years ended 31 December 2023 and 2022

	2023					2022					Unit: Million Baht
	TTM(T)	TTM(M)	HPLUS	PTTAC	HMC	TTM(T)	TTM(M)	HPLUS**	PTTAC	HMC	
Revenue*	3,537	333	110	10,773	25,833	3,920	626	3	14,594	32,848	
Expenses	(1,786)	(293)	(236)	(12,810)	(30,138)	(1,793)	(422)	(185)	(15,787)	(34,510)	
Profit (loss) before taxes	1,751	40	(126)	(2,037)	(4,305)	2,127	204	(182)	(1,193)	(1,662)	
Income taxes	(369)	(156)	-	9	(27)	(515)	56	-	8	34	
Net profit (loss)	1,382	(116)	(126)	(2,028)	(4,332)	1,612	260	(182)	(1,185)	(1,628)	
Other comprehensive income (loss)	-	-	-	(7)	(761)	26	-	-	15	(990)	
Total comprehensive income (loss)	1,382	(116)	(126)	(2,035)	(5,093)	1,638	260	(182)	(1,170)	(2,618)	

During the year, the Group recognized share of profit (loss) from significant investments in joint ventures as follows:

Share of profit (loss) from investments in joint ventures during the year	691	(58)	(76)	(1,014)	(1,795)	806	130	(109)	(593)	(675)
Share of other comprehensive income (loss) from investments in joint ventures during the year	-	-	-	(4)	(315)	13	-	-	8	(410)

* Including gain (loss) on foreign exchange rate and derivatives.

** Information for the period from February to December 2022 that the Group started investing in the joint ventures and recognizing share of profit under the equity method.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.8 Summary financial information of the material associates of the Group, adjusted for fair value adjustments and differences in accounting policies, are as follows:

Statements of financial position as at 31 December 2023 and 2022

	2023							2022							Unit: Million Baht
	AEPL	CAP	THAPLINE	XPCL	UCHA	AVT	CF	AEPL	CAP	THAPLINE	XPCL	UCHA	AVT	CF	
Current assets	10,265	107,557	7,470	7,592	6,414	22,485	3,276	5,424	98,677	4,399	8,278	6,940	31,639	2,518	
Non-current assets	74,237	80,473	16,208	123,361	6,745	26,298	94,640	68,420	70,584	8,015	126,320	7,072	17,903	71,172	
Current liabilities	(5,307)	(23,524)	(1,393)	(5,359)	(1,455)	(4,333)	(2,088)	(4,869)	(20,937)	(648)	(5,040)	(1,350)	(5,348)	(1,140)	
Non-current liabilities	(43,055)	(61,824)	(2,110)	(90,731)	(241)	(2,519)	(83,394)	(47,012)	(51,102)	(1,091)	(96,232)	(218)	(2,581)	(59,122)	
Net assets (100%)	36,140	102,682	20,175	34,863	11,463	41,931	12,434	21,963	97,222	10,675	33,326	12,444	41,613	13,428	
Shareholding (%)	42.93	15.00	49.21	25.00	25.00	32.72	25.00	42.93	15.00	49.21	25.00	25.00	32.72	25.00	
The Group's share of net assets	15,515	15,402	9,928	8,716	2,866	13,720	3,109	9,429	14,583	5,253	8,332	3,111	13,616	3,357	
Adjustment	5,117	14,921	(5,082)	35	1,447	3,689	10,712	5,175	16,341	(117)	34	1,483	3,850	10,604	
Carrying amount of interest in associates	20,632	30,323	4,846	8,751	4,313	17,409	13,821	14,604	30,924	5,136	8,366	4,594	17,466	13,961	



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.8 Summary financial information of the material associates of the Group, adjusted for fair value adjustments and differences in accounting policies, are as follows: (Continued)

Statements of comprehensive income for the years ended 31 December 2023 and 2022

	2023							2022							Unit: Million Baht
	AEPL	CAP	THAPLINE	XPCL	UCHA	AVT	CF	AEPL	CAP	THAPLINE	XPCL	UCHA	AVT**	CF	
Revenue*	7,966	79,911	7,234	13,922	10,416	34,370	783	6,083	84,672	3,221	16,230	14,627	21,305	54	
Expenses	(6,931)	(81,319)	(2,910)	(11,793)	(11,628)	(29,832)	(677)	(6,682)	(90,666)	(1,339)	(11,135)	(15,305)	(17,633)	1,024	
Profit (loss) before taxes	1,035	(1,408)	4,324	2,129	(1,212)	4,538	106	(599)	(5,994)	1,882	5,095	(678)	3,672	1,078	
Income taxes	(324)	319	(856)	-	239	(820)	-	(84)	878	(381)	-	108	(683)	-	
Net profit (loss)	711	(1,089)	3,468	2,129	(973)	3,718	106	(683)	(5,116)	1,501	5,095	(570)	2,989	1,078	
Other comprehensive income (loss)	(292)	(56)	-	(100)	2	(23)	-	(766)	1,298	25	(164)	-	148	-	
Total comprehensive income (loss)	419	(1,145)	3,468	2,029	(971)	3,695	106	(1,449)	(3,818)	1,526	4,931	(570)	3,137	1,078	

During the year, the Group recognized share of profit (loss) from significant investments in associates as follows:

Share of profit (loss) from investments in associates during the year	305	(163)	1,707	532	(243)	1,217	27	(293)	(767)	739	1,274	(143)	978	270
Share of other comprehensive income (loss) from investments in associates during the year	(125)	(8)	-	(25)	1	(8)	-	(329)	195	12	(41)	-	48	-

* Including gain (loss) on foreign exchange rate and derivatives.

** Information for the period from July to December 2022 that the Group started investing in the associate and recognizing share of profit under the equity method.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.9 Significant events during the year ended 31 December 2023

PTTGM

In aligning with the 3P Decarbonization Pathways in terms of Portfolio Transformation, on 1 August 2022, PTT International Holdings Limited (PTTIH), which is 100% indirectly owned by the Company, entered into a Share Purchase Agreement with a company listed on the Indonesian Stock Exchange to dispose of its 100% investment in PTT Mining Limited (PTTML) (100% owned by PTTIH). The disposal of investment was completed on 15 February 2023 at a selling price of approximately USD 486 million. The Group recognized loss on disposal of investment of Baht 80 million in the consolidated financial statements and the Company reversed the allowance on impairment of investment in PTT Global Management Co., Ltd. (PTTGM) amounting to Baht 16,478 million in the separate financial statements.

During the year ended 31 December 2023, PTTGM increased share capital a number of times and issued calls for the additional share capital. The Company made the additional share payments totaling Baht 4,299 million.

PTTER

The Board of Directors' meeting of PTT Energy Resources Co., Ltd. (PTTER) No.13/2023 on 2 October 2023 and the Extraordinary General Meeting of Shareholders of PTTER No.1/2023 on 18 October 2023, passed a resolution to decrease the registered share capital of PTTER by Baht 1,562 million, from Baht 36,045 million to Baht 34,483 million by reducing 156 million ordinary shares, at par value of 10 Baht per share. PTTER has already registered the dissolution with the Department of Business Development, Ministry of Commerce. The Company received the payment of Baht 1,562 million from the capital decrement and reversed the allowance for impairment of investments in the separate financial statements at the same amount.

VISUP

On 24 July 2023, the Management Committee Meeting of the Company No. 26/2023 passed a resolution to invest in 2 million shares of VISUP Company Limited (VISUP), at a par value of 10 Baht per share, totaling Baht 20 million. Therefore, the Company holds a 22.22% shareholding in VISUP. The share payments were made on 19 December 2023.

Significant events of subsidiaries of the Company

AEPL

During the year ended 31 December 2023, Avaada Energy Private Limited (AEPL), an associate company of GPSC, increased the share capital and called up additional share capital from a subsidiary of GPSC in proportion to its existing shareholding for 85,768,426 shares, at Rupee 100.84 per share, totaling Rupee 8,649 million, or equivalent to Baht 3,726 million. The subsidiary made additional payments for the shares on 25 July 2023.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.9 Significant events during the year ended 31 December 2023 (Continued)

GCL

On 20 December 2023, PTT Global Chemical Public Company Limited (PTTGC) entered into a Share Purchase Agreement and proceeded to sell 50% of the ordinary shares of GC Logistics Company Limited (GCL), a subsidiary of PTTGC, to WHA Venture Holding Company Limited (WHAVH) for a total of Baht 2,640 million. After the transfer of GCL shares, PTTGC's shareholding in GCL will decrease from 100% to 50%. As a result, the remaining investments in GCL have been reclassified from investments in a subsidiary company to investments in a joint venture company and subsequently have been recognized as gains on change in status of investments in the consolidated income statement totaling Baht 2,443 million.

14.10 Material non-controlling interests

Financial information of subsidiaries that have material non-controlling interests are as follow:

Company name	Country of Incorporation	Non-controlling interests Shareholding (%)	
		2023	2022
PTT Exploration and Production Public Co., Ltd. (PTTEP)	Thailand	34.71	34.71
Thai Oil Public Co., Ltd. (TOP)	Thailand	52.00	52.00
IRPC Public Co., Ltd. (IRPC)	Thailand	51.95	51.95
PTT Global Chemical Public Co., Ltd. (PTTGC)	Thailand	51.82	51.82
Global Power Synergy Public Co., Ltd. (GPSC)	Thailand	24.77	24.77
PTT Oil and Retail Business Public Co., Ltd. (OR)	Thailand	25.00	25.00



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.10 Material non-controlling interests (Continued)

Financial information of subsidiaries that have material non-controlling interests, after accounting policy adjustment, before eliminations:

Summary of financial position as at 31 December 2023 and 2022

	2023					2022					Unit: Million Baht	
	PTTEP	TOP	IRPC	PTTGC	GPSC	OR	PTTEP	TOP	IRPC	PTTGC		GPSC
Current assets	234,800	125,371	61,683	186,873	41,823	127,072	196,843	153,828	70,920	172,008	52,822	136,552
Non-current assets	668,021	294,468	130,978	532,131	239,880	93,164	673,022	290,599	127,267	547,957	235,988	88,952
Current liabilities	(88,590)	(73,501)	(58,944)	(125,841)	(38,667)	(67,679)	(114,616)	(103,673)	(62,056)	(103,976)	(32,193)	(68,660)
Non-current liabilities	(314,788)	(178,180)	(57,595)	(296,982)	(125,511)	(43,049)	(288,128)	(182,250)	(56,453)	(317,161)	(141,508)	(53,083)
Net assets	499,443	168,158	76,122	296,181	117,525	109,508	467,121	158,504	79,678	298,828	115,109	103,761
The Group's share of net assets	325,996	79,405	36,479	139,197	79,893	82,082	304,970	74,843	38,181	140,356	78,797	77,776
Non-controlling interests	173,447	88,753	39,643	156,984	37,632	27,426	162,151	83,661	41,497	158,472	36,312	25,985

14. Investments in subsidiaries, joint ventures and associates (Continued)

14.10 Material non-controlling interests (Continued)

Financial information of subsidiaries that have material non-controlling interests, after accounting policy adjustment, before eliminations: (Continued)

Summary of comprehensive income or loss for the years ended 31 December 2023 and 2022

Unit: Million Baht

	2023						2022					
	PTTEP	TOP	IRPC	PTTGC	GPSC	OR	PTTEP	TOP	IRPC	PTTGC	GPSC	OR
Revenue*	315,393	468,848	321,829	632,984	93,579	774,969	331,403	529,517	319,645	669,517	128,089	793,953
Expenses	(175,437)	(443,773)	(325,513)	(630,767)	(88,263)	(761,436)	(188,207)	(489,179)	(325,147)	(679,426)	(127,008)	(780,942)
Profit (loss) before income taxes	139,956	25,075	(3,684)	2,217	5,316	13,533	143,196	40,338	(5,502)	(9,909)	1,081	13,011
Income taxes	(63,530)	(4,790)	772	(1,352)	(507)	(2,437)	(72,295)	(8,526)	1,142	2,273	376	(2,638)
Net profit (loss)	76,426	20,285	(2,912)	865	4,809	11,096	70,901	31,812	(4,360)	(7,636)	1,457	10,373
Other comprehensive income												
(loss)	(5,777)	(5,361)	(7)	(2,265)	(546)	(552)	14,981	1,693	(7)	(7,226)	(1,224)	(8)
Total comprehensive income												
(loss)	70,649	14,924	(2,919)	(1,400)	4,263	10,544	85,882	33,505	(4,367)	(14,862)	233	10,365
Net profit (loss) attributable to												
The Group	49,898	9,670	(1,405)	481	2,779	8,320	46,289	15,064	(2,097)	(4,217)	670	7,778
Non-controlling interests	26,528	10,615	(1,507)	384	2,030	2,776	24,612	16,748	(2,263)	(3,419)	787	2,595
Total dividend paid to non-controlling interests	12,745	2,747	343	726	596	1,200	9,988	4,473	1,941	6,314	978	1,620

* Including gain (loss) on foreign exchange rate and derivatives.



14. Investments in subsidiaries, joint ventures and associates (Continued)

14.10 Material non-controlling interests (Continued)

Financial information of subsidiaries that have material non-controlling interests, after accounting policy adjustment, before eliminations: (Continued)

Summary of cash flows for the years ended 31 December 2023 and 2022

	2023						2022						Unit: Million Baht
	PTTEP	TOP	IRPC	PTTGC	GPSC	OR	PTTEP	TOP	IRPC	PTTGC	GPSC	OR	
Net cash provided by (used in) operating activities	151,851	27,970	18,630	48,234	23,160	37,972	164,916	43,281	(3,900)	(3,427)	3,453	(4,200)	
Net cash provided by (used in) investing activities	(82,447)	(19,574)	(12,022)	(12,148)	(14,042)	(7,669)	(58,760)	(9,080)	(8,743)	(12,213)	(15,564)	5,753	
Net cash provided by (used in) financing activities	(51,416)	(23,072)	(3,618)	(25,123)	(10,195)	(16,802)	(69,958)	(20,253)	4,637	(14,164)	12,235	(9,853)	
Others	(2,770)	(468)	-	416	38	25	598	(68)	-	130	320	37	
Net increase (decrease) in cash and cash equivalents	15,218	(15,144)	2,990	11,379	(1,039)	13,526	36,796	13,880	(8,006)	(29,674)	444	(8,263)	



15. Investment properties

Details of investment properties are as follows:

Unit: Million Baht

	Consolidated financial statements					
	Land	Buildings and building improvements	Other assets	Construction in progress	Right-of-use assets	Total
As at 1 January 2022						
Cost	8,229	3,802	12	34	128	12,205
<u>Less</u> Accumulated depreciation	-	(1,652)	(2)	-	(28)	(1,682)
Allowance for impairment of assets	(64)	-	-	-	-	(64)
Net book value	8,165	2,150	10	34	100	10,459
For the year ended 31 December 2022						
Beginning net book value	8,165	2,150	10	34	100	10,459
- Additions	-	47	-	234	-	281
- Reclassifications	4	156	2	-	-	162
- Disposal and write-off - net	-	(2)	-	-	-	(2)
- Reversal of loss on impairment of assets	17	-	-	-	-	17
- Depreciation for the year	-	(174)	(1)	-	(6)	(181)
Ending net book value	8,186	2,177	11	268	94	10,736
As at 31 December 2022						
Cost	8,233	3,995	14	268	128	12,638
<u>Less</u> Accumulated depreciation	-	(1,818)	(3)	-	(34)	(1,855)
Allowance for impairment of assets	(47)	-	-	-	-	(47)
Net book value	8,186	2,177	11	268	94	10,736



15. Investment properties (Continued)

Details of investment properties are as follows: (Continued)

Unit: Million Baht

	Consolidated financial statements					
	Land	Buildings and building improvements	Other assets	Construction in progress	Right-of-use assets	Total
For the year ended						
31 December 2023						
Beginning net book value	8,186	2,177	11	268	94	10,736
- Additions	-	29	-	463	-	492
- Reclassifications	1	611	2	(405)	-	209
- Depreciation for the year	-	(196)	(1)	-	(6)	(203)
Ending net book value	8,187	2,621	12	326	88	11,234
As at 31 December 2023						
Cost	8,234	4,644	16	326	128	13,348
<u>Less</u> Accumulated depreciation	-	(2,023)	(4)	-	(40)	(2,067)
Allowance for impairment of assets	(47)	-	-	-	-	(47)
Net book value	8,187	2,621	12	326	88	11,234

As at 31 December 2023 and 2022, the Group did not have pledged assets.



15. Investment properties (Continued)

Details of investment properties are as follows: (Continued)

Unit: Million Baht

	Separate financial statements				
	Land	Buildings and building improvements	Construction in progress	Right-of-use assets	Total
As at 1 January 2022					
Cost	3,581	1,652	2	46	5,281
<u>Less</u> Accumulated depreciation	-	(1,305)	-	(9)	(1,314)
Net book value	3,581	347	2	37	3,967
For the year ended 31 December 2022					
Beginning net book value	3,581	347	2	37	3,967
- Additions	-	-	-	1	1
- Reclassifications	4	-	-	-	4
- Depreciation for the year	-	(39)	-	(6)	(45)
Ending net book value	3,585	308	2	32	3,927
As at 31 December 2022					
Cost	3,585	1,652	2	47	5,286
<u>Less</u> Accumulated depreciation	-	(1,344)	-	(15)	(1,359)
Net book value	3,585	308	2	32	3,927
For the year ended 31 December 2023					
Beginning net book value	3,585	308	2	32	3,927
- Reclassifications	-	188	-	15	203
- Disposal and write-off - net	-	(1)	-	-	(1)
- Depreciation for the year	-	(38)	-	(15)	(53)
Ending net book value	3,585	457	2	32	4,076
As at 31 December 2023					
Cost	3,585	1,633	2	65	5,285
<u>Less</u> Accumulated depreciation	-	(1,176)	-	(33)	(1,209)
Net book value	3,585	457	2	32	4,076



15. Investment properties (Continued)

Fair value disclosed as at 31 December 2023 and 2022 using different levels of inputs as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Fair value hierarchy				
Level 2	13,313	12,673	4,666	4,250
Level 3	14,000	13,120	292	221
Total	27,313	25,793	4,958	4,471

Fair value level 2

The fair values of land for rent categorized as investment property were determined by independent property appraisers under the market approach.

Fair value level 3

The fair values of land and buildings for rent categorized as investment property were determined by using the income approach. The inputs used for the valuation consisted of the rate of return and finance costs.



16. Property, plant and equipment

Details of property, plant and equipment are as follows:

	Consolidated financial statements						Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Mining properties	Other assets	
						Construction in progress	Total
As at 1 January 2022							
Cost	56,782	344,867	1,284,481	1,170,951	60,722	24,405	3,142,266
Less Accumulated depreciation	-	(190,708)	(631,833)	(787,580)	(33,821)	(18,175)	(1,662,117)
Allowance for impairment of assets	(73)	(1,404)	(4,204)	(12,429)	(22,495)	(66)	(43,272)
Net book value	56,709	152,755	648,444	370,942	4,406	6,164	1,436,877



16. Property, plant and equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

	Consolidated financial statements						Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Mining properties	Other assets	
						Construction in progress	Total
For the year ended							
31 December 2022							
Beginning net book value	56,709	152,755	648,444	370,942	4,406	6,164	1,436,877
- Business acquisition	1,129	553	776	-	-	79	3,357
- Additions	110	2,273	10,088	104,075	1,440	970	210,299
- Borrowing costs	-	1	32	-	-	-	5,604
- Reclassifications	743	8,412	25,975	(121)	6	1,561	(4,419)
- Disposal and write-off - net	(4)	(411)	(3,612)	(10,134)	(3)	(31)	(15,455)
- Depreciation for the year	-	(12,264)	(50,082)	(77,339)	(1,425)	(1,835)	(142,945)
- Loss on impairment of assets	-	(671)	(364)	-	(221)	-	(1,256)
- Reclassified to assets held for sale	-	(135)	(588)	(345)	(4,420)	-	(5,518)
- Exchange differences on translation of financial statements	(160)	(108)	(10)	12,877	217	-	12,786
Ending net book value	58,527	150,405	630,659	399,955	-	6,908	1,499,330



16. Property, plant and equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

	Consolidated financial statements						Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Mining properties	Other assets	
						Construction in progress	Total
As at 31 December 2022							
Cost	58,600	354,577	1,298,178	1,233,095	-	26,429	3,226,421
Less Accumulated depreciation	-	(202,118)	(663,980)	(823,510)	-	(19,456)	(1,709,064)
Allowance for impairment of assets	(73)	(2,054)	(3,539)	(9,630)	-	(65)	(18,027)
Net book value	58,527	150,405	630,659	399,955	-	6,908	1,499,330



16. Property, plant and equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

	Consolidated financial statements						Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Other assets	Construction in progress	Total
For the year ended							
31 December 2023							
Beginning net book value	58,527	150,405	630,659	399,955	6,908	252,876	1,499,330
- Additions	669	1,720	5,378	104,693	929	76,154	189,543
- Borrowing costs	-	1	31	-	-	5,680	5,712
- Reclassifications	3,906	10,475	74,000	7,769	1,532	(90,590)	7,092
- Disposal and write-off - net	(2,616)	(1,152)	(2,775)	(508)	23	(1,312)	(8,340)
- Depreciation for the year	-	(12,520)	(52,961)	(78,575)	(1,935)	-	(145,991)
- Reversal of (loss on) impairment of assets (Note 21)	-	18	(215)	-	-	(68)	(265)
- Reclassified to assets held for sale	-	(318)	36	-	(2)	(1,555)	(1,839)
- Exchange differences on translation of financial statements	115	76	1,547	(4,400)	125	(1,496)	(4,033)
Ending net book value	60,601	148,705	655,700	428,934	7,580	239,689	1,541,209



16. Property, plant and equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

	Consolidated financial statements					Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Other assets	
As at 31 December 2023						
Cost	60,674	363,379	1,361,768	1,183,944	28,783	3,240,908
Less Accumulated depreciation	-	(212,729)	(702,995)	(745,474)	(21,138)	(1,682,336)
Allowance for impairment of assets	(73)	(1,945)	(3,073)	(9,536)	(65)	(17,363)
Net book value	60,601	148,705	655,700	428,934	7,580	1,541,209

As at 31 December 2023, the Group had pledged assets amounting to Baht 52,380 million (31 December 2022: Baht 61,775 million)



16. Property, plant and equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					
	Land	Buildings and building improvements	Machinery and equipment	Other assets	Construction in progress	Total
As at 1 January 2022						
Cost	5,847	40,592	375,365	18,097	30,090	469,991
<u>Less</u> Accumulated depreciation	-	(17,790)	(184,009)	(13,174)	-	(214,973)
Allowance for impairment of assets	-	(1,352)	(2,931)	(65)	-	(4,348)
Net book value	5,847	21,450	188,425	4,858	30,090	250,670
For the year ended 31 December 2022						
Begining net book value	5,847	21,450	188,425	4,858	30,090	250,670
- Additions	-	386	1,107	261	15,250	17,004
- Borrowing costs	-	-	-	-	852	852
- Reclassifications	347	980	9,361	1,251	(16,587)	(4,648)
- Disposal and write-off - net	-	(51)	(6)	(6)	-	(63)
- Depreciation for the year	-	(1,548)	(12,684)	(1,328)	-	(15,560)
- Reversal of loss on impairment of assets	-	16	4	1	-	21
Ending net book value	6,194	21,233	186,207	5,037	29,605	248,276
As at 31 December 2022						
Cost	6,194	41,681	385,119	19,246	29,605	481,845
<u>Less</u> Accumulated depreciation	-	(19,112)	(195,985)	(14,144)	-	(229,241)
Allowance for impairment of assets	-	(1,336)	(2,927)	(65)	-	(4,328)
Net book value	6,194	21,233	186,207	5,037	29,605	248,276



16. Property, plant and equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					Total
	Land	Buildings and building improvements	Machinery and equipment	Other assets	Construction in progress	
For the year ended						
31 December 2023						
Beginning net book value	6,194	21,233	186,207	5,037	29,605	248,276
- Additions	17	152	291	77	15,378	15,915
- Borrowing costs	-	-	-	-	971	971
- Reclassifications	383	826	11,540	1,139	(14,848)	(960)
- Disposal and write-off - net	(6)	(53)	(195)	(2)	-	(256)
- Depreciation for the year	-	(1,574)	(13,075)	(1,345)	-	(15,994)
- Reversal of loss on impairment of assets	-	39	65	1	-	105
Ending net book value	6,588	20,623	184,833	4,907	31,106	248,057
As at 31 December 2023						
Cost	6,588	41,895	392,915	19,902	31,106	492,406
<u>Less</u> Accumulated depreciation	-	(19,975)	(205,220)	(14,931)	-	(240,126)
Allowance for impairment of assets	-	(1,297)	(2,862)	(64)	-	(4,223)
Net book value	6,588	20,623	184,833	4,907	31,106	248,057

Borrowing costs were capitalized as a part of costs of property, plant and equipment. During the year, the Group used capitalization rates ranging from 2.00% - 7.00% per annum (2022: 0.40% - 5.47% per annum). The Company used capitalization rates at 3.40% per annum (2022: 3.46% per annum).



17. Right-of-use assets

Details of right-of-use assets are as follows:

	Consolidated financial statements						Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Vehicles	Exploration and production properties	Other assets	Total
As at 1 January 2022							
Cost	67,181	3,321	16,190	3,249	21,421	6,514	117,876
Less Accumulated depreciation	(18,535)	(1,027)	(8,727)	(1,455)	(6,000)	(1,731)	(37,475)
Allowance for impairment of assets	(12)	-	-	-	-	-	(12)
Net book value	48,634	2,294	7,463	1,794	15,421	4,783	80,389



17. Right-of-use assets (Continued)

Details of right-of-use assets are as follows: (Continued)

	Consolidated financial statements						Unit: Million Baht
	Land	Buildings and building improvements	Machinery and equipment	Vehicles	Exploration and production properties	Other assets	
For the year ended 31 December 2022							
Beginning net book value	48,634	2,294	7,463	1,794	15,421	4,783	80,389
- Business acquisition	-	110	-	-	-	14	124
- Additions	1,893	2,361	17,078	3,870	21,498	9,194	55,894
- Modification	17	-	(4)	-	240	(841)	(588)
- Reclassifications	4,121	(84)	(984)	(11)	724	-	3,766
- Termination	(104)	73	(32)	(28)	(253)	-	(344)
- Depreciation for the year	(3,004)	(1,348)	(1,899)	(1,354)	(6,590)	(1,202)	(15,397)
- Reversal of loss on impairment of assets	1	-	-	-	-	-	1
- Classified to assets held for sale	-	(7)	-	(8)	-	-	(15)
- Exchange differences on translation of financial statements	(131)	(49)	(4)	5	411	(9)	223
Ending net book value	51,427	3,350	21,618	4,268	31,451	11,939	124,053
As at 31 December 2022							
Cost	72,539	5,218	31,571	6,570	41,476	13,196	170,570
Less Accumulated depreciation	(21,101)	(1,868)	(9,953)	(2,302)	(10,025)	(1,257)	(46,506)
Allowance for impairment of assets	(11)	-	-	-	-	-	(11)
Net book value	51,427	3,350	21,618	4,268	31,451	11,939	124,053



17. Right-of-use assets (Continued)

Details of right-of-use assets are as follows: (Continued)

	Consolidated financial statements						Total
	Land	Buildings and building improvements	Machinery and equipment	Vehicles	Exploration and production properties	Other assets	
For the year ended 31 December 2023							
Beginning net book value	51,427	3,350	21,618	4,268	31,451	11,939	124,053
- Additions	1,802	2,161	1,135	1,071	4,864	315	11,348
- Modification	64	44	772	-	852	(14)	1,718
- Reclassifications	-	-	1	30	-	-	31
- Termination	(26)	(247)	(101)	(20)	(862)	1	(1,255)
- Depreciation for the year	(3,147)	(1,904)	(2,722)	(1,822)	(8,484)	(1,488)	(19,567)
- Classified to assets held for sale	-	(4)	-	-	-	-	(4)
- Exchange differences on translation of financial statements	1	(8)	6	21	(245)	-	(225)
Ending net book value	50,121	3,392	20,709	3,548	27,576	10,753	116,099
As at 31 December 2023							
Cost	74,169	5,473	32,124	6,662	43,052	13,441	174,921
Less Accumulated depreciation	(24,037)	(2,081)	(11,415)	(3,114)	(15,476)	(2,688)	(58,811)
Allowance for impairment of assets	(11)	-	-	-	-	-	(11)
Net book value	50,121	3,392	20,709	3,548	27,576	10,753	116,099

Unit: Million Baht



17. Right-of-use assets (Continued)

Details of right-of-use assets are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					
	Land	Buildings and building improvements	Machinery and equipment	Vehicles	Other assets	Total
As at 1 January 2022						
Cost	26,046	27	10,223	615	15	36,926
<u>Less</u> Accumulated depreciation	(11,530)	(14)	(6,285)	(328)	(15)	(18,172)
Allowance for impairment of assets	(7)	-	-	-	-	(7)
Net book value	14,509	13	3,938	287	-	18,747
For the year ended 31 December 2022						
Beginning net book value	14,509	13	3,938	287	-	18,747
- Additions	301	11	1,183	3,015	213	4,723
- Modification	(7)	-	(5)	-	(1)	(13)
- Reclassifications	3,601	-	6	-	-	3,607
- Termination	(7)	-	-	(1)	-	(8)
- Depreciation for the year	(999)	(10)	(569)	(575)	(34)	(2,187)
Ending net book value	17,398	14	4,553	2,726	178	24,869
As at 31 December 2022						
Cost	29,888	39	11,397	3,611	214	45,149
<u>Less</u> Accumulated depreciation	(12,483)	(25)	(6,844)	(885)	(36)	(20,273)
Allowance for impairment of assets	(7)	-	-	-	-	(7)
Net book value	17,398	14	4,553	2,726	178	24,869



17. Right-of-use assets (Continued)

Details of right-of-use assets are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					Total
	Land	Buildings and building improvements	Machinery and equipment	Vehicles	Other assets	
For the year ended						
31 December 2023						
Beginning net book value	17,398	14	4,553	2,726	178	24,869
- Additions	294	2	292	399	117	1,104
- Modification	5	-	2	(1)	(63)	(57)
- Reclassifications	(15)	-	-	-	-	(15)
- Depreciation for the year	(1,073)	(9)	(597)	(750)	(49)	(2,478)
Ending net book value	16,609	7	4,250	2,374	183	23,423
As at 31 December 2023						
Cost	30,161	38	11,686	3,657	267	45,809
<u>Less</u> Accumulated depreciation	(13,545)	(31)	(7,436)	(1,283)	(84)	(22,379)
Allowance for impairment of assets	(7)	-	-	-	-	(7)
Net book value	16,609	7	4,250	2,374	183	23,423

18. Goodwill

Movements in goodwill are as follows:

Unit: Million Baht

	Consolidated financial statements	
	2023	2022
Net book value as at 1 January	188,964	182,854
- Business acquisition	-	12,573
- Loss on impairment of assets (Note 21)	(4,255)	(6,611)
- Write-off	(2,623)	-
- Classified as assets held for sale	(236)	(82)
- Exchange differences on translation of financial statements	1,881	230
Net book value as at 31 December	183,731	188,964



19. Other intangible assets

Details of other intangible assets are as follows:

Unit: Million Baht

	Consolidated financial statements				
	Computer software	Customer contracts	Copyright, license and trademark	Other intangible assets	Total
As at 1 January 2022					
Cost	35,224	68,613	27,029	42,560	173,426
<u>Less</u> Accumulated amortization	(22,448)	(10,444)	(6,478)	(10,421)	(49,791)
Allowance for impairment of assets	(40)	-	-	(99)	(139)
Net book value	12,736	58,169	20,551	32,040	123,496
For the year ended 31 December 2022					
Beginning net book value	12,736	58,169	20,551	32,040	123,496
- Business acquisition	22	-	17,468	2,809	20,299
- Additions	2,642	27	3,909	2,282	8,860
- Reclassifications	1,742	-	328	(1,393)	677
- Disposal and write-off - net	(155)	-	(1,003)	(286)	(1,444)
- Amortization for the year	(3,691)	(2,703)	(2,753)	(2,155)	(11,302)
- Reversal of (loss on) impairment of assets	14	-	(4)	(155)	(145)
- Business disposal	(9)	-	-	-	(9)
- Classified as assets held for sale	-	-	-	(2,463)	(2,463)
- Exchange differences on translation of financial statements	69	(516)	124	(595)	(918)
Ending net book value	13,370	54,977	38,620	30,084	137,051
As at 31 December 2022					
Cost	38,467	68,006	47,952	40,064	194,489
<u>Less</u> Accumulated amortization	(25,071)	(13,029)	(9,329)	(9,788)	(57,217)
Allowance for impairment of assets	(26)	-	(3)	(192)	(221)
Net book value	13,370	54,977	38,620	30,084	137,051



19. Other intangible assets (Continued)

Details of other intangible assets are as follows: (Continued)

Unit: Million Baht

	Consolidated financial statements				
	Computer software	Customer contracts	Copyright, license and trademark	Other intangible assets	Total
For the year ended					
31 December 2023					
Beginning net book value	13,370	54,977	38,620	30,084	137,051
- Additions	2,608	-	1,900	1,129	5,637
- Reclassifications	1,841	34	3,500	(4,028)	1,347
- Disposal and write-off - net	(113)	-	(243)	(53)	(409)
- Amortization for the year	(3,773)	(2,686)	(3,433)	(1,878)	(11,770)
- Loss on impairment of assets	-	-	(103)	-	(103)
- Business disposal	(88)	-	-	(28)	(116)
- Classified as assets held for sale	(36)	-	(2,749)	-	(2,785)
- Exchange differences on translation of financial statements	(93)	483	226	844	1,460
Ending net book value	13,716	52,808	37,718	26,070	130,312
As at 31 December 2023					
Cost	42,016	68,683	50,153	37,885	198,737
<u>Less</u> Accumulated amortization	(28,274)	(15,875)	(12,159)	(11,793)	(68,101)
Allowance for impairment of assets	(26)	-	(276)	(22)	(324)
Net book value	13,716	52,808	37,718	26,070	130,312



19. Other intangible assets (Continued)

Details of other intangible assets are as follows: (Continued)

Unit: Million Baht

	Separate financial statements		
	Computer software	Other intangible assets	Total
As at 1 January 2022			
Cost	9,824	31	9,855
<u>Less</u> Accumulated amortization	(7,226)	-	(7,226)
Allowance for impairment of assets	(24)	-	(24)
Beginning net book value	2,574	31	2,605
For the year ended 31 December 2022			
Beginning net book value	2,574	31	2,605
- Additions	245	-	245
- Reclassifications	927	5	932
- Disposal and write-off - net	(1)	-	(1)
- Amortization for the year	(1,079)	-	(1,079)
Ending net book value	2,666	36	2,702
As at 31 December 2022			
Cost	10,878	36	10,914
<u>Less</u> Accumulated amortization	(8,188)	-	(8,188)
Allowance for impairment of assets	(24)	-	(24)
Net book value	2,666	36	2,702



19. Other intangible assets (Continued)

Details of other intangible assets are as follows: (Continued)

Unit: Million Baht

	Separate financial statements		
	Computer software	Other intangible assets	Total
For the year ended 31 December 2023			
Beginning net book value	2,666	36	2,702
- Additions	157	-	157
- Reclassifications	813	1	814
- Disposal and write-off - net	(1,050)	-	(1,050)
- Amortization for the year	(31)	-	(31)
Ending net book value	2,555	37	2,592
As at 31 December 2023			
Cost	11,510	37	11,547
<u>Less</u> Accumulated amortization	(8,932)	-	(8,932)
Allowance for impairment of assets	(23)	-	(23)
Net book value	2,555	37	2,592



20. Exploration and evaluation assets

Details of exploration and evaluation assets are as follows:

	Consolidated financial statements			Unit: Million Baht
	Petroleum exploration and evaluation assets	Mining properties	Total	
As at 1 January 2022				
Cost	148,599	864	149,463	
<u>Less</u> Allowance for impairment of assets	(44,285)	(583)	(44,868)	129
Beginning net book value	104,314	281	104,595	—
For the year ended 31 December 2022				
Beginning net book value	104,314	281	104,595	
- Additions	3,329	-	3,329	
- Reclassifications	(603)	(116)	(719)	
- Disposal and write-off - net	(996)	-	(996)	
- Loss on impairment of assets	-	(162)	(162)	
- Classified as assets held for sale	(3,470)	(12)	(3,482)	
- Exchange differences on translation of financial statements	3,587	9	3,596	
Ending net book value	106,161	-	106,161	
As at 31 December 2022				
Cost	149,032	-	149,032	
<u>Less</u> Allowance for impairment of assets	(42,871)	-	(42,871)	
Net book value	106,161	-	106,161	



20. Exploration and evaluation assets (Continued)

Details of exploration and evaluation assets are as follows: (Continued)

		Unit: Million Baht	
		Consolidated financial statements	
		Petroleum	Total
		exploration and	
		evaluation assets	
For the year ended 31 December 2023			
Beginning net book value		106,161	106,161
- Additions		5,531	5,531
- Reclassifications		(7,770)	(7,770)
- Disposal and write-off - net		(2,182)	(2,182)
- Business acquisitions		(6,542)	(6,542)
- Exchange differences on translation			
of financial statements		(867)	(867)
Ending net book value		94,331	94,331
As at 31 December 2023			
Cost		94,331	94,331
<u>Less</u> Allowance for impairment of assets*		-	-
Net book value		94,331	94,331

* Terminate and return all of the exploration block of Mariana Oil Sands Project of PTTEP Canada Limited (PTTEP CA), completed on 1 August 2023.



21. Impairment of assets

The Group performs an impairment test on assets whenever events or circumstances suggest that the carrying amount of the assets may exceed its recoverable amount. For the intangible assets with indefinite useful lives or not yet available for use and goodwill from business combination, the Group perform impairment tests annually or when the indication exists. A loss on impairment is recognized when the recoverable amount of an asset is lower than its carrying amount. The recoverable amount is the higher of the asset's fair value less cost to sell and its value in use.

Losses on impairment of assets, excluding goodwill, may be reversed if the estimates and assumptions applied in determining the recoverable amount change.

During the year 2023, the Group considered and found that a project in the development phase changed its development plan based on current situation, resulting in a significant delay in its operation. This event was the key indicator that required the Group to do an impairment assessment of assets.

In determining recoverable amounts, the Group applied significant estimates and assumptions related to various matters, such as the short-term forward oil price curve, the long-term oil price based on global supply and demand, estimates made by the project management team regarding the capital expenditure and operating expenditure approved by management using the constant inflation rate for periods beyond five years, exchange rates, discount rates, and past industry performance. These estimates and assumptions were consistent with external information sources. The significant assumptions used in testing the value in use of assets were discount rates from 6.00% to 14.00%.

During the year ended 31 December 2023, the Group recognized loss on impairment of assets in statements of income as follows:

	Unit: Million Baht
	Consolidated
	financial statements
Property, plant and equipment (Note 16)	265
Goodwill (Note 18)	4,255
Other assets	422
Total	4,942



22. Income taxes and deferred taxes

Applicable tax rates for the Group are as follows:

	Rates (%)
Petroleum income tax on petroleum business in Thailand	
pursuant to the Petroleum Income Tax Act, B.E. 2514 and B.E. 2532	50
pursuant to the Petroleum Income Tax Act, B.E. 2560	20
Corporate Income tax from the Petroleum business in the Thai-Malaysia	
co-development area under the Petroleum Income Tax Act (No.5) B.E. 2541 and	
Petroleum Income tax in Malaysia	10
Petroleum income tax in foreign countries	20 - 80
Petroleum resource rent tax in Australia	40
Income tax under the Revenue Code of the Company and its subsidiaries	Exempt, 3 - 20
Corporate income tax in foreign countries	5 - 80
Income tax from the profit distribution	10 - 20

- 22.1 Income taxes recognized in the statements of income for the years ended 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Current tax:				
Current tax	79,368	76,176	10,989	3,597
Adjustments in respect of current tax of				
previous year	(1,413)	1,730	(375)	335
	77,955	77,906	10,614	3,932
Deferred tax:				
Change in temporary differences	3,054	12,030	(4,391)	850
Tax effect of currency translation on tax base	304	526	-	-
	3,358	12,556	(4,391)	850
Total	81,313	90,462	6,223	4,782



22. Income taxes and deferred taxes (Continued)

22.2 Reconciliations between income taxes and the accounting profit before income taxes multiplied by the applicable tax rate are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Accounting profit before income taxes	236,593	212,562	84,607	57,363
Applicable tax rate at 20%	47,319	42,512	16,921	11,473
Tax effect of :				
Income not subject to tax	(2,011)	(2,739)	(7,240)	(7,495)
Non-deductible expenses	13,578	15,159	625	429
Expenses deductible at a greater amount	(979)	(2,780)	(105)	(126)
Loss from the entities not subject to tax	2,672	7,232	-	-
Adjustment in respect of prior year	(1,413)	1,730	(375)	335
Share of profit from investment in joint ventures and associates	(926)	(1,196)	-	-
Tax credit on petroleum royalty	(13,514)	(20,330)	-	-
Differences in tax rate	33,870	44,096	-	-
Deferred tax on functional currency	304	526	-	-
Previously deductible temporary differences and unrecognized tax losses that is used to reduce current tax expense	-	-	(3,608)	-
Others	2,413	6,252	5	166
Income taxes	81,313	90,462	6,223	4,782

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22.3 Movements in deferred taxes

Deferred income tax assets are recognized for tax loss and carried forwards only to the extent that realization of the related tax benefit through the future taxable profits is probable. The Group does not recognize deferred tax asset from tax losses of Baht 32,053 million (2022: Baht 41,454 million) to carry forward against future taxable income. Some portions of tax losses could be carried forward against future taxable income without expiration invalid and some portions will be expired during 2024 to 2041.



22. Income taxes and deferred taxes (Continued)

22.3 Movements in deferred taxes (Continued)

Unit: Million Baht

	Consolidated financial statements							
	Net balance as at 1 January 2023	Profit (loss)	Other comprehensive income (loss)	Currency translation differences	Others	As at 31 December 2023		
						Net Balance	Deferred tax assets Deferred tax liabilities	
Trade and other accounts receivable	(11,830)	11,144	-	-	-	(686)	770	(1,456)
Inventories	(242)	(192)	-	(5)	35	(404)	442	(846)
Investments measured at fair value through other comprehensive income	(3,926)	9	3,373	-	(9)	(553)	2,677	(3,230)
Other investments in financial assets	(477)	(116)	-	2	263	(328)	1	(329)
Property, plant and equipment	(79,964)	(7,729)	-	(87)	138	(87,642)	11,939	(99,581)
Right-of-use assets	(3,347)	345	-	1	(1)	(3,002)	782	(3,784)
Intangible assets	(6,902)	(74)	-	(40)	(471)	(7,487)	6,424	(13,911)
Derivatives	1,842	(303)	7	4	-	1,550	1,712	(162)
Loans	(72)	(16)	-	(1)	-	(89)	5	(94)
Lease liabilities	4,694	1,451	-	(37)	1	6,109	6,109	-
Provisions for employee benefits	6,540	202	157	(16)	(39)	6,844	6,879	(35)
Provision for decommissioning costs	34,572	(3,132)	-	5	-	31,445	31,615	(170)
Cumulative loss carried forward	14,489	(4,964)	-	20	18	9,563	9,564	(1)
Tax effect of currency translation on tax base	(586)	(306)	-	16	25	(851)	-	(851)
Others	4,997	323	-	33	(39)	5,314	8,475	(3,161)
Total before set-off of taxes	(40,212)	(3,358)	3,537	(105)	(79)	(40,217)	87,394	(127,611)
Set-off of taxes						-	(44,916)	44,916
Net deferred tax assets (liabilities)						(40,217)	42,478	(82,695)



22. Income taxes and deferred taxes (Continued)

22.3 Movements in deferred taxes (Continued)

Unit: Million Baht

Consolidated financial statements									
Net balance as at 1 January 2022	Profit (loss)	Other Comprehensive income (loss)	Business acquisition	Currency translation differences	Others	As at 31 December 2022			
						Net Balance	Deferred tax assets Deferred tax liabilities		
Trade and other accounts receivable	(5,453)	(6,397)	-	(14)	(2)	36	(11,830)	340	(12,170)
Inventories	(295)	(16)	-	50	19	-	(242)	560	(802)
Investments measured at fair value									
through other comprehensive income	(4,915)	(2)	1,013	-	(22)	-	(3,926)	150	(4,076)
Other investments in financial assets	105	(19)	-	(563)	-	-	(477)	8	(485)
Property, plant and equipment	(82,771)	4,560	-	(145)	(1,676)	68	(79,964)	11,787	(91,751)
Right-of-use assets	(2,941)	(392)	-	(1)	(13)	-	(3,347)	505	(3,852)
Intangible assets	(4,727)	(191)	-	(2,038)	54	-	(6,902)	6,969	(13,871)
Derivatives	396	1,319	103	-	24	-	1,842	1,950	(108)
Loans	(88)	19	-	-	(3)	-	(72)	4	(76)
Lease liabilities	3,793	923	-	-	(22)	-	4,694	4,694	-
Provisions for employee benefits	8,043	(310)	(1,332)	101	69	(31)	6,540	6,570	(30)
Provision for decommissioning costs	36,942	(3,627)	-	-	1,257	-	34,572	34,648	(76)
Cumulative loss carried forward	9,332	4,903	(14)	12	257	(1)	14,489	14,489	-
Tax effect of currency translation on									
tax base	(50)	(526)	-	(25)	15	-	(586)	-	(586)
Others	17,110	(12,800)	3	131	576	(23)	4,997	10,263	(5,266)
Total before set-off of taxes	(25,519)	(12,556)	(227)	(2,492)	533	49	(40,212)	92,937	(133,149)
Set-off of taxes							-	(42,177)	42,177
Net deferred tax assets (liabilities)							(40,212)	50,760	(90,972)



22. Income taxes and deferred taxes (Continued)

22.3 Movements in deferred taxes (Continued)

Unit: Million Baht

	Separate financial statements					
	Net balance as at 1 January 2023	Profit (loss)	Other comprehensive income (loss)	As at 31 December 2023		Deferred tax liabilities
				Net balance	Deferred tax assets	
Trade and other accounts receivable	(5,017)	5,048	-	31	74	(43)
Inventories	41	54	-	95	95	-
Investments measured at fair value through other comprehensive income - equity instruments	(811)	-	341	(470)	-	(470)
Other investments in financial assets	(80)	27	-	(53)	1	(54)
Property, plant and equipment	409	54	-	463	463	-
Right-of-use assets	(2,015)	142	-	(1,873)	-	(1,873)
Intangible assets	72	(19)	-	53	53	-
Derivatives	1,178	(338)	-	840	840	-
Lease liabilities	2,080	(148)	-	1,932	1,932	-
Provisions for employee benefits	1,200	67	91	1,358	1,358	-
Provisions for decommissioning costs	-	2	-	2	2	-
Others	1,505	(498)	-	1,007	1,023	(16)
Total before set-off of taxes	(1,438)	4,391	432	3,385	5,841	(2,456)
Set-off of taxes				-	(2,456)	2,456
Net deferred tax assets (liabilities)				3,385	3,385	-



22. Income taxes and deferred taxes (Continued)

22.3 Movements in deferred taxes (Continued)

Unit: Million Baht

	Separate financial statements				
	Net balance as at 1 January 2022	Profit (loss)	Other comprehensive income (loss)	As at 31 December 2022	
				Net balance	Deferred tax assets Deferred tax liabilities
Trade and other accounts receivable	(3,252)	(1,765)	-	(5,017)	87 (5,104)
Inventories	198	(157)	-	41	41 -
Investments measured at fair value through other comprehensive income - equity instruments	(1,313)	-	502	(811)	- (811)
Other investments in financial assets	122	(202)	-	(80)	- (80)
Property, plant and equipment	113	296	-	409	409 -
Right-of-use assets	(1,363)	(652)	-	(2,015)	- (2,015)
Intangible assets	78	(6)	-	72	72 -
Derivatives	319	859	-	1,178	1,178 -
Lease liabilities	1,392	688	-	2,080	2,080 -
Provisions for employee benefits	1,364	54	(218)	1,200	1,200 -
Others	1,471	34	-	1,505	1,519 (14)
Total before set-off of taxes	(871)	(851)	284	(1,438)	6,586 (8,024)
Set-off of taxes				-	(6,586) 6,586
Net deferred tax assets (liabilities)				(1,438)	- (1,438)

Notes to Financial Statements



23. Other non-current assets

Details of other non-current assets as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Advance payments and deferred charge	1,731	2,360	35	46
Decommissioning fund	11,932	10,962	-	-
Others	4,225	4,182	1,063	2
Total	17,888	17,504	1,098	48

Unit: Million Baht

24. Trade accounts payable

Details of trade accounts payable as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Trade accounts payable - unrelated parties	239,295	226,064	90,602	89,663
Oil fuel fund payable and excise tax payable	3,099	3,245	588	292
Trade accounts payable - related parties (Note 9.4)	991	1,057	58,137	54,716
Total	243,385	230,366	149,327	144,671

Unit: Million Baht



25. Other accounts payable

Details of other accounts payable as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Other accounts payable - unrelated parties	54,327	62,185	12,902	12,838
Accrued interest expenses	7,248	13,177	1,796	7,716
Advance received	7,973	7,240	327	346
Others	9,311	5,271	268	205
Other accounts payable - related parties				
(Note 9.5)	1,238	449	7,431	4,592
Total	80,097	88,322	22,724	25,697

26. Other current liabilities

Details of other current liabilities as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Undue output VAT	4,996	6,095	3,770	4,165
Provision for remuneration for the renewal of petroleum production	1,950	1,514	-	-
Others	4,280	9,104	3	691
Total	11,226	16,713	3,773	4,856



27. Borrowings and lease liabilities

27.1 Details of borrowings and lease liabilities are as follows:

	Consolidated financial statements									Unit: Million Baht
	As at 1 January 2023	Cash flows from financing		Non-cash items					As at 31 December 2023	
		Additions	Repayments	Lease - Addition	(Gain) loss on exchange rates	Business disposal	Classified as assets held for sale	Exchange differences on translation of financial statements		
Short-term borrowings from financial institutions	90,757	563,635	(557,650)	-	(2)	-	-	(229)	-	96,511
Short-term borrowings - related parties (Note 9.5)	-	6,500	-	-	-	-	-	-	-	6,500
Short-term borrowings - others	784	4,828	(5,055)	-	339	-	(787)	(72)	(37)	-
Borrowings - Baht currency	201,434	46,549	(47,078)	-	-	(933)	-	-	(68)	199,904
Borrowings - foreign currency	75,974	25,531	(36,002)	-	(930)	-	-	713	112	65,398
Debentures - Baht currency	389,433	27,544	(18,000)	-	268	-	-	(317)	67	398,995
Debentures - foreign currency	331,340	-	(29,213)	-	(1,188)	-	-	(2,591)	(1,943)	296,405
Lease liabilities	103,872	-	(18,220)	12,765	(116)	(91)	(4)	(999)	522	97,729
Total	1,193,594	674,587	(711,218)	12,765	(1,629)	(1,024)	(791)	(3,495)	(1,347)	1,161,442



27. Borrowings and lease liabilities (Continued)

27.1 Details of borrowings and lease liabilities are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					
	As at 1 January 2023	Cash flows from financing		Non-cash items		As at 31 December 2023
		Additions	Repayments	Lease - Additions	Loss on exchange rates	
Short-term borrowings - related parties (Note 9.5)	9,447	10,833	(1,983)	-	-	18,297
Borrowings - Baht currency	16,975	12,480	-	-	(33)	29,422
Borrowings - foreign currencies	50,260	-	(16)	-	(870)	49,379
Debentures - Baht currency	158,226	998	(16,000)	-	-	143,281
Debentures - foreign currencies	10,091	-	-	-	(101)	9,997
Lease liabilities	9,471	-	(1,163)	1,101	(40)	9,072
Total	254,470	24,311	(19,162)	1,101	(1,011)	259,448



27. Borrowings and lease liabilities (Continued)

27.2 Interest rates charged on borrowings and lease liabilities as at 31 December 2023 and 2022 are as follows:

	Unit: % per annum			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Short-term borrowings from				
financial institutions	0.00 - 10.00	0.00 - 8.15	-	-
Loans - Baht currency	1.99 - 6.10	1.08 - 5.74	2.78 - 3.83	2.08 - 2.26
Loans - foreign currencies				
- USD	5.64 - 9.15	0.80 - 6.30	4.20 - 6.38	4.20 - 6.38
- EUR	1.00 - 5.71	0.50 - 3.67	-	-
- JPY	4.45	4.45	4.95	4.95
- Others	3.60 - 9.59	3.70 - 11.00	-	-
Debentures - Baht currency	0.96 - 6.80	0.80 - 6.80	0.96 - 6.80	0.80 - 6.80
Debentures - foreign currency				
- USD	2.50 - 6.35	2.59 - 6.35	4.50 - 5.88	4.50 - 5.88
Lease liabilities	0.18 - 23.06	0.18 - 23.06	0.72 - 9.05	0.68 - 8.28



27. Borrowings and lease liabilities (Continued)

27.3 Details of borrowings and lease liabilities as at 31 December 2023 and 2022 are as follows:

Current portion of borrowings and lease liabilities

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Loans - Baht currency	27,428	36,100	-	-
Loans - foreign currencies	3,624	1,865	-	-
Debentures - Baht currency	66,347	17,954	39,352	15,955
Debentures - foreign currency	-	17,318	-	-
Leases liabilities	16,077	16,191	1,511	1,202
Total	113,476	89,428	40,863	17,157

Unit: Million Baht

Long-term borrowings and lease liabilities

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Loans - Baht currency	172,476	165,334	29,422	16,975
Loans - foreign currencies	61,774	74,109	49,379	50,260
Debentures - Baht currency	332,648	371,478	103,929	142,271
Debentures - foreign currency	296,405	314,022	9,997	10,091
Lease liabilities	81,652	87,681	7,561	8,269
Total	944,955	1,012,624	200,288	227,866

Unit: Million Baht

27.4 Long-term loans can be classified by types of interest rate as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Floating interest rate	252,038	240,654	29,423	16,975
Fixed interest rate	806,393	861,398	211,728	228,048
Total	1,058,431	1,102,052	241,151	245,023

Unit: Million Baht

As at 31 December 2023, after taking into account the effect of interest rate swap, in the consolidated financial statements approximately 71.60% of the Group's borrowings are at a fixed rate of interest (31 December 2022: 74.59%), and in the separate financial statements amounting approximately 67.05% of the Company's borrowings are at a fixed rate of interest (31 December 2022: 71.16%).



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows:

27.5.1 Loans

Loans - Baht currency

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the Company are as follows:

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
1	6,000	6M Compounded THOR plus margin	Principal is repayable at the end of contract in September 2026.
2	6,000	6M Compounded THOR plus margin	Principal is repayable at the end of contract in June 2027.
3	5,000	6M FDR plus margin	Principal is repayable at the end of contract in June 2027.
4	7,500	3M Compounded THOR plus margin	Principal is repayable at the end of contract in July 2025.
5	5,000	6M Compounded THOR plus margin	Principal is repayable at the end of contract in August 2028.

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows:

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
1	2,058	THOR plus margin	Principal is repayable every 3 months, totalling 16 instalments, commencing in October 2022.
2	3,900	Fixed rate	Principal is repayable every 6 months, totalling 20 instalments, commencing in September 2020.
3	3,290	1M THOR plus margin	Principal is repayable every 6 months, totalling 19 instalments, commencing in September 2022.
4	2,848	6M FDR plus margin	Principal is repayable every 6 months, totalling 23 instalments, commencing in June 2018.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - Baht currency (Continued)

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
5	949	THOR plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in June 2022.
6	1,090	THOR plus margin	Principal is repayable every 12 months, totalling 9 instalments, commencing in June 2024.
7	88	Fixed rate	Principal is repayable every 6 months, totalling 29 instalments, commencing in June 2017.
8	279	Fixed rate	Principal is repayable every 3 months, totalling 51 instalments, commencing in October 2022.
9	6,844	MLR minus discount	Principal is repayable every 3 months, totalling 25 instalments, commencing in April 2024.
10	145	MLR minus discount	Principal is repayable every 6 months, totalling 25 instalments, commencing in October 2023.
11	1,304	3M THOR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in October 2023.
12	932	3M THOR plus margin	Principal is repayable every 6 months, totalling 25 instalments, commencing in October 2023.
13	532	3M BIBOR plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in May 2021.
14	225	3M BIBOR plus margin	Principal is repayable every 6 months, totalling 11 instalments, commencing in June 2021.
15	2,398	THOR plus margin	Principal is repayable every 6 months, totalling 22 instalments, commencing in October 2020.
16	4,589	THOR plus margin	Principal is repayable every 6 months, totalling 17 instalments, commencing in February 2022.
17	1,500	6M THOR plus margin	Principal is repayable every 6 months, totalling 16 instalments, commencing in January 2024.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - Baht currency (Continued)

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
18	3,000	6M BIBOR plus margin	Principal is repayable every 6 months, totalling 16 instalments, commencing in February 2024.
19	6,110	1M THOR plus margin	Principal is repayable every 6 months, totalling 19 instalments, commencing in September 2022.
20	3,000	Fixed rate	Principal is repayable at the end of contract in January 2025.
21	2,000	THOR plus margin	Principal is repayable every 6 months, totalling 9 instalments, commencing in December 2025.
22	2,000	6M FDR plus margin	Principal is repayable at the end of contract in March 2030
23	2,000	3M BIBOR plus margin	Principal is repayable at the end of contract in August 2030
24	2,100	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in December 2022.
25	1,000	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in May 2020.
26	500	6M FDR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in December 2018.
27	900	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in October 2023.
28	375	6M THBFX plus margin	Principal is repayable every 6 months, totalling 14 instalments, commencing in April 2023.
29	1,500	6M FDR plus margin	Principal is repayable every 3 months, totalling 10 instalments, commencing in March 2022.
30	2,400	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2023.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - Baht currency (Continued)

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
31	3,150	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in October 2023.
32	1,395	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in October 2023.
33	4,500	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in November 2020.
34	10,000	THOR plus margin	Principal is repayable at the end of contract in June 2025.
35	10,000	THOR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in January 2022.
36	10,000	MLR minus discount	Principal is repayable every 3 months, totalling 12 instalments, commencing in December 2024.
37	12,800	THOR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in March 2023.
38	10,000	MLR minus discount	Principal is repayable every 3 months, totalling 12 instalments, commencing in September 2025.
39	2,000	THOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in March 2026.
40	2,000	THOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in March 2026.
41	15,000	MLR minus discount	Principal is repayable every 3 months, totalling 14 instalments, commencing in June 2026.
42	1,000	Prime rate minus discount	Principal is repayable every 6 months, totalling 6 instalments, commencing in June 2026.
43	6,004	THOR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in February 2021.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - Baht currency (Continued)

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
44	1,250	THOR plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in April 2023.
45	755	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2024.
46	700	THOR plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in October 2022.
47	700	6M FDR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in April 2023.
48	400	MLR minus discount	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2024.
49	755	THOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2024.
50	10,000	THOR plus margin	Principal is repayable at the end of contract in December 2029.
51	2,000	THOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2026.
52	25	Fixed rate	Principal is repayable every 3 months, totalling 36 instalments, commencing in December 2022.
53	45	Fixed rate	Principal is repayable every months, totalling 48 instalments, commencing in December 2024.
54	5,000	6M FDR plus margin	Principal is repayable every 6 months, totalling 17 instalments, commencing in September 2020.
55	10,000	MLR minus discount	Principal is repayable every 6 months, totalling 16 instalments, commencing in March 2021.
56	10,000	Average THOR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in June 2021.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - Baht currency (Continued)

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
57	9,500	3M BIBOR plus margin	Principal is repayable every 6 months, totalling 9 instalments, commencing in September 2020.
58	2,000	3M BIBOR plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in September 2020.
59	1,000	3M BIBOR plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in September 2020.
60	1,500	3M BIBOR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in March 2023.
61	5,000	6M FDR plus margin	Principal is repayable every 6 months, totalling 17 instalments, commencing in December 2022.
62	42	THOR plus margin	Principal is repayable every 6 months, totalling 8 instalments, commencing in June 2023.
63	10	THOR plus margin	Principal is repayable every 6 months, totalling 5 instalments, commencing in December 2026.
64	42	MLR minus discount	Principal is repayable every 6 months, totalling 8 instalments, commencing in December 2020.
65	44	MLR minus discount	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2020.
66	8	THOR plus margin	Principal is repayable every 6 months, totalling 4 instalments, commencing in December 2024.
67	5,400	THOR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in June 2019.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - Baht currency (Continued)

As at 31 December 2023, details of long-term loans from financial institutions in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (unit: million Baht)	Interest rate (percent per annum)	Repayment terms
68	504	THOR plus margin	Principal is repayable at the end of contract.
69	7,000	MLR minus discount	Principal is repayable every 3 months, totalling 20 instalments, commencing in March 2023.
70	5,000	6M BIBOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2023.
71	500	3M BIBOR plus margin	Principal is repayable at the end of contract in March 2028.
72	500	THOR plus margin	Principal is repayable at the end of contract in March 2028.
73	1,000	THOR plus margin	Principal is repayable every 3 months, totalling 24 instalments, commencing in June 2025.
74	3,000	THOR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in June 2025.
75	1,000	MLR minus discount	Principal is repayable every 3 months, totalling 20 instalments, commencing in June 2025.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.1 Loans (Continued)

Loans - foreign currency

As at 31 December 2023, details of long-term loans from financial institutions in foreign currency of the subsidiaries are as follows:

No.	Principal (million)	Currency	Interest rate (percent per annum)	Repayment terms
1	185	USD	SOFR plus margin	Principal is repayable every 12 months, totalling 8 instalments, commencing in September 2025.
2	60	USD	SOFR plus margin	Principal is repayable every 6 months, totalling 9 instalments, commencing in June 2020.
3	300	USD	SOFR plus margin	Principal is repayable at the end of contract in November 2028.
4	100	USD	SOFR plus margin	Principal is repayable every December of 2025, 2026, 2028 and 2030.
5	2	USD	Fixed rate	Principal is repayable every 3 months, totalling 15 instalments, commencing in October 2023.
6	30	USD	Fixed rate	Principal is repayable at the end of contract in October 2024.
7	180	EUR	3M EURIBOR plus margin	Principal is repayable every 12 months, totalling 6 instalments, commencing in September 2023.
8	30	EUR	6M EURIBOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2022.
9	450	EUR	EURIBOR plus margin	Principal is repayable at the end of contract in November 2028.
10	700	CNY	LPR minus discount	Principal is repayable every 6 months, totalling 10 instalments, commencing in December 2025.
11	7,980	NTD	Fixed rate	Principal is repayable every 12 months, totalling 5 instalments, commencing in October 2024.
12	10,000	KRW	Fixed rate	Principal is repayable at the end of contract in March 2024.
13	8,000	KRW	Fixed rate	Principal is repayable every 12 months, totalling 4 instalments, commencing in June 2024.
14	70,000	KRW	Fixed rate	Principal is repayable every 12 months, totalling 5 instalments, commencing in October 2024.

**27. Borrowings and lease liabilities (Continued)****27.5 Detail of long-term loans and debentures are as follows: (Continued)****27.5.1 Loans (Continued)****Loans - foreign currency (Continued)**

As at 31 December 2023, details of long-term loans from financial institutions in foreign currency of the subsidiaries are as follows: (Continued)

No.	Principal (million)	Currency	Interest rate (percent per annum)	Repayment terms
15	310,791	VND	COF plus margin	Principal is repayable every 6 months, totalling 18 instalments, commencing in July 2019.
16	23,000*	JPY	Fixed rate	Principal is repayable at the end of contract in April 2036.

* Guaranteed by the Company which the maximum liability under the guarantee will be capped at an amount equal to 125% of the principal or equivalent to JPY 28,750 Million.

The Group has entered into derivative contracts on long-term loans to cover foreign currency exchange rates risks and interest rates risks as mentioned in Note 39.2 and Note 39.4.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures

Debentures - Baht currency

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the Company are as follows:

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
1	15,000	1,000	3	0.96	Interest is repayable every 6 months and mature in August 2024.
2	8,000	1,000	3	1.79	Interest is repayable every 6 months and mature in April 2025.
3	1,000	1,000	2	2.31	Interest is repayable every 6 months and mature in May 2025.
4	3,000	1,000	5	2.05	Interest is repayable every 6 months and mature in July 2025.
5	15,000	1,000	5	1.31	Interest is repayable every 6 months and mature in August 2026.
6	13,000	1,000	7	2.85	Interest is repayable every 6 months and mature in May 2027.
7	3,000	1,000	5 years 6 months	2.45	Interest is repayable every 6 months and mature in October 2027.
8	5,000	1,000	7	1.79	Interest is repayable every 6 months and mature in August 2028.
9	20,000	1,000	7	3.25	Interest is repayable every 6 months and mature in May 2029.
10	2,000	1,000	10	2.84	Interest is repayable every 6 months and mature in July 2030.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the Company are as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
11	8,000	1,000	10	2.37	Interest is repayable every 6 months and mature in August 2031.
12	9,000	1,000	12	3.47	Interest is repayable every 6 months and mature in April 2034.
13	6,000	1,000	15	3.20	Interest is repayable every 6 months and mature in July 2035.
14	7,000	1,000	25	3.74	Interest is repayable every 6 months and mature in July 2045.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the Company in Baht currency are as follows:

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
1	14,967	1,000	15	Year 1 - 5 : 5.00 Year 6 - 8 : 6.20 Year 9 - 15 : 6.80	Interest is repayable every 6 months and mature in March 2024. (The debenture holders can early redeem at the end of 8th year.)
2	9,387	1,000	15	Year 1 - 5 : 4.25 Year 6 - 10 : 5.50 Year 11- 15 : 5.75	Interest is repayable every 6 months and mature in July 2024. (The debenture holders can early redeem at the end of 10th year.)
3	4,000	1,000	100	5.90	Interest is repayable every 6 months and mature in December 2110. (The debenture holders can early redeem at the end of 50th and 75th year and other cases specified in the regulations regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the subsidiaries are as follows:

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
1	1,000	1,000	3	2.55	Interest is repayable every 6 months and mature in June 2025.
2	3,000	1,000	5	3.04	Interest is repayable every 6 months and mature in June 2027.
3	1,000	1,000	8	3.56	Interest is repayable every 6 months and mature in June 2030.
4	3,000	1,000	10	3.75	Interest is repayable every 6 months and mature in June 2032.
5	4,000	1,000	15	4.40	Interest is repayable every 6 months and mature in June 2037.
6	1,500	1,000	7	2.82	Interest is repayable every 6 months and mature in September 2024.
7	5,000	1,000	5	2.24	Interest is repayable every 6 months and mature in November 2024.
8	6,000	1,000	7	2.52	Interest is repayable every 6 months and mature in November 2026.
9	8,000	1,000	10	2.86	Interest is repayable every 6 months and mature in November 2029.
10	7,500	1,000	12	3.15	Interest is repayable every 6 months and mature in November 2031.
11	6,500	1,000	15	3.25	Interest is repayable every 6 months and mature in November 2034.
12	1,500	1,000	5	2.11	Interest is repayable every 6 months and mature in August 2025.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
13	1,000	1,000	10	2.94	Interest is repayable every 6 months and mature in August 2030.
14	2,500	1,000	15	3.24	Interest is repayable every 6 months and mature in August 2035.
15	3,000	1,000	12	3.78	Interest is repayable every 6 months and mature in April 2035.
16	4,000	1,000	5	3.50	Interest is repayable every 6 months and mature in September 2025.
17	1,300	1,000	10	3.93	Interest is repayable every 6 months and mature in September 2030.
18	2,700	1,000	15	4.40	Interest is repayable every 6 months and mature in September 2035.
19	4,000	1,000	5	3.00	Interest is repayable every 6 months and mature in May 2026.
20	2,000	1,000	3	1.77	Interest is repayable every 6 months and mature in May 2024.
21	2,000	1,000	7	2.91	Interest is repayable every 6 months and mature in May 2028.
22	2,000	1,000	10	3.38	Interest is repayable every 6 months and mature in May 2031.
23	2,000	1,000	15	4.10	Interest is repayable every 6 months and mature in May 2036.
24	500	1,000	4	3.03	Interest is repayable every 6 months and mature in May 2026.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
25	7,000	1,000	5	3.10	Interest is repayable every 6 months and mature in May 2027.
26	750	1,000	7	4.17	Interest is repayable every 6 months and mature in May 2029.
27	1,500	1,000	10	4.52	Interest is repayable every 6 months and mature in May 2032.
28	2,250	1,000	12	4.86	Interest is repayable every 6 months and mature in May 2034.
29	3,203	1,000	3	3.20	Interest is repayable every 6 months and mature in May 2026.
30	3,753	1,000	5	3.70	Interest is repayable every 6 months and mature in May 2028.
31	3,004	1,000	7	4.00	Interest is repayable every 6 months and mature in May 2030.
32	2,041	1,000	10	4.20	Interest is repayable every 6 months and mature in May 2033.
33	11,400	1,000	15	4.82	Interest is repayable every 6 months and mature in June 2029.
34	6,000	1,000	5	2.25	Interest is repayable every 6 months and mature in November 2026.
35	5,000	1,000	5	2.09	Interest is repayable every 6 months and mature in April 2027.
36	1,000	1,000	7	2.69	Interest is repayable every 6 months and mature in April 2029.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
37	6,000	1,000	10	3.05	Interest is repayable every 6 months and mature in April 2032.
38	1,500	1,000	3	2.51	Interest is repayable every 6 months and mature in May 2026.
39	1,500	1,000	5	2.20	Interest is repayable every 6 months and mature in September 2024.
40	7,000	1,000	7	2.43	Interest is repayable every 6 months and mature in September 2026.
41	1,500	1,000	10	2.75	Interest is repayable every 6 months and mature in September 2029.
42	1,530	1,000	7	2.60	Interest is repayable every 6 months and mature in April 2027.
43	3,310	1,000	10	2.99	Interest is repayable every 6 months and mature in April 2030.
44	4,360	1,000	12	3.29	Interest is repayable every 6 months and mature in April 2032.
45	5,800	1,000	15	3.50	Interest is repayable every 6 months and mature in April 2035.
46	14,000	1,000	5	2.13	Interest is repayable every 6 months and mature in January 2027.
47	2,000	1,000	7	2.65	Interest is repayable every 6 months and mature in January 2029.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the details of unsecured, unsubordinated debentures in Baht currency of the subsidiaries are as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
48	2,000	1,000	10	3.05	Interest is repayable every 6 months and mature in January 2032.
49	12,000	1,000	12	3.29	Interest is repayable every 6 months and mature in January 2034.
50	5,000	1,000	5	3.21	Interest is repayable every 6 months and mature in June 2027.
51	3,000	1,000	12	4.00	Interest is repayable every 6 months and mature in June 2034.

**27. Borrowings and lease liabilities (Continued)**

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)**Debentures - Baht currency (Continued)**

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in Baht currency is as follows:

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
1	10,000	1,000	5	2.90	Interest is repayable every 6 months and mature in August 2024. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
2	17,000	1,000	7	3.50	Interest is repayable every 6 months and mature in June 2029. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
3	7,000	1,000	10	4.84	Interest is repayable every 6 months and mature in March 2024. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
4	7,500	1,000	15	5.05	Interest is repayable every 6 months and mature in March 2027. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in Baht currency is as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
5	1,400	1,000	3	2.99	Interest is repayable every 6 months and mature in November 2025. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
6	600	1,000	5	3.64	Interest is repayable every 6 months and mature in November 2027. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
7	2,000	1,000	7	4.13	Interest is repayable every 6 months and mature in November 2029. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
8	1,700	1,000	10	4.49	Interest is repayable every 6 months and mature in November 2032. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
9	3,100	1,000	12	4.79	Interest is repayable every 6 months and mature in November 2034. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in Baht currency is as follows: (Continued)

No.	Principal (million Baht)	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
10	3,200	1,000	15	5.09	Interest is repayable every 6 months and mature in November 2037. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
11	2,800	1,000	5	3.32	Interest is repayable every 6 months and mature in May 2028. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
12	2,300	1,000	10	3.84	Interest is repayable every 6 months and mature in May 2033. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
13	4,900	1,000	15	4.24	Interest is repayable every 6 months and mature in May 2038. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - foreign currency

As at 31 December 2023, the details of unsecured, unsubordinated debentures in foreign currency with the debenture holders' early redemption right of the Company are as follows:

No.	Principal (million)	Currency	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
1	53	USD	1,000	30	5.88	Interest is repayable every 6 months and mature in August 2035. (The debenture holders can early redeem at anytime regarding the rights and obligations of the issuer and the debenture holders and other related documents.)
2	241	USD	1,000	30	4.50	Interest is repayable every 6 months and mature in October 2042. (The debenture holders can early redeem at anytime regarding the rights and obligations of the issuer and the debenture holders and other related documents.)

**27. Borrowings and lease liabilities (Continued)**

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)**Debentures - foreign currency (Continued)**

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in foreign currency are as follows:

No.	Principal (million)	Currency	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
1	350	USD	1,000	10	2.99	Interest is repayable every 6 months and mature in January 2030. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
2	458	USD	1,000	30	6.35	Interest is repayable every 6 months and mature in June 2042. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
3	600	USD	1,000	40	3.90	Interest is repayable every 6 months and mature in December 2059. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
4	500	USD	1,000	7	2.59	Interest is repayable every 6 months and mature in June 2027. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - foreign currency (Continued)

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in foreign currency are as follows: (Continued)

No.	Principal (million)	Currency	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
5	630	USD	1,000	10	2.98	Interest is repayable every 6 months and mature in March 2031. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
6	525	USD	1,000	30	4.30	Interest is repayable every 6 months and mature in March 2051. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
7	800	USD	1,000	10	4.40	Interest is repayable every 6 months and mature in March 2032. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
8	240	USD	1,000	30	5.20	Interest is repayable every 6 months and mature in March 2052. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - foreign currency (Continued)

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in foreign currency are as follows: (Continued)

No.	Principal (million)	Currency	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
9	172	USD	1,000	30	4.88	Interest is repayable every 6 months and mature in January 2043. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
10	328	USD	1,000	30	4.88	Interest is repayable every 6 months and mature in January 2043. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
11	400	USD	1,000	10	4.63	Interest is repayable every 6 months and mature in November 2028. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
12	600	USD	1,000	30	5.38	Interest is repayable every 6 months and mature in November 2048. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)

**27. Borrowings and lease liabilities (Continued)**

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)**Debentures - foreign currency (Continued)**

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in foreign currency are as follows: (Continued)

No.	Principal (million)	Currency	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
13	565	USD	1,000	30	3.50	Interest is repayable every 6 months and mature in October 2049. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
14	400	USD	1,000	10	2.50	Interest is repayable every 6 months and mature in June 2030. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
15	600	USD	1,000	30	3.75	Interest is repayable every 6 months and mature in June 2050. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

27.5.2 Debentures (Continued)

Debentures - foreign currency (Continued)

As at 31 December 2023, the detail of unsecured, unsubordinated debentures with the debenture holders' early redemption right of the subsidiaries in foreign currency are as follows: (Continued)

No.	Principal (million)	Currency	Par value (per share)	Period (years)	Interest rate (percent per annum)	Repayment terms
16	245*	USD	1,000	16	5.88	Interest is repayable every 6 months and mature in August 2035. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
17	330**	USD	1,000	23	4.50	Interest is repayable every 6 months and mature in October 2042. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)
18	700***	USD	1,000	50	3.70	Interest is repayable every 6 months and mature in July 2070. (The debenture holders can early redeem regarding the rights and obligations of the issuer and the debenture holders.)

* Guaranteed by the Company which the maximum liability under the guarantee will be capped at an amount equal to 125% of the principal or equivalent to approximately USD 306 Million.

** Guaranteed by the Company which the maximum liability under the guarantee will be capped at an amount equal to 125% of the principal or equivalent to approximately USD 413 Million.

*** Guaranteed by the Company which the maximum liability under the guarantee will be capped at an amount equal to 125% of the principal or equivalent to approximately USD 875 Million.

The Group has entered into derivative contracts on debentures to cover foreign currency exchange rates risks and interest rates risks as mentioned in Note 39.2 and Note 39.4.



27. Borrowings and lease liabilities (Continued)

27.5 Detail of long-term loans and debentures are as follows: (Continued)

The proceeds from these borrowings and debentures are to be used for working capital and general corporate purposes, repayment of borrowings, capital expenditure, and to provide loans to group companies.

Under the terms of the borrowings and debentures, The Group has to comply with certain conditions as stipulated, such as maintaining net tangible asset, maintaining net debt to equity ratios, maintaining debt service coverage ratio, maintaining the Company's shareholding proportion in the subsidiary, and coal reserves, etc.

27.6 Lease liabilities

Details of lease liabilities as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Lease payments	121,524	129,178	10,593	10,927
Less: Deferred interest expenses	(23,795)	(25,306)	(1,521)	(1,456)
Total	97,729	103,872	9,072	9,471
Less: Portion due within one year	(16,077)	(16,191)	(1,511)	(1,202)
Lease liabilities - net of current portion	81,652	87,681	7,561	8,269



28. Provision for employee benefits

Details of provision for employee benefits as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Retirement benefits	30,807	29,561	6,547	5,794
Other long-term benefits	5,935	5,714	245	204
Fair value of plan assets	(2,926)	(2,919)	-	-
Total	33,816	32,356	6,792	5,998

Unit: Million Baht

Movements in the present value of provision for employee benefits are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
As at 1 January	32,356	36,895	5,998	6,818
Current service cost	2,117	2,410	360	442
Past service cost	(10)	9	-	-
Interest cost	1,034	716	188	156
Actuarial (gain) loss from provision for post-employment benefits	515	(6,003)	460	(1,092)
Actuarial (gain) loss from provision for other long-term employee benefits	31	(204)	32	(8)
Actual payment	(1,862)	(1,808)	(246)	(318)
Return on plan assets	(23)	203	-	-
Business acquisition	-	602	-	-
Business disposal	(134)	(75)	-	-
Classified as assets held for sale	-	(41)	-	-
Others	193	(32)	-	-
Exchange differences on translation of financial statements	(401)	(316)	-	-
As at 31 December	33,816	32,356	6,792	5,998

Unit: Million Baht

The Group expects to pay for the long-term employee benefits within 1 year of Baht 1,863 million (the Company only: Baht 345 million).



28. Provision for employee benefits (Continued)

Details of actuarial gain from provision for post-employment benefits are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
(Gain) loss from experience adjustments	203	239	124	125
(Gain) loss from changes in financial assumptions	339	(6,292)	336	(1,217)
(Gain) loss from changes in demographic assumptions	(27)	50	-	-
Total	515	(6,003)	460	(1,092)

Expenses recognized in the statements of income and comprehensive income for the years ended 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Cost of sales and services	992	1,119	106	108
Selling and distribution expenses	222	218	33	33
Administrative expenses	1,932	1,577	438	446
Management remuneration	26	17	2	2
Other comprehensive (gain) loss	492	(5,800)	460	(1,092)
Total	3,664	(2,869)	1,039	(503)

Principal actuarial assumptions used in determining the present value of provision for post-employment benefits of the Group are as follows:

	Annual percentage rate	
	2023	2022
Discount rate	0.66 - 7.30	0.66 - 7.63
Inflation rate	0.00 - 8.00	0.00 - 8.00
Employee turnover rate	0.00 - 60.00	0.00 - 60.00
Mortality rate	based on the published statistics of each country	based on the published statistics of each country



28. Provision for employee benefits (Continued)

Sensitivity analysis of principal actuarial assumption used in determining the present value of provision for post-employment benefits of the Group as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht	
	Increase (decrease) in present value of the provisions	
	2023	2022
Discount rate		
Increase 1%	(3,502)	(3,421)
Decrease 1%	4,296	4,387

Weighted average duration of the provisions for post-employment benefits of the Group for the year ended 31 December 2023 is 15.57 years (31 December 2022: 15.45 years).

29. Provision for decommissioning costs

Movements in the provision for decommissioning costs which will occur in the future are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
As at 1 January	110,051	93,594	-	-
- Business acquisition	-	12	-	-
- Additional provision	41,815	28,026	25	-
- Utilization during the year	(10,455)	(5,498)	-	-
- Reversal of non-occurred provision	(3,706)	(8,528)	-	-
- Classified as assets held for sale	-	(426)	-	-
- Exchange differences on translation of financial statements	(1,320)	2,871	-	-
As at 31 December	136,385	110,051	25	-
- Current portion	(2,107)	(10,889)	-	-
- Long-term portion	134,278	99,162	25	-

**30. Other non-current financial liabilities**

Other non-current financial liabilities as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Long-term other accounts payable	1,380	1,790	1,169	1,276
Others	3,612	2,872	318	312
Total	4,992	4,662	1,487	1,588

31. Other non-current liabilities

Other non-current liabilities as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Provision for remuneration for the renewal of petroleum production*	5,441	6,689	-	-
Deferred revenue**	19,679	19,787	5,050	5,317
Others	3,740	2,821	-	-
Total	28,860	29,297	5,050	5,317

* The Group recognized provision for remuneration for production bonus and the renewal of petroleum production which has to pay remuneration fee to the Ministry of Energy by using the discounted cash flows based on the significant assumptions, such as sales volume data, accumulate volume of total petroleum production, oil price and discounted rate, etc.

** Deferred revenue in the consolidated financial statements include advance receipts of availability payments in relation to the availabilities of a subsidiary's power plant, as agreed with EGAT and in accordance with the terms of PPA, amounting to Baht 14,731 million. (2022 : Baht 14,639 million)



32. Reserves

32.1 Legal reserve

Under the Public Limited Companies Act B.E. 2535, the Company is required to appropriate not less than 5% of its annual net profit to a legal reserve until the reserve fund reaches 10% of the authorized share capital. The reserve is non-distributable. The Company's reserve has already reached the 10% of authorized share capital stipulated in the Act.

32.2 Reserve for self-insurance fund

The self-insurance fund was set up to provide insurance coverage for the Company's business. The Company appropriates net profit from operations and the returns of the fund each year as contributions to the fund.

33. Basic earnings per share

Basic earnings per share for the years ended 31 December 2023 and 2022 are as follows:

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Profit attributable to equity holders of the Company	112,023,880,947	91,174,857,528	78,383,864,547	52,580,519,858
Adjustment of profit *	-	216,243,509	-	-
Profit for the calculation of earnings per share	112,023,880,947	91,391,101,037	78,383,864,547	52,580,519,858
Number of weighted average of ordinary shares (shares)	28,562,996,250	28,562,996,250	28,562,996,250	28,562,996,250
Earnings per share (Baht/share)	3.92	3.20	2.74	1.84

*Adjustments of profit are adjustments related to redemption of perpetual subordinated debentures, interests, and related income taxes



34. Sales and service income

Details of sales and service income for the years ended 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Oil products	1,955,448	1,995,203	1,205,945	1,379,445
Gas products	555,885	602,201	658,181	732,137
Petrochemical products	492,658	575,133	25,441	16,058
Pharmaceutical products	21,541	14,411	-	-
Non-oil businesses	23,740	21,626	20	24
Utilities	78,886	113,259	-	-
Services	12,751	13,485	1,067	1,153
Others*	3,642	31,885	-	-
Total	3,144,551	3,367,203	1,890,654	2,128,817

* Including mining products from coal business which was sold during the first quarter of 2023.

Sales and service income for the years ended 31 December 2023 and 2022 include sales to government agencies and state enterprises amounting to Baht 168,028 million and Baht 210,638 million in the consolidated financial statements, and Baht 121,518 million and Baht 128,238 million in the separate financial statements, respectively.



35. Other income

Details of other income 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
Transportation income	1,874	2,209	7,094	6,903
Dividend income	2,190	467	36,251	37,761
Interest income	12,219	3,921	3,144	2,256
Gain (loss) on disposals of assets and investments	6,110	1,886	(33)	(634)
Gain (loss) on investment at fair value through profit and loss	355	277	(143)	(53)
Reversal of allowance on impairment of investment	-	-	18,040	-
Gain on change in status of investments	2,443	848	-	-
Gain from early redemption of debentures	2,160	-	-	-
Others	13,354	14,812	5,959	6,245
Total	40,705	24,420	70,312	52,478

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36. Expenses by nature

Details of expenses by nature 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
Changes in inventories decrease	2,501,373	2,646,512	1,813,697	2,040,258
Staff costs	80,455	75,581	10,439	9,993
Depreciation and amortization	173,065	167,330	19,459	18,827
Expenses related to short-term lease agreements	1,096	1,058	24	25
Expenses related to low-value assets lease agreements	370	197	106	100
Expenses related to variable rental	932	920	718	729
Loss on impairment of assets and investments	4,942	12,609	143	21
(Reversal of) expected credit loss of accounts receivable and other assets	401	298	(63)	(81)



37. Finance costs

Details of finance costs for the years ended 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Interest expenses:				
Loans	12,195	7,901	3,445	2,617
Debentures	22,171	21,369	5,729	5,258
Finance leases liabilities	2,996	2,302	227	211
Derivative for cash flow hedge instruments	363	270	-	-
Provision for decommissioning costs	5,354	2,724	-	-
Others	225	450	-	4
Other finance costs	2,079	2,075	81	141
Total	45,383	37,091	9,482	8,231

38. Operating segments

These operating segments are consistent with the internal management reports provided to the Chief Operating Decision Maker (CODM), who makes decisions related to the allocation of resources to the segments and assesses their performance.

For management purposes, the Group is organized into business groups based on types of products and services. The major segments of the Group are as follows:

Upstream petroleum and Natural gas business group

1. Petroleum exploration and production business:

The Group conducts petroleum exploration and production business both domestically and overseas. The Group is the operator and jointly invests with leading petroleum exploration and production companies. Most domestic projects are located in the Gulf of Thailand, while overseas projects are located in Southeast Asia, Australia, America and Africa.

2. Natural gas business:

The Group conducts natural gas business including procurement, natural gas pipeline transmission, distribution, and natural gas separation. Products from the natural gas separation plants are used as feedstock for the petrochemical industry and as fuel in the household, transportation and industry sectors.



38. Operating segments (Continued)

Downstream petroleum business group

1. Oil and retail business:

The Group conducts marketing of petroleum products and lube oil in both domestic and overseas markets under an efficient operating system of procurement, storage, and distribution of products as well as the retail business at service stations.

2. International trading business:

The Group conducts international trading business including the import and export of petroleum and petrochemical products as well as other related products. This includes the price risk management and international chartering.

3. Petrochemical and Refining business:

The Group conducts refining business including the production and distribution of petroleum and petrochemicals products in both domestic and overseas markets.

New business and infrastructure group

NBI Group was established to develop new businesses in accordance with PTT's "Powering Life with Future Energy and Beyond" vision, in areas such as renewable energy, energy storage, EV value chain and hydrogen business. The Group will also look for growth opportunities in new businesses beyond energy, including life science (pharmaceuticals, medical devices, nutrition), logistics and infrastructure and AI, robotics and digitalization, as well as engaging in production and distribution of electricity, steam and hydro power for industrial purposes, property management and engineering project management.

Other operations of the Group are included in other segments, none of which constitutes a separately reportable segment.



38. Operating segments (Continued)

Consolidated financial statements

For the year ended 31 December 2023

	Upstream petroleum and natural gas		Downstream petroleum			New business and infrastructure	Others	Elimination	Total
	Petroleum exploration and production	Natural gas	Oil and retail	International trading	Petrochemicals and refining				
Sales - others	76,241	471,875	736,805	979,240	785,755	92,576	2,059	-	3,144,551
- related parties	224,453	183,884	34,092	1,052,823	557,795	31,555	4,048	(2,088,650)	-
Net sales	300,694	655,759	770,897	2,032,063	1,343,550	124,131	6,107	(2,088,650)	3,144,551
Gross profit (loss)*	259,686	75,796	42,576	8,836	112,749	35,679	824	(6,898)	529,248
EBITDA	231,301	66,024	21,403	4,325	80,640	26,251	(3,242)	193	426,895
Depreciation and amortization expenses	(84,729)	(20,144)	(6,521)	(1,282)	(45,177)	(14,736)	(476)	-	(173,065)
Segment operating profit (loss)	146,572	45,880	14,882	3,043	35,463	11,515	(3,718)	193	253,830
Share of profit (loss) from investments in joint ventures and associates	1,069	825	696	-	(939)	1,362	-	-	3,013
Others	(2,414)	1,481	(642)	-	5,131	307	(40)	-	3,823
Unallocated revenue and expenses:									
Interest income									12,219
Loss on derivatives									(13,194)
Gain on foreign exchange rate									22,285
EBIT									281,976
Profit for the year									155,280

* Gross profit (loss) excludes depreciation and amortization expenses in cost of sales.



38. Operating segments (Continued)

Consolidated financial statements

As at 31 December 2023

	Upstream petroleum and natural gas						Downstream petroleum			New business and infrastructure	Others	Elimination	Total
	Petroleum exploration and production	Natural gas		Oil and retail	International trading	Petrochemicals and refining							
Segment assets	843,938	437,627	199,173	140,370	1,142,906		325,385	156,263	-	3,245,662			
Inter-company assets	30,702	18,474	6,029	72,353	46,851		16,625	38,303	(229,337)	-			
Investments in joint ventures and associates	6,438	5,165	9,513	-	94,343		56,858	5	-	172,322			
Total segment assets	881,078	461,266	214,715	212,723	1,284,100		398,868	194,571	(229,337)	3,417,984			
Non-allocated assets										42,478			
Total assets										3,460,462			
Segment liabilities	349,599	53,180	77,623	159,872	696,941		163,351	252,226	-	1,752,792			
Inter-company liabilities	1,361	40,109	32,476	33,684	69,664		24,223	27,803	(229,320)	-			
Total segment liabilities	350,960	93,289	110,099	193,556	766,605		187,574	280,029	(229,320)	1,752,792			
Non-allocated liabilities										82,694			
Total liabilities										1,835,486			
Capital expenditure	117,907	23,654	11,578	718	50,592		14,912	708	(1,804)	218,265			



38. Operating segments (Continued)

Consolidated financial statements

For the year ended 31 December 2022

	Downstream petroleum					New business	Others**	Elimination	Unit: Million Baht
	Upstream petroleum and natural gas								Total
	Petroleum exploration and production	Natural gas	Oil and retail	International trading	Petrochemicals and refining	and infrastructure			
Sales - others	83,469	509,391	776,456	957,646	891,721	116,948	31,572	-	3,367,203
- related parties	247,881	199,461	15,289	1,214,920	581,957	31,476	6,090	(2,297,074)	-
Net sales	331,350	708,852	791,745	2,172,566	1,473,678	148,424	37,662	(2,297,074)	3,367,203
Gross profit (loss)*	290,886	69,368	41,005	17,184	148,699	24,344	21,693	(6,606)	606,573
EBITDA	253,973	61,207	20,962	13,897	109,719	16,392	15,084	54	491,288
Depreciation and amortization expenses	(82,942)	(18,302)	(6,348)	(954)	(43,538)	(12,952)	(2,294)	-	(167,330)
Segment operating profit (loss)	171,031	42,905	14,614	12,943	66,181	3,440	12,790	54	323,958
Share of profit (loss) from investments in joint ventures and associates	265	1,040	626	-	2,434	1,489	(5)	-	5,849
Others	(12,841)	(2,988)	(695)	-	1,215	925	(329)	-	(14,713)
Unallocated revenue and expenses:									
Interest income									3,921
Loss on derivatives									(74,914)
Gain on foreign exchange rate									5,552
EBIT									249,653
Profit for the year									122,100

* Gross profit (loss) excludes depreciation and amortization expenses in cost of sales.

** Including coal business which was sold during the first quarter of 2023.



38. Operating segments (Continued)

Consolidated financial statements

As at 31 December 2022

	Upstream petroleum and natural gas			Downstream petroleum			New business and infrastructure	Others*	Elimination	Total
	Petroleum exploration and production	Natural gas	Oil and retail	International trading	Petrochemicals and refining					
Segment assets	800,834	450,853	207,360	109,792	1,170,294		338,580	122,145	-	3,199,858
Inter-company assets	26,948	16,990	2,819	88,961	41,290		13,165	57,900	(248,073)	-
Investments in joint ventures and associates	6,569	5,321	9,725	-	93,797		49,596	6	-	165,014
Total segment assets	834,351	473,164	219,904	198,753	1,305,381		401,341	180,051	(248,073)	3,364,872
Non-allocated assets										50,760
Total assets										3,415,632
Segment liabilities	346,589	58,522	84,275	147,851	717,373		174,930	261,428	-	1,790,968
Inter-company liabilities	1,310	39,182	34,145	21,902	83,946		27,433	34,784	(242,702)	-
Total segment liabilities	347,899	97,704	118,420	169,753	801,319		202,363	296,212	(242,702)	1,790,968
Non-allocated liabilities										90,972
Total liabilities										1,881,940
Capital expenditure	132,751	29,422	7,611	3,841	94,287		8,720	492	(2,620)	274,504

* Including coal business which was sold during the first quarter of 2023.

**38. Operating segments (Continued)**

Geographical information

Sales and service income are presented in respect of the geographical location of customers for the years ended 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements	
	2023	2022
Thailand	1,744,026	1,933,532
Asia	1,167,335	1,146,884
Europe	66,270	98,015
America	103,986	131,014
Others	62,934	57,758
Total	3,144,551	3,367,203

Non-current assets are presented in respect of the geographical location of the assets as at 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements	
	2023	2022
Thailand	1,591,029	1,517,285
Asia	367,899	412,483
Europe	159,339	159,239
America	22,165	21,812
Others	126,693	137,995
Total	2,267,125	2,248,814

Major customers

For the years 2023 and 2022, the Group has no major customer with revenue of 10% or more of the entity's revenues.



39. Financial instruments

39.1 Classification of financial assets and liabilities

Unit: Million Baht

		Consolidated financial statements					
		31 December 2023					
	Measured at fair value - using hedge accounting	Measured at fair value through profit or loss	Measured at fair value through other comprehensive income	Measured at fair value through other comprehensive income	Measured at amortized cost	Total	
			income	income			
			- debt instruments	- equity instruments			
Financial assets							
Cash and cash equivalents	-	-	1	-	417,133	417,134	
Short-term investments in financial assets	-	-	797	-	25,684	26,481	
Trade accounts receivable	-	-	-	-	259,813	259,813	
Other accounts receivable	-	-	-	-	40,271	40,271	
Short-term lending	-	-	-	-	275	275	
Long-term investments in financial assets (include current portion)	-	4,675	842	40,215	5,910	51,642	
Long-term lending (include current portion)	-	-	-	-	8,884	8,884	
Derivatives	46	9,556	-	-	-	9,602	
Other current financial assets	-	-	-	-	878	878	
Other non-current financial assets	-	2,372	-	-	13,261	15,633	
Total financial assets	46	16,603	1,640	40,215	772,109	830,613	



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

Unit: Million Baht

	Consolidated financial statements			
	31 December 2023			
	Measured at fair value - using hedge accounting	Measured at fair value through profit or loss	Measured at amortized cost	Total
Financial liabilities				
Bank overdrafts and short-term loans from financial institutions	-	-	96,511	96,511
Trade accounts payable	-	-	240,286	240,286
Other accounts payable	-	-	67,344	67,344
Short-term borrowings	-	-	6,500	6,500
Long-term borrowings (include current portion)	-	-	960,702	960,702
Lease liabilities (include current portion)	-	-	97,729	97,729
Deposits on LPG cylinders	-	-	12,952	12,952
Derivatives	1,168	8,793	-	9,961
Other current financial liabilities	-	-	524	524
Other non-current financial liabilities	-	26	4,966	4,992
Total financial liabilities	1,168	8,819	1,487,514	1,497,501



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

Unit: Million Baht

	Consolidated financial statements						
	31 December 2022						
	Measured at fair value - using hedge accounting	Measured at fair value through profit or loss	Measured at fair value through other comprehensive income	Measured at fair value through other comprehensive income	Measured at amortized cost	Total	
Financial assets							
Cash and cash equivalents	-	-	281	-	339,773	340,054	
Short-term investments in financial assets	-	95	916	-	9,535	10,546	
Trade accounts receivable	-	-	-	-	219,054	219,054	
Other accounts receivable	-	-	-	-	25,149	25,149	
Short-term lending	-	-	-	-	151	151	
Long-term investments in financial assets							
(include current portion)	-	4,034	1,618	42,823	7,672	56,147	
Long-term lending (include current portion)	-	-	-	-	10,068	10,068	
Derivatives	949	15,448	-	-	-	16,397	
Other current financial assets	-	-	-	-	1,924	1,924	
Other non-current financial assets	-	2,559	-	-	8,866	11,425	
Total financial assets	949	22,136	2,815	42,823	622,192	690,915	



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

	Consolidated financial statements				Unit: Million Baht
	31 December 2022				
	Measured at fair value - using hedge accounting	Measured at fair value through profit or loss	Measured at amortized cost	Total	
Financial liabilities					
Bank overdrafts and short-term loans from financial institutions	-	-	90,757	90,757	
Trade accounts payable	-	-	227,121	227,121	
Other accounts payable	-	-	74,371	74,371	
Short-term borrowings	-	-	784	784	
Long-term borrowings (include current portion)	-	-	998,181	998,181	
Lease liabilities (include current portion)	-	-	103,872	103,872	
Deposits on LPG cylinders	-	-	12,684	12,684	
Derivatives	1,536	29,119	-	30,655	
Other current financial liabilities	-	25	6,044	6,069	
Other non-current financial liabilities	-	25	4,637	4,662	
Total financial liabilities	1,536	29,169	1,518,451	1,549,156	



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

Unit: Million Baht

	Separate financial statements				
	31 December 2023				
	Measured at fair value through profit or loss	Measured at fair value through other comprehensive income	Measured at amortized cost	Total	
Financial assets		- equity instruments			
Cash and cash equivalents	-	-	87,570	87,570	
Short-term investments in financial assets	-	-	1,344	1,344	
Trade accounts receivable	-	-	164,397	164,397	
Other accounts receivable	-	-	8,697	8,697	
Short-term lending	-	-	481	481	
Long-term investments in financial assets (include current portion)	448	6,124	5,910	12,482	
Long-term lending (include current portion)	-	-	56,553	56,553	
Derivatives	1,361	-	-	1,361	
Other current financial assets	-	-	297	297	
Other non-current financial assets	-	-	209	209	
Total financial assets	1,809	6,124	325,458	333,391	



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

Separate financial statements				Unit: Million Baht
31 December 2023				
	Measured at fair value through profit or loss	Measured at amortized cost	Total	
Financial liabilities				
Trade accounts payable	-	148,739	148,739	
Other accounts payable	-	18,679	18,679	
Short-term borrowings	-	18,297	18,297	
Long-term borrowings (include current portion)	-	232,079	232,079	
Lease liabilities (include current portion)	-	9,072	9,072	
Derivatives	4,358	-	4,358	
Other current financial liabilities	-	211	211	
Other non-current financial liabilities	-	1,487	1,487	
Total financial liabilities	4,358	428,564	432,922	

Unit: Million Baht



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

	Separate financial statements				Unit: Million Baht
	31 December 2022				
	Measured at fair value through profit or loss	Measured at fair value through other comprehensive income	Measured at amortized cost	Total	
Financial assets					
Cash and cash equivalents	-	-	52,788	52,788	
Short-term investments in financial assets	72	-	1,343	1,415	
Trade accounts receivable	-	-	161,459	161,459	
Other accounts receivable	-	-	8,339	8,339	
Short-term lending	-	-	682	682	
Long-term investments in financial assets (include current portion)	395	7,016	7,672	15,083	
Long-term lending (include current portion)	-	-	57,428	57,428	
Derivatives	1,231	-	-	1,231	
Other current financial assets	-	-	298	298	
Other non-current financial assets	-	-	179	179	
Total financial assets	1,698	7,016	290,188	298,902	



39. Financial instruments (Continued)

39.1 Classification of financial assets and liabilities (Continued)

	Separate financial statements			Unit: Million Baht
	31 December 2022			
	Measured at fair value through profit or loss	Measured at amortized cost	Total	
Financial liabilities				
Trade accounts payable	-	144,380	144,380	
Other accounts payable	-	23,959	23,959	
Short-term borrowings	-	9,447	9,447	
Long-term borrowings (include current portion)	-	235,551	235,551	
Lease liabilities (include current portion)	-	9,471	9,471	
Derivatives	5,633	-	5,633	
Other current financial liabilities	-	3,309	3,309	
Other non-current financial liabilities	-	1,588	1,588	
Total financial liabilities	5,633	427,705	433,338	



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements

Financial instruments of the Group consist of cash and cash equivalents, trade accounts receivable, lending loans, investments, loans and debentures. The Group has financial risks associated with those financial instruments and has risk managements policys as follows

- Credit risk
- Market risks: foreign exchange rate risk, interest rate risk and fluctuation in oil market price risk
- Liquidity risk

39.2.1 Credit risk

Credit risk arises when customers do not comply with the terms of agreements or the conditions of credit agreements, causing financial losses to the Group. However, the Group has managed risk by adjusting its credit policies according to the current economic situation, focusing on using financial instruments, such as the bank guarantee, letter of guarantee or standby letter of credit, making payment by using letter of credit (L/C), trade credit insurance. The Group also manages credit risk in various ways, such as cash collateral and advanced payment in order to reduce credit risk and to determine procedures for risk prevention and mitigation, including credit rating for all trading partners. In addition, the Group reviews their credit ratings regularly to be standardized and be effective for credit consideration process.

39.2.2 Market risk

The Group faces the principal financial risks associated with fluctuations in exchange rates, interest rates, and global oil market prices. The Group also has certain portions of sales, purchases and loans for operations nominated in foreign currencies which are paid in both fixed and floating interest rates. Accordingly, the management has entered into derivative contracts to cover these risks. The financial instruments used for hedging risks are forward foreign exchange contracts, interest rate swap contracts, cross-currency swap contracts, participating swap contracts etc.

Risk exposure relating to global oil market prices is managed by derivatives such as swap oil price contracts, forward oil contracts and commodity option contracts. These has to report details of the costs and market prices of all financial instruments to management, including outstanding forward foreign exchange contracts and forward oil contracts to management as well. Moreover, the Group has established structures and processes for governance and risk management consistent with international standards and has set Value at Risk (VaR) in commercial transactions. The Group also regularly prepared a risk status report to management and relvent departments.



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.2 Market risk (Continued)

Foreign exchange rate risk

The Group has entered into forward foreign exchange contracts. The contract prices and exchange rates under the forward foreign exchange contracts as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht	
	Consolidated financial statements	
	2023	2022
Forward foreign exchange purchase contracts		
Rate 32.8475 - 36.2000 Baht = 1 USD	95,808	-
Rate 30.1200 - 37.8000 Baht = 1 USD	-	108,160
Rate 3.3530 - 3.5073 Baht = 1 SEK	382	-
Rate 3.2466 - 3.2985 Baht = 1 SEK	-	1,311
Rate 36.9000 - 37.1150 Baht = 1 EUR	-	124
Rate 4.9015 - 5.1915 Baht = 1 CNY	-	32
Rate 8.6125 - 10.7068 NOK = 1 USD	-	1,555
Rate 15,435.0000 - 15,538.0000 IDR = 1 USD	144	-
Rate 15,710.0000 - 15,721.2000 IDR = 1 USD	-	24
Rate 7.0962 - 7.3790 CNY = 1 USD	569	-
Rate 6.9780 - 7.3590 CNY = 1 USD	-	64
Rate 113.1800 - 148.2900 JPY = 1 USD	-	195
Rate 1.6499 - 1.7800 NZD = 1 EUR	-	346
Rate 1.5055 - 1.5902 AUD = 1 EUR	-	1,036
Rate 7.3760 CNY = 1 EUR	-	85
Rate 1.4640 USD = 1 EUR	246	378
Rate 0.6740 - 0.6743 USD = 1 AUD	-	449
Rate 0.8809 - 1.1504 EUR = 1 GBP	-	105
Rate 0.0901 - 0.1038 USD = 1 NOK	1,477	-
Rate 0.2455 - 0.2575 Baht = 1 JPY	195	-
Rate 0.0068 - 0.0081 USD = 1 JPY	202	-



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.2 Market risk (Continued)

Foreign exchange rate risk (Continued)

		Unit: Million Baht	
		Consolidated financial statements	
		2023	2022
Forward foreign exchange sale contracts			
Rate 34.3400 - 36.7925 Baht = 1 USD	43,105	-	195
Rate 34.3650 - 37.1846 Baht = 1 USD	-	29,025	—
Rate 8.6125 - 10.7068 NOK = 1 USD	-	1,589	
Rate 15,710.0000 - 15,721.2000 IDR = 1 USD	-	24	
Rate 113.1800 - 148.2900 JPY = 1 USD	-	207	
Rate 1.6499 - 1.7800 NZD = 1 EUR	-	351	
Rate 1.5055 - 1.5902 AUD = 1 EUR	-	1,018	
Rate 7.3760 CNY = 1 EUR	-	84	
Rate 4.9015 - 5.1915 Baht = 1 CNY	-	32	
Rate 0.8809 - 1.1504 EUR = 1 GBP	-	104	
Rate 37.3500 - 38.1200 Baht = 1 EUR	51	-	
Rate 0.1261 - 0.1295 EUR = 1 CNY	133	-	
Rate 4.7009 - 4.8490 Baht = 1 CNY	15	-	
Rate 0.2412 - 0.2486 Baht = 1 JPY	2,449	-	
Rate 0.5908 - 0.6363 AUD = 1 Baht	833	-	
Rate 1.1417 - 1.1606 EUR = 1 GBP	110	-	
Rate 0.5378 - 0.5851 EUR = 1 NZD	229	-	
		Unit: Million Baht	
		Separate financial statements	
		2023	2022
Forward foreign exchange purchase contracts			
Rate 34.0733 - 36.0892 Baht = 1 USD	41,797	-	
Rate 34.3854 - 37.7552 Baht = 1 USD	-	47,927	
Rate 37.1150 Baht = 1 EUR	-	44	
Forward foreign exchange sale contracts			
Rate 34.3500 - 35.9868 Baht = 1 USD	34,624	-	
Rate 34.4460 - 37.1846 Baht = 1 USD	-	23,086	
Rate 0.2412 - 0.2486 Baht = 1 JPY	2,449	-	



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.2 Market risk (Continued)

Foreign exchange rate risk (Continued)

The Group has entered into a cross-currency swap contract of a long-term loan in the form of a participating swap contracts. The term of such contract as at 31 December 2023 and 2022 is as follows:

	Unit: Million Baht	
	Consolidated and separate	
	financial statements	
	2023	2022
JPY 23,000 million/USD 197 million	5,652	6,083

This contract has a maturity more than five years.

Currency and interest rate risks

The Group has entered into cross-currency swap contracts of other long-term investments, long-term loans and debentures. The terms of the outstanding cross-currency swap contracts as at 31 December 2023 and 2022 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Baht 58,991 million/USD 1,770 million	58,991	-	-	-
Baht 71,465 million/USD 2,140 million	-	71,465	-	-
USD 1,092 million/Baht 34,465 million	35,847	-	-	-
USD 429 million/Baht 13,994 million	-	14,733	-	-
CNY 1 million/Baht 4 million	4	-	-	-
USD 448 million/Baht 13,963 million	-	-	15,344	-
USD 348 million/Baht 11,281 million	-	-	-	12,020
Total	94,842	86,198	15,344	12,020



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.2 Market risk (Continued)

Currency and interest rate risks (Continued)

The maturity periods of contracts are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Due within 1 year	5,202	239	5,108	-
Over 1 year but not over 5 years	41,502	60,975	-	5,156
Over 5 years	48,138	24,984	10,236	6,864
Total	94,842	86,198	15,344	12,020

Unit: Million Baht

Interest rate risk

The Group has entered into interest rate swap contracts of long-term loans and debentures. The terms of the outstanding interest rate swap contracts as at 31 December 2023 and 2022 are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Interest rate swap contracts to swap floating for fixed rate in USD currency	-	5,384	-	-
Interest rate swap contracts to swap fixed for floating rate in USD currency	15,060	18,665	15,060	18,665
Interest rate swap contracts to swap floating for fixed rate in Baht currency	16,736	2,813	-	-
Interest rate swap contracts to swap fixed for floating rate in Baht currency	29,988	29,986	29,988	29,986
Interest rate swap contracts to swap fixed for lower fixed rate in Baht currency	1,998	11,954	1,998	11,954
Interest rate swap contracts to swap floating for fixed rate in EUR currency	1,902	-	-	-
Total	65,684	68,802	47,046	60,605

Unit: Million Baht



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.2 Market risk (Continued)

Interest rate risk (Continued)

The maturity periods of contracts are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	2023	2022	2023	2022
Due within 1 year	15,000	13,975	8,000	13,429
Over 1 year but not over 5 years	29,626	36,886	17,988	29,234
Over 5 years	21,058	17,941	21,058	17,942
Total	65,684	68,802	47,046	60,605

Unit: Million Baht

Sensitivity analysis

Sensitivity analysis of financial instruments in consolidated financial statements as at 31 December 2023 and 2022 are as follows:

- Foreign exchange rate

The following tables demonstrates the sensitivity of the Group's profit before tax and equity to a reasonably possible change in the USD exchange rates, with all other variables held constant. The Group's exposure to foreign currency changes for all other currencies is not material.

Foreign exchange rate effects	Profit before tax		Other components of shareholders' equity - currency translation differences	
	Increase (decrease)		Increase (decrease)	
	2023	2022	2023	2022
USD currency appreciate by 10% against by Baht currency	(5,464)	(5,550)	49,214	54,456
USD currency depreciate by 10% against by Baht currency	5,338	4,913	(49,214)	(53,604)

Unit: Million Baht



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.2 Market risk (Continued)

Sensitivity analysis (Continued)

Sensitivity analysis of financial instruments in consolidated financial statements as at 31 December 2023 and 2022 are as follows: (Continued)

- Interest rate

The following table demonstrates the sensitivity of the Group's profit before tax to a reasonably possible change in interest rates on floating rate loans as at 31 December 2023 and 2022, with all other variables held constant.

Interest rate effects	Unit: Million Baht	
	Financial costs	
	Increase (decrease)	
	2023	2022
Interest rate increase by 1%	2,203	2,092
Interest rate decrease by 1%	(2,204)	(2,087)

- Oil market price

The following table demonstrates the sensitivity of the Group's profit before tax to a reasonably possible change in market oil price as at 31 December 2023 and 2022, with all other variables held constant.

Oil market price effects	Unit: Million Baht	
	Profit before tax	
	increase (decrease)	
	2023	2022
Increase in oil market price of USD 1 per Barrel	(159)	(135)
Decrease in oil market price of USD 1 per Barrel	159	132



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.3 Liquidity risk

The Group has liquidity risk management by maintaining the level of cash and cash equivalents and having the ability to access a variety of funding sources to ensure sufficient for the operation of the Group.

The details of maturity of financial liabilities of the Group as at 31 December 2023 and 2022 considering from cash flow of contract which are not discounted as follows:

	Unit: Million Baht			
	Consolidated financial statements			
	31 December 2023			
	Less than 1 year	1- 5 years	Over 5 years	Total
Bank overdrafts and short-term loans from financial institutions	96,511	-	-	96,511
Trade accounts payable	240,286	-	-	240,286
Other accounts payable	60,097	-	-	60,097
Short-term borrowings	6,500	-	-	6,500
Other current financial liabilities	524	-	-	524
Borrowings and debentures:				
Principal	97,435	360,671	504,583	962,689
Interest paid	29,501	94,351	231,172	355,024
Lease liabilities	18,548	44,208	58,768	121,524
Deposits on LPG cylinders	-	-	12,952	12,952
Other non-current financial liabilities	-	2,992	831	3,823
Cash outflow from derivatives	155,447	45,945	42,566	243,958
Cash inflow from derivatives	153,562	45,586	44,427	243,575
Cash outflow from commodity derivatives	58	-	-	58
Cash inflow from commodity derivatives	2,519	-	-	2,519
Cash outflow from commodity contracts	9,404	-	-	9,404
Cash inflow from commodity contracts	6,348	-	-	6,348



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.3 Liquidity risk (Continued)

The details of maturity of financial liabilities of the Group as at 31 December 2023 and 2022 considering from cash flow of contract which are not discounted as follows: (Continued)

	Unit: Million Baht			
	Consolidated financial statements			
	31 December 2022			
	Less than 1 year	1- 5 years	Over 5 years	Total
Bank overdrafts and short-term loans from financial institutions	90,757	-	-	90,757
Trade accounts payable	227,121	-	-	227,121
Other accounts payable	61,194	-	-	61,194
Short-term borrowings	784	-	-	784
Other current financial liabilities	6,069	-	-	6,069
Borrowings and debentures:				
Principal	74,907	387,410	537,892	1,000,209
Interest paid	38,723	106,441	264,665	409,829
Lease liabilities	18,533	67,769	42,876	129,178
Deposits on LPG cylinders	-	-	12,684	12,684
Other non-current financial liabilities	-	2,344	1,001	3,345
Cash outflow from derivatives	130,204	59,809	12,271	202,284
Cash inflow from derivatives	129,737	62,497	13,019	205,253
Cash outflow from commodity derivatives	4,920	-	-	4,920
Cash inflow from commodity derivatives	4,630	-	-	4,630
Cash outflow from commodity contracts	14,467	-	-	14,467
Cash inflow from commodity contracts	6,392	-	-	6,392



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.3 Liquidity risk (Continued)

The details of maturity of financial liabilities of the Group as at 31 December 2023 and 2022 considering from cash flow of contract which are not discounted as follows: (Continued)

Unit: Million Baht

	Separate financial statements			
	31 December 2023			
	Less than 1 year	1- 5 years	Over 5 years	Total
Trade accounts payable	148,739	-	-	148,739
Other accounts payable	16,002	-	-	16,002
Short-term borrowings	18,297	-	-	18,297
Other current financial liabilities	211	-	-	211
Borrowings and debentures:				
Principal	39,354	77,500	115,248	232,102
Interest paid	7,934	23,396	89,966	121,296
Lease liabilities	1,744	5,106	3,743	10,593
Other non-current financial liabilities	-	220	98	318
Cash outflow from derivatives	86,360	8,941	16,508	111,809
Cash inflow from derivatives	86,150	7,569	16,590	110,309
Cash outflow from commodity derivatives	19	-	-	19
Cash inflow from commodity derivatives	160	-	-	160
Cash outflow from commodity contracts	8,890	-	-	8,890
Cash inflow from commodity contracts	8,960	-	-	8,960



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.3 Liquidity risk (Continued)

The details of maturity of financial liabilities of the Group as at 31 December 2023 and 2022 considering from cash flow of contract which are not discounted as follows: (Continued)

	Unit: Million Baht			
	Separate financial statements			
	31 December 2022			
	Less than 1 year	1- 5 years	Over 5 years	Total
Trade accounts payable	144,380	-	-	144,380
Other accounts payable	15,361	-	-	15,361
Short-term borrowings	9,447	-	-	9,447
Other current financial liabilities	3,309	-	-	3,309
Borrowings and debentures:				
Principal	16,000	98,354	121,224	235,578
Interest paid	14,527	24,860	95,534	134,921
Lease liabilities	1,424	5,435	4,068	10,927
Other non-current financial liabilities	-	193	120	313
Cash outflow from derivatives	75,417	6,793	12,202	94,412
Cash inflow from derivatives	76,009	7,660	12,966	96,635
Cash outflow from commodity derivatives	183	-	-	183
Cash inflow from commodity derivatives	45	-	-	45
Cash outflow from commodity contracts	28,196	-	-	28,196
Cash inflow from commodity contracts	28,540	-	-	28,540



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.3 Liquidity risk (Continued)

Principal and undrawn amount of short-term bank credit facilities as at 31 December 2023 and 2022 are as follows:

Unit: Million Baht

	Consolidated financial statements			
	Credit limit		Undrawn amount	
	2023	2022	2023	2022
Short-term committed bank credit facility	71,049	65,371	31,133	32,047
Short-term uncommitted bank credit facility	316,146	329,520	221,087	244,479

Unit: Million Baht

	Separate financial statements			
	Credit limit		Undrawn amount	
	2023	2022	2023	2022
Short-term committed bank credit facility	4,365	4,365	4,365	4,365
Short-term uncommitted bank credit facility	91,952	128,731	73,655	75,259

Principal and undrawn amount of long-term bank credit facilities as at 31 December 2023 and 2022 are as follows:

	Consolidated financial statements			
	Long-term committed bank credit facility			
	Credit limit		Undrawn amount	
	2023	2022	2023	2022
Credit facility in Baht (Million Baht)	144,394	114,911	48,605	56,182
Credit facility in USD (Million USD)	17,112	14,544	17,112	14,212
Credit facility in EUR (Million EUR)	43,658	-	5,683	-
Credit facility in VND (Million VND)	99	460,791	99	50,614



39. Financial instruments (Continued)

39.2 Disclosure of financial instruments and financial risk managements (Continued)

39.2.3 Liquidity risk (Continued)

Principal and undrawn amount of long-term bank credit facilities as at 31 December 2023 and 2022 are as follows:
(Continued)

	Separate financial statements			
	Long-term uncommitted bank credit facility			
	Credit limit		Undrawn amount	
	2023	2022	2023	2022
Credit facility in Baht (Million Baht)	-	12,500	-	12,500

39.3 Fair value measurement of financial instruments

As at 31 December 2023 and 2022, the Group had financial assets and financial liabilities measured at fair value as follows:

	Unit: Million Baht			
	Consolidated financial statements			
	31 December 2023			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value				
Cash and cash equivalents	-	1	-	1
Investments in short-term financial assets	-	797	-	797
Investments measured at fair value through other comprehensive income	3,897	842	36,318	41,057
Investments measured at fair value through profit or loss	970	-	3,705	4,675
Derivatives	3,856	5,746	-	9,602
Other non-current financial assets	2,372	-	-	2,372
Financial liabilities measured at fair value				
Derivatives	-	9,961	-	9,961
Other non-current financial liabilities	-	-	26	26



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

As at 31 December 2023 and 2022, the Group had financial assets and financial liabilities measured at fair value as follows: (Continued)

Unit: Million Baht

	Consolidated financial statements			
	31 December 2022			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value				
Cash and cash equivalents	-	281	-	281
Investments in short-term financial assets	23	916	72	1,011
Investments measured at fair value				
through other comprehensive income	6,073	1,618	36,750	44,441
Investments measured at fair value				
through profit or loss	1,171	-	2,863	4,034
Derivatives	4,481	11,916	-	16,397
Other non-current financial assets	2,559	-	-	2,559
Financial liabilities measured at fair value				
Derivatives	3,903	26,753	-	30,656
Other current financial liabilities	-	-	25	25
Other non-current financial liabilities	-	-	25	25



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

As at 31 December 2023 and 2022, the Group had financial assets and financial liabilities measured at fair value as follows: (Continued)

Unit: Million Baht

	Separate financial statements			
	31 December 2023			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value				
Investments measured at fair value through other comprehensive income	2,349	-	3,775	6,124
Investments measured at fair value through profit or loss	328	-	120	448
Derivatives	-	1,361	-	1,361
Financial liabilities measured at fair value				
Derivatives	-	4,358	-	4,358

Unit: Million Baht

	Separate financial statements			
	31 December 2022			
	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value				
Investments in short-term financial assets	-	-	72	72
Investments measured at fair value through other comprehensive income	3,691	-	3,325	7,016
Investments measured at fair value through profit or loss	395	-	-	395
Derivatives	-	1,231	-	1,231
Financial liabilities measured at fair value				
Derivatives	-	5,633	-	5,633



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

As at 31 December 2023 and 2022, the Group had financial assets and financial liabilities that were not measured at fair value, though the fair values approximate their carrying value, except financial assets and liabilities as follows:

Unit: Million Baht

Consolidated financial statements				
31 December 2023				
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Amortized cost investments	-	5,299	-	5,299
Financial liabilities disclosed at fair value				
Long-term borrowings	-	237,613	33,198	270,811
Debentures	-	651,492	-	651,492

Unit: Million Baht

Consolidated financial statements				
31 December 2022				
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Amortized cost investments	-	6,988	-	6,988
Financial liabilities disclosed at fair value				
Long-term borrowings	-	250,645	19,778	270,423
Debentures	-	662,399	-	662,399



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

As at 31 December 2023 and 2022, the Group had financial assets and financial liabilities that were not measured at fair value, though the fair values approximate their carrying value, except financial assets and liabilities as follows: (Continued)

Unit: Million Baht

	Separate financial statements			
	31 December 2023			
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Amortized cost investments	-	5,299	-	5,299
Financial liabilities disclosed at fair value				
Long-term borrowings	-	-	77,547	77,547
Debentures	-	150,311	-	150,311

Unit: Million Baht

	Separate financial statements			
	31 December 2022			
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Amortized cost investments	-	6,988	-	6,988
Financial liabilities disclosed at fair value				
Long-term borrowings	-	-	60,132	60,132
Debentures	-	172,118	-	172,118



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

Fair value valuation techniques and inputs for level 2 valuation

The fair values of debt securities were determined based on the latest bid price or the yield rate quoted by the Thai Bond Market Association or other relevant markets. They were also calculated based on the contractual cash flows, discounted using the market reference rate of other debt securities that have observable prices.

In determining the fair values of derivatives, most of the inputs used for the valuations are observable in the relevant markets, adjusted by appropriate risk factors, such as market price, price volatility, foreign exchange rate volatility, spot rates of foreign currencies, yield curves of the respective currencies, the market value of swap price, timing of exercise and commodity price yield curves. Discounting was applied if there was a significant impact to the fair value of the derivative instruments.

The fair values of long-term loans were determined based on the present values of future cash flows, discounted using the market interest rate for similar instruments. The fair values of debentures were based on the latest closing price or the reference interest rate quoted by the bond or other market or ask prices or latest price of comparable market securities. They were also calculated using the reference price in the secondary market of bond or other market that are quoted in an active market.

Fair value valuation techniques and inputs for level 3 valuation

The significant unobservable input for level 3 valuation is the risk-adjusted discount rate. This is estimated based on public companies' weighted average cost of capital and cost of equity that are, in the opinion of the Group, in a comparable financial position with the counterparties to the contract.

The fair values of debt instruments measured at fair value through profit or loss are as follows:

- For investments in startup companies, the fair values are based on the valuation made during the latest round of fundraising.
- For investments in non-marketable securities, the fair values are based on the discounted present value of the future cash flows, estimated based on available performance indicators and an appropriate interest rate, or the fair values are based on the net asset method whereby the information is reasonably available.



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

Fair value valuation techniques and inputs for level 3 valuation (Continued)

The fair values of equity instruments measured at fair value through other comprehensive income are as follows:

- For investments in startup companies, the fair values are based on the valuation made during the latest round of fundraising.
- For investments in non-marketable securities, the fair values are based on cost which is treated as an estimate of fair value unless there are significant changes in the operations of the investee, or the fair values are based on the discounted present value of the future cash flows, estimated based on an incremental borrowing rate and likely assumptions related to the conditions in the Share Purchase Agreement, or the fair values are based on the net asset method whereby the information is reasonably available.
- For investments in funds, the fair values are referred to the net asset value of the funds.

The fair values of long-term loans were determined based on discounted future cash flows and valuation model techniques, using an appropriate risk-adjusted discount rate. Most of the inputs used for the valuation are observable in the relevant markets, such as spot rates of foreign currencies, interest rate yield curves and bonds yield curves.

The fair value of other non-current financial liabilities that are categorized as contingent considerations from business acquisition and contingent considerations from interest acquisition in joint venture were determined by discounted cash flow. Significant unobservable input of fair value hierarchy level 3 is risk adjusted discount rate. It is estimated based on the Group's cost of debt and assumptions about related probability according to specified conditions in Sales and Purchase Agreement (SPA).



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

The reconciliation of financial assets and liabilities regularly measured fair value and categorized as level 3 as follows:

	Consolidated financial statements				Total
	Investments in short-term financial assets	Investments measured at fair value through other comprehensive income	Investments measured at fair value through profit and loss	Contingent considerations from business acquisition	
Balance as at 1 January 2023	72	36,750	2,863	50	39,735
- Increase (Decrease)	-	942	257	(25)	1,174
- Net gain (loss) on profit and loss	(72)	-	602	1	531
- Net loss on other comprehensive income	-	(1,201)	-	-	(1,201)
- Exchange differences on translation	-	(173)	(17)	-	(190)
Balance as at 31 December 2023	-	36,318	3,705	26	40,049

Unit: Million Baht

Unit: Million Baht



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

The reconciliation of financial assets and liabilities regularly measured fair value and categorized as level 3 as follows: (Continued)

	Consolidated financial statements						Unit: Million Baht
	Investments in short-term financial assets	Investments measured at fair value through other comprehensive income	Investments measured at fair value through profit and loss	Put options over non-controlling interest	Contingent considerations from business acquisition	Total	
Balance as at 1 January 2022	-	24,259	471	470	2,412	27,612	
- Increase (Decrease)	72	10,970	985	(457)	3	11,573	
- Business acquisition	-	329	1,004	-	-	1,333	
- Reclassification	-	(96)	70	-	-	(26)	
- Net gain (loss) on profit and loss	-	-	379	-	(2,478)	(2,099)	
- Net loss on other comprehensive income	-	(491)	-	-	-	(491)	
- Exchange differences on translation	-	1,779	(46)	(13)	113	1,833	
Balance as at 31 December 2022	72	36,750	2,863	-	50	39,735	



39. Financial instruments (Continued)

39.3 Fair value measurement of financial instruments (Continued)

The reconciliation of financial assets and liabilities regularly measured fair value and categorized as level 3 as follows: (Continued)

	Separate financial statements				Unit: Million Baht
	Investments in	Investments	Investments	Total	
	short-term financial assets	measured at fair value through other comprehensive income	measured at fair value through profit and loss		
Balance as at 1 January 2023	72	3,325	-	3,397	
- Increases	-	621	125	746	
- Net loss on profit and loss	(72)	-	(5)	(77)	
- Net loss on other comprehensive income	-	(171)	-	(171)	
Balance as at 31 December 2023	-	3,775	120	3,895	
Balance as at 1 January 2022	-	2,627	-	2,627	
- Increases	72	758	-	830	
- Reclassification	-	(31)	-	(31)	
- Net loss on other comprehensive income	-	(29)	-	(29)	
Balance as at 31 December 2022	72	3,325	-	3,397	



39. Financial instruments (Continued)

39.4 Cash flow hedge

The Group uses derivatives as hedging instruments as at 31 December 2023 and 2022 as follows:

	Consolidated financial statements			
	31 December 2023			
	Maturity			
	Less than 1 year	1 - 5 years	Over 5 years	Total
Foreign currency forward contracts (for highly probable forecast sale)				
Notional amount (Unit: Million Baht)	916	-	-	916
Average forward rate (Baht : USD)	34.34 - 36.79	-	-	34.34 - 36.79
Foreign currency forward contracts (for highly probable forecast purchases)				
Notional amount (Unit: Million Baht)	360	-	-	360
Average forward rate (Baht : USD)	32.85 - 35.34	-	-	32.85 - 35.34
Notional amount (Unit: Million Baht)	382	-	-	382
Average forward rate (Baht : SEK)	3.35 - 3.51	-	-	3.35 - 3.51
Interest rate swap contracts (for loans)				
Notional amount (Unit: Million Baht)	-	2,236	-	2,236
Average fixed rate (%)	-	4.30	-	4.30
Cross-currency swap contracts (for loans)				
Notional amount (Unit: Million Baht)	-	-	17,935	17,935
Average forward rate (Baht : USD)	-	-	30.76 - 32.00	30.76 - 32.00
Average fixed rate (%)	-	-	3.50	3.50
Cross-currency swap contracts (for debentures)				
Notional amount (Unit: Million Baht)	-	11,000	19,967	30,967
Average forward rate (Baht : USD)	-	33.00 - 33.75	30.72 - 33.60	30.72 - 33.75
Average fixed rate (%)	-	2.00 - 3.26	2.69 - 4.99	2.00 - 4.99



39. Financial instruments (Continued)

39.4 Cash flow hedge (Continued)

The Group uses derivatives as hedging instruments as at 31 December 2023 and 2022 as follows: (Continued)

	Consolidated financial statements			
	31 December 2022			
	Maturity			
	Less than 1 year	1 - 5 years	Over 5 years	Total
Foreign currency forward contracts (for highly probable forecast purchases)				
Notional amount (Unit: Million Baht)	1,675	150	-	1,825
Average forward rate (Baht : USD)	31.01 - 36.68	32.91 - 32.93	-	31.01 - 36.68
Notional amount (Unit: Million Baht)	929	382	-	1,311
Average forward rate (Baht : SEK)	3.30	3.25	-	3.25 - 3.30
Notional amount (Unit: Million Baht)	127	127	124	378
Average forward rate (USD : EUR)	1.46	1.46	1.46	1.46
Foreign currency forward contracts (for debentures)				
Notional amount (Unit: Million Baht)	6,111	-	-	6,111
Average forward rate (Baht : USD)	30.12 - 32.17	-	-	30.12 - 32.17
Interest rate swap contracts (for loans)				
Notional amount (Unit: Million Baht)	639	2,145	3,746	6,530
Average fixed rate (%)	1.96 - 4.49	1.96 - 4.49	1.96 - 4.49	1.96 - 4.49
Cross-currency swap contracts (for loans)				
Notional amount (Unit: Million Baht)	-	-	19,797	19,797
Average forward rate (Baht : USD)	-	-	30.72 - 32.00	30.72 - 32.00
Average fixed rate (%)	-	-	3.50 - 4.88	3.50 - 4.88
Cross-currency swap contracts (for debentures)				
Notional amount (Unit: Million Baht)	-	11,000	18,120	29,120
Average forward rate (Baht : USD)	-	33.69 - 33.75	32.66 - 33.60	32.66 - 33.75
Average fixed rate (%)	-	2.00 - 3.26	2.69 - 4.82	2.00 - 4.82



39. Financial instruments (Continued)

39.4 Cash flow hedge (Continued)

The impact of the derivatives on the statement of financial position as at 31 December 2023 and 2022 as follows:

	Consolidated financial statements			Unit: Million Baht
	31 December 2023			
	Provision of cash flow hedge		Provision for	
	Continuous hedging	Hedge termination	cost of hedging	
Highly probable forecast sale	27	-	-	-
Highly probable forecast purchases	(1)	-	5	5
Loans	(1,311)	-	(610)	(610)
Debentures	685	-	455	455

Notes to Financial Statements

	Consolidated financial statements			Unit: Million Baht
	31 December 2022			
	Provision of cash flow hedge		Provision for	
	Continuous hedging	Hedge termination	cost of hedging	
Highly probable forecast purchases	(76)	-	(12)	
Loans	(35)	-	1	
Debentures	(1,086)	-	269	



39. Financial instruments (Continued)

39.4 Cash flow hedge (Continued)

The impact of the hedging instruments on the statement of financial position as at 31 December 2023 and 2022 and the impact of cash flow hedge on the statement of income for the year ended 31 December 2023 and 2022 as follows:

Consolidated financial statements						Unit: Million Baht
31 December 2023						
Notional amount	Carrying amount	Change in fair value used for measuring effectiveness for the period	Cost of hedging recognized in shareholders' equity	Provision of cash flow hedge classified to profit and loss	Line item in the statement of incomes or non-financial assets	
Foreign currency forward contracts						
- for highly probable forecast sale	916	34	-	-	-	
Foreign currency forward contracts						
- for highly probable forecast purchases	742	5	22	5	-	
Interest rate swap contracts - for loans	2,236	(81)	(63)	-	76	Finance cost
Cross-currency swap contracts - for loans	17,935	(949)	1,230	610	-	-
Cross-currency swap contracts - for debentures	30,967	333	186	(386)	(289)	Gain (loss) on foreign exchange rates



39. Financial instruments (Continued)

39.4 Cash flow hedge (Continued)

The impact of the hedging instruments on the statement of financial position as at 31 December 2023 and 2022 and the impact of cash flow hedge on the statement of income for the year ended 31 December 2023 and 2022 as follows: (Continued)

		Consolidated financial statements					Unit: Million Baht
		31 December 2022					
	Notional amount	Carrying amount	Change in fair value used for measuring effectiveness for the period	Cost of hedging recognized in shareholders' equity	Provision of cash flow hedge classified to profit and loss	Line item in the statement of incomes or non-financial assets	
Foreign currency forward contracts							
- for highly probable forecast purchases	2,328	(32)	(84)	(20)	-	-	
Foreign currency forward contracts							
- for debentures	6,111	658	16	4	-	-	
Interest rate swap contracts - for loans	6,530	(71)	313	-	144	Gain (Loss) on derivatives	
Cross-currency swap contracts - for loans	3,000	(136)	(1)	(2)	8	Gain (Loss) on derivatives	
Cross-currency swap contracts - for debentures	48,917	2,452	3,558	1,182	(160)	Gain (loss) on foreign exchange rates	
Interest rate collar (zero cost collar) - for loans	-	-	(38)	1	-	-	



39. Financial instruments (Continued)

39.4 Cash flow hedge (Continued)

Movement of other components of shareholders' equity and other comprehensive income analysis as follows:

		Unit: Million Baht	
		Consolidated financial statements	
		Provision of cash flow hedge	Provision for cost of hedging
As at 1 January 2023		(1,197)	258
- Change in fair value of hedging instruments		818	(432)
- Classification to profit and loss		(214)	-
- Effect of taxes		(7)	24
As at 31 December 2023		(600)	(150)

		Unit: Million Baht	
		Consolidated financial statements	
		Provision of cash flow hedge	Provision for cost of hedging
As at 1 January 2022		(1,278)	296
- Change in fair value of hedging instruments		128	(48)
- Classification to profit and loss		(160)	-
- Effect of taxes		113	10
As at 31 December 2022		(1,197)	258



40. Dividend payment

Dividend	Approved by	Dividend payment rate (Baht/share)	Number of shares (shares)	Total dividend (Million Baht)	Payment date
For the year 2022	The 2023 Annual General Shareholders' Meeting of the Company on 12 April 2023	0.70	28,562,841,312	19,994	28 April 2023
Interim 2023	The Board of Directors Meeting of the Company on 21 September 2023	0.80	28,562,804,952	22,850	20 October 2023
				<u>42,844</u>	

41. Promotional privileges

Some subsidiaries received the following promotional privileges from the BOI under the Investment Promotion Act, B.E. 2520

The TOP Group has been granted promotional privileges from the BOI for its power and steam generation, petrochemical product production, and chemical product production. The promotional privileges include exemption from import duties and tax on the machinery and equipment approved by the BOI, exemption from corporate income tax on the net income from the promoted business for seven to eight years starting from the date on which income is first derived from such operations or eight years from the date on which the income is received subsequent to when the promotional privileges were granted, and a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption.

The PTTGC Group has been promotional granted privileges from the BOI for its production of upstream, intermediate and downstream petrochemical, utilities and production support facilities, jetty for loading and storage of liquid product and transportation by marine vessels, petroleum product production. The promotional privileges include exemption and/or reduction from payment of income tax on the net profit derived from promoted operations.

The GPSC Group has been granted promotional privileges for its production of electricity, steam, water, chilled water, and refuse-derived fuel. The promotional privileges include exemption from various duties and taxes and exemption from corporate income tax on the net income from the promoted business for four or eight years starting from the date on which income is first derived from such operations.



41. Promotional privileges (Continued)

Some subsidiaries received the following promotional privileges from the BOI under the Investment Promotion Act, B.E. 2520 (Continued)

The IRPC Group has been granted promotional privileges for its manufacture of Compounded Plastic, the cogeneration and steam power plant project (CHP), Propylene project (PRP), EBSM Upgrading for ABS Specialties project (EBSM), Polypropylene Resin (PPE) project, Polypropylene Compound project (PPC), High Pressure HDPE Compound project, Value Added Products (UHV), Floating Solar project, and PP Melt Blown project. The promotional privileges include exemption from import duties and tax on materials and necessary parts including machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for three to eight years starting from the date on which income is first derived from such operations, a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption, and double deduction of logistics, electricity and water expenses for a period of ten years since income is first derived from such operations.

The OR Group has received investment promotion certificates granting promotional privileges for the manufacture of quality roasted coffee beans and one investment promotion certificate granting promotional privileges for the electricity generated from solar energy. The OR Group has been granted a range of privileges, including exemption from corporate income tax subject to certain imposed conditions.

The PTT TANK Group has been granted promotional privileges for its loading/unloading facilities for sea transport Category 7.1: Public utilities and basic services. The promotional privileges include exemption from import duties on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for eight years starting from the date on which income is first derived from such operations, and a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption. Moreover, the PTT TANK Group has been granted promotional privileges for its loading/unloading facilities for sea transport Category 7.1.4 Loading/unloading facilities for sea transport. The promotional privileges include exemption from import duties on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for six years starting from the date on which income is first derived from such operations.

PTTLNG has been granted promotional privileges, for its liquefied natural gas transportation business Category 7.1 Public utilities and basic services. The promotional privileges include exemption from import duties on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for eight years starting from the date on which income is first derived from such operations, and a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption. Moreover, PTTLNG has been granted promotional privileges for its loading facilities for sea transport Category 7.1.4. under the promotion conditions. The promotional privileges include exemption from corporate income tax on the net income from the promoted business for five years starting from the date on which income is first derived from such operations.

The PTTGM Group has been granted promotional privileges for its production of Li-ion battery. These privileges include exemption from import duties on machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business (not exceeding 100% of the investment but excluding land and working capital) for eight years starting from the date on which income is first derived from such operations, a 50% reduction of corporate income tax on the net income from the promoted business for five years after the expiry date of the corporate income tax exemption.

The Group must comply with certain terms and conditions prescribed in the promotional certificates.



42. Commitments and contingent liabilities

Details of significant changes in commitments and contingent liabilities are as follows:

42.1 Details of commitments to related parties are as follows:

42.1.1 The Company has provided loans to its subsidiaries through PTT Treasury Center Company Limited (PTTCC) (a subsidiary of the Company) with credit limits totaling Baht 115,679 million. As at 31 December 2023, the remaining credit limits were Baht 57,003 million.

42.1.2 As at 31 December 2023, the Group entered into the Sponsor Support Agreements with their related parties totaling USD 1,267 million with credit limits based on the Group's participating interest in those related parties.

The Company has commitments arising from issuing Parent Company Guarantees (PCG) on behalf of a subsidiary, providing guarantees for purchases of goods. However, the subsidiary has established risk management measures for such transactions. Therefore, the Company bears very low risk of assuming responsibility for the above obligations.

The Company has commitments for guarantee of the subsidiaries' loans and debentures as mentioned in Notes 27.

42.1.3 As at 31 December 2023, the Group had obligations not exceeding USD 270 million in respect of the purchase of shares in the associates under the share purchase agreements.

The Company had obligations under the Shareholder Agreements to pay for ordinary shares in proportion to its shareholding. As at 31 December 2023, the Company had remaining obligations amounting to Baht 9,296 million.



42. Commitments and contingent liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 42.2 Commitments under leases - the Group as a lessee, the future minimum lease payments under uncancellable leases as at 31 December 2023 are as follows:

	Unit: Million Baht	
	Consolidated	Separate
	financial statements	financial statements
- Within 1 year	1,570	104
- Over 1 year but not over 5 years	544	59
- Over 5 years	744	50
Total	2,858	213

- 42.3 As at 31 December 2023, the Group had capital commitments of Baht 132,916 million in the consolidated financial statements and Baht 25,036 million in the separate financial statements.

- 42.4 As at 31 December 2023, the Group had outstanding letters of credit of Baht 70,014 million in the consolidated financial statements and Baht 5,955 million in the separate financial statements.

- 42.5 As at 31 December 2023, the Group had contingent liabilities in the form of letter of guarantee amounting to Baht 44,597 million in the consolidated financial statements and Baht 538 million in the separate financial statements.



42. Commitments and contingent liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 42.6 On 25 February 2014, the contractor for an onshore natural gas pipeline construction project (the “Contractor”) filed a lawsuit against the Company with the Civil Court on the grounds of wrongful termination and breach of contract and claim for outstanding payment for the work and damages. The Company considered all of the Company’s actions to have been in accordance with the terms and conditions of the contract and, therefore, forwarded the case to the Office of the Attorney General to consider arguing the case. The Company, by the Office of the Attorney General, submitted an answer with the Civil Court, which subsequently ordered the case to be transferred to the Central Administrative Court for consideration and judgment because the Civil Court and the Central Administrative Court were both of the opinion that the case was an administrative case. The Civil Court transferred the case to the Central Administrative Court. Currently, the case is under the consideration of the Central Administrative Court.

After the Company terminated the contract with the Contractor, the Company completed an onshore natural gas pipeline construction project. Subsequently, on 20 June 2018, the Company filed a lawsuit against the Contractor with the Central Administrative Court on the grounds of breach of contract and abandonment of work and claimed damages. On 15 October 2020, the Central Administrative Court issued an order of joinder that this case to be tried together with the case filed by the pipeline contractor. Currently, the case is under the consideration of the Central Administrative Court.

On 25 September 2019, the Contractor filed a statement of fact with the Central Administrative Court. On 8 March 2019, the National Company Law Tribunal of India had ordered the Contractor to enter the Corporate Insolvency Resolution Process and had appointed a Resolution Professional in accordance with Indian Law. The Company conducted an investigation and found that such statement was true. Subsequently, on 26 November 2019, the Company filed a motion for repayment of debt with the Resolution Professional in India, who is currently considering the claim. Subsequently, the Contractor has been brought into the liquidation process under the Law of India and the Company also filed a petition to request the payment of debt in accordance with the Law of India. At present, the matter is under the consideration of the Indian court.

On 27 December 2023, the Central Administrative Court rendered a judgment dismissing the complaint in the case where the Construction Company is the plaintiff, and the Construction Company to pay for damages of approximately Baht 6,400 million with interest in accordance with the law in the case where the Company is the plaintiff. The Central Administrative Court ordered that the damages be fully paid within 60 days from the judgment date. However, the parties to the cases have the right to appeal the Central Administrative Court’s judgment to the Supreme Administrative Court within 30 days from the judgment date.



42. Commitments and contingent liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 42.7 Reference is made to the class action lawsuit brought by a group of Indonesian seaweed farmers against PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA) in the Federal Court of Australia in 2016. The farmers claimed that damage to their seaweed crops was allegedly caused by the 2009 Montara incident. The trial judge found that, on the balance of probabilities, oil from the Montara oil spill incident reached the seaweed farms and caused damage, and also identified the impacted areas. PTTEP AAA lodged an appeal against the court's first instance judgment in its entirety. However, in parallel in the fourth quarter of 2022, PTTEP AAA participated in mediation, as ordered by the Court, and reached an in-principle agreement, whereby PTTEP AAA would pay Australian Dollar 192.5 million in full and final settlement of the class action (including PTTEP AAA's appeal) to the group of Indonesian seaweed farmers, on a no admission of liability basis.

In the first quarter of 2023, the Federal Court of Australia approved this in-principle settlement agreement and the approach to the distribution of the settlement sum to the group members.

In May 2023, PTTEP AAA paid the approved settlement amount of Australian Dollar 192.5 million, equivalent to Baht 4,421 million. Nevertheless, the class action remains ongoing until the claims administrator appointed by the court completes the distribution process. This process will be carried out in accordance with the approved distribution scheme under the supervision of the court. PTTEP AAA will monitor such distribution process to ensure it is conducted in line with the settlement agreement approved by the court. The case will be finalised when the distribution process has been completed.



42. Commitments and contingent liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 42.8 During the third quarter of 2014, the number of people in Rayong filed several lawsuits with the Civil Court and the Rayong Provincial Court against PTT Global Chemical Public Co., Ltd. (PTTGC) to claim the extra compensation from oil spill incident and to perform the rehabilitation of the sea and natural environmental recovery. Some cases have been dismissed and some cases have been passed a judgment by the Civil Court on 25 August 2016 ordered PTTGC to compensate for damages including interest and rehabilitation of approximately Baht 11 million. PTTGC has appealed on 17 February 2017. Subsequently, on 11 May 2018, PTTGC made compromise agreements with majority plaintiffs at the Civil Court. On 20 December 2018, the Court of Appeal has passed the judgment according to the compromise contracts which PTTGC has already paid compensation in full amount. For the remaining plaintiffs, the Court of Appeal orders PTTGC to pay compensation with its interest according to the judgement of the Court of First Instance and reduced the amount of interest. PTTGC has paid compensation to all plaintiff completely and no petition is submitted to Supreme Court by any of plaintiff. This case has become final.

For the case at Rayong Provincial Court, on 28 September 2018, the court has made the judgement ordering PTTGC to pay damage cost with its interest approximately Baht 38 million by deducting the remedy payment paid to the plaintiffs of Baht 24 million. PTTGC deposited the remaining damage cost with its interest to the Rayong Provincial Court on 25 February 2019. Some plaintiffs filed an appeal with the Rayong Provincial Court and PTTGC has filed an answer to the appeal with the Rayong Provincial Court on 2 October 2019. Subsequently, on 1 September 2020, the Court of Appeal Region 2 has made the judgement ordering PTTGC to pay damage cost with its interest to the plaintiffs. PTTGC deposited the amount of Baht 25 million to the Rayong Provincial Court on 30 September 2020, which is to cover the additional damages ordered under the judgement. Afterwards, on 14 October 2020, the Rayong Provincial Court sent an appointment to hear the judgement or the order of the Court of Appeal Region 2 on 26 November 2020. Then, the plaintiffs have filed the Dika appeal period on 1 March 2021. The Supreme Court has issued an order accepting the Dika appeal of the plaintiffs on 2 March 2022 and sent a copy of Dika appeal to PTTGC on 19 March 2022. PTTGC filed a petition to the Dika appeal on 13 September 2022. The case is currently under the trial by the Supreme Court.

Subsequently, on 28 July 2023, PTTGC received a summons and a copy of the civil plaint, which the Department of National Parks, Wildlife and Plant Conservation filed against the Company with Rayong Provincial Court regarding the wrongful act causing damage to natural resources and claim for damages. The plaintiff claimed that the oil spill incident in 2013 caused damage to the plaintiff. However, PTTGC and its legal advisor of PTTGC considered relevant facts, evidence and applicable laws and are of the opinion that PTTGC has taken appropriate measures to provide remedy and compensation for the damage, and the natural resources and environment have been restored since the incident. Therefore, PTTGC is not liable for the damages as claimed, and no provision for any losses resulting from this case has been recorded.



42. Commitments and contingent liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

42.9 On 8 April 2023, PTTGC received a summons and a copy of the civil plaint which the Local Fisheries Association, fishermen and merchants ("Plaintiffs") filed against Star Petroleum Refining Public Company Limited as the first defendant and the PTTGC as the second defendant with Rayong Provincial Court regarding the wrongful act, claim for damages and request for marine resources restoration. The Plaintiffs claimed that the oil spill incident caused the Plaintiffs' loss of income. However, PTTGC and its legal advisor considered relevant facts, evidence and applicable laws and are of the opinion that PTTGC did not commit a wrongful act against the Plaintiffs as claimed. Therefore, it is not liable for the damages as claimed. PTTGC submitted the statement of defense to the Rayong Provincial Court on 8 June 2023 and the case is under the consideration by the Rayong Provincial Court. Accordingly, no provision for any losses resulting from this case has been recorded.

42.10 On 3 September 2023, the incident resulting in an oil spill during the oil discharge occurred near the Single Buoy Mooring of Thai Oil Public Company Limited (TOP)'s refinery in Chonburi. TOP, with cooperation and support from both public and private sector entities, promptly initiated oil spill cleanup efforts to prevent the oil from reaching the shoreline. At present, TOP has completed the clean-up of the spilled oil. The ongoing process involves assessment of long-term impacts and determining any required rehabilitation actions in the affected areas, which will require cooperation among government authorities, external experts and local communities. Currently, TOP's refinery has resumed its normal operations.

TOP has established recovery measures to provide assistance to those who have been affected by this situation. Concurrently, TOP is actively negotiating with the insurance company to determine the claim value under the insurance policy.

TOP has recognized related expenses of approximately Baht 224 million in the statement of income for the year ended 31 December 2023 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 providing compensation and the financial relief to affected parties.

As of 31 December 2023, the related expenses included the provision for the oil spill incident and TOP may potentially incur additional expenditures in the future.



43. Events after the reporting period

- 43.1 On 19 December 2023, the cabinet meeting passed a resolution regarding contributions from a shortfall of gas suppliers to reduce natural gas prices. This resolution is part of measures to lower electricity prices.

In this regard, the Energy Regulatory Commission (ERC) ordered the Company to include the shortfall amounting to Baht 4,300 million incurred in the period of October 2020 - December 2022 in the pool gas calculation for January 2024. Therefore, the Company appealed such order with the ERC since the Company has believed that its calculation of the pool gas is correct and in accordance with applicable resolutions of the National Energy Policy Committee (NEPC) and relevant notifications of ERC. Furthermore, the Company fulfilled the terms and conditions in accordance with the gas sales agreement. Subsequently, ERC decided to dismiss the Company's appeal, requiring the Company to comply with ERC's order immediately. If the Company disagrees with the ERC's decision, the Company is entitled to file a petition with the Administrative Court or to submit this matter to the Office of the Attorney General. This is in accordance with the Rules of the Office of the Prime Minister on the determination of dispute resolution between government agencies and Litigation, 2561 B.E. within 90 days from the date of acknowledgement of the ERC's decision.

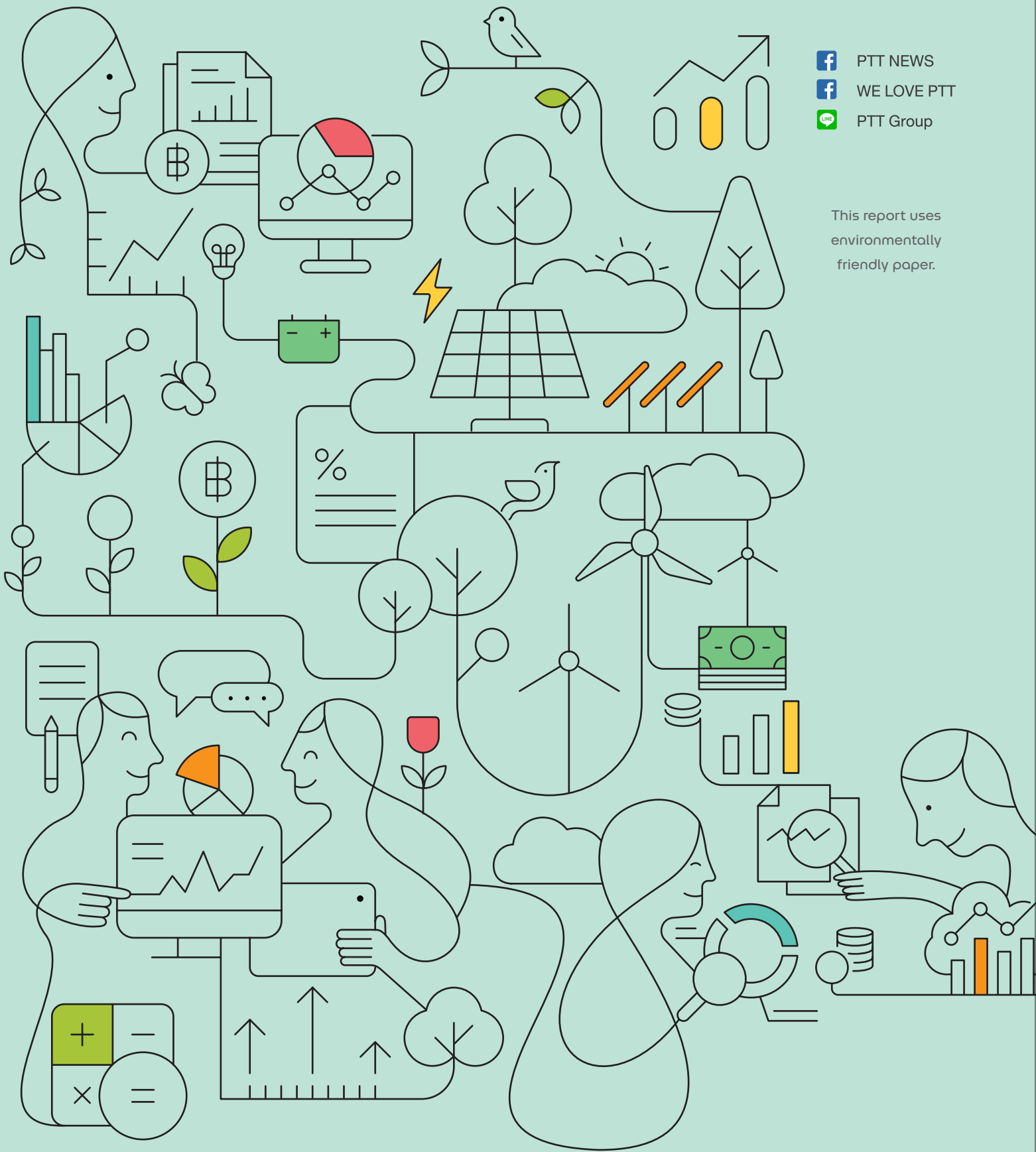
On 12 January 2024, the Board of Directors, the special meeting No. 1/2567 passed a resolution approving the Company's compliance with the ERC's decision on the appeal. In response to this resolution, the Company will take into account necessary and appropriate legal measures or exercise of its legal rights under applicable laws. The Company therefore included the shortfall in the pool gas calculation, resulting in an impact on the Company's sales income in January 2024.




- 43.2 On 15 February 2024, at the Board of Directors Meeting No. 2/2024 of the Company, the Board passed a resolution to propose to the Annual General Meeting of the Company's shareholders for the approval of dividend payment of Baht 2.00 per share for the year 2023. On 20 October 2023, the Company paid an interim dividend of Baht 0.80 per share as described in Note 40. Accordingly, the remaining dividend of Baht 1.20 per share or approximately Baht 34,275 million will be proposed for approval by the Annual General Meeting of the Company's shareholders for the year 2024.
- 43.2 The Board of Directors of the Company approved these financial statements for public issuance on 15 February 2024.



Audit Fee

PTT and its subsidiaries paid a total of THB 337,686,464 (Three hundred thirty-seven million, six hundred and eighty-six thousand, four hundred and sixty-four) in audit fees to the office of the external auditors for the previous fiscal year. They also paid THB 76,360,507 (Seventy-six million, three hundred and sixty thousand, five hundred and seven) for other services (non-audit fees) such as consulting services for M&A in the areas of financial due diligence, tax and accounting, tax service fees, and other certification fees in the previous fiscal year.



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