Consolidated Income Statement

for the year ended 31st December 2021

	Note	2021 HK\$'M	2020 HK\$'M
Revenue	5	53,563.7	40,927.0
Total operating expenses	6	(44,744.0)	(32,527.1)
		8,819.7	8,399.9
Other losses, net	7	(1,563.3)	(481.9)
Interest expense	9	(1,408.2)	(1,268.6)
Share of results of associates	21	1,885.6	1,187.0
Share of results of joint ventures	22	646.9	1,089.2
Profit before taxation	10	8,380.7	8,925.6
Taxation	13	(2,155.0)	(1,713.2)
Profit for the year		6,225.7	7,212.4
Attributable to:			
Shareholders of the Company		5,017.0	6,007.3
Holders of perpetual capital securities		110.9	110.3
Non-controlling interests		1,097.8	1,094.8
		6,225.7	7,212.4
Earnings per share – basic and diluted, HK cents	15	26.9	32.2*

^{*} Adjusted for the bonus share issue in 2021

Consolidated Statement of Comprehensive Income

for the year ended 31st December 2021

	2021 HK\$'M	2020 HK\$'M
Profit for the year	6,225.7	7,212.4
Other comprehensive income:		
Items that will not be reclassified subsequently to profit or loss:		
Movement in reserve of equity investments at fair value through other comprehensive income	(279.7)	(597.6)
Remeasurements of retirement benefit	82.8	55.2
Share of other comprehensive loss of an associate	-	(19.7)
Exchange differences	340.0	891.6
Items that may be reclassified subsequently to profit or loss:		
Movement in reserve of debt investments at fair value through other comprehensive income	(6.6)	4.5
Change in fair value of cash flow hedges	24.8	(87.1)
Share of other comprehensive (loss)/income of an associate	(3.5)	4.1
Exchange differences	1,937.2	2,975.9
Other comprehensive income for the year, net of tax	2,095.0	3,226.9
Total comprehensive income for the year	8,320.7	10,439.3
Total comprehensive income attributable to:		
Shareholders of the Company	6,829.6	8,534.0
Holders of perpetual capital securities	110.9	110.3
Non-controlling interests	1,380.2	1,795.0
	8,320.7	10,439.3

Consolidated Statement of Financial Position

as at 31st December 2021

	Note	2021 HK\$'M	2020 HK\$'M
Assets			
Non-current assets			
Property, plant and equipment	16	72,221.5	68,133.7
Investment property	17	849.0	827.0
Right-of-use assets	18	2,938.7	2,802.4
Intangible assets	19	5,607.2	5,462.9
Associates	21	36,149.9	28,670.3
Joint ventures	22	12,575.2	11,981.2
Financial assets at fair value through other comprehensive income	23	2,170.5	2,492.8
Financial assets at fair value through profit or loss	24	5,047.6	4,687.3
Derivative financial instruments	25	331.8	305.0
Retirement benefit assets	26	184.0	111.9
Other non-current assets	27	5,804.1	4,649.1
		143,879.5	130,123.6
Current assets			
Inventories	28	3,140.7	2,671.0
Trade and other receivables	29	9,148.9	8,572.5
Loan and other receivables from associates	21	418.8	401.7
Loan and other receivables from joint ventures	22	535.9	442.9
Loan and other receivables from non-controlling shareholders		306.6	206.3
Financial assets at fair value through profit or loss	24	_	205.4
Derivative financial instruments	25	2.1	28.5
Time deposits over three months	30	77.9	173.3
Time deposits up to three months, cash and bank balances	30	10,557.0	7,455.0
		24,187.9	20,156.6
Current liabilities			
Trade payables and other liabilities	31	(18,487.6)	(17,031.1)
Amounts due to joint ventures	22	(189.5)	(486.3)
Loan and other payables due to non-controlling shareholders		(159.4)	(108.3)
Provision for taxation		(931.0)	(1,188.1)
Borrowings	32	(18,255.2)	(10,852.3)
Derivative financial instruments	25	(511.0)	(140.2)
		(38,533.7)	(29,806.3)
Total assets less current liabilities		129,533.7	120,473.9

Consolidated Statement of Financial Position (Continued)

as at 31st December 2021

	Note	2021 HK\$'M	2020 HK\$'M
Non-current liabilities			
Deferred taxation	33	(7,225.4)	(7,059.1)
Borrowings	32	(36,855.9)	(31,286.3)
Derivative financial instruments	25	(856.9)	(478.6)
Other non-current liabilities	34	(2,756.7)	(2,496.6)
		(47,694.9)	(41,320.6)
Net assets		81,838.8	79,153.3
Capital and reserves			
Share capital	35	5,474.7	5,474.7
Reserves	36	61,951.7	61,283.8
Shareholders' funds		67,426.4	66,758.5
Perpetual capital securities	37	2,384.2	2,384.0
Non-controlling interests		12,028.2	10,010.8
Total equity		81,838.8	79,153.3

Approved by the Board of Directors on 21st March 2022

Lee Ka-kit
Director

David Li Kwok-po Director

Consolidated Cash Flow Statement

for the year ended 31st December 2021

	Note	2021 HK\$'M	2020 HK\$'M
Net cash from operating activities	41(a)	10,469.5	9,910.2
Investing activities			
Receipt from sale of property, plant and equipment		93.2	32.6
Receipt from sale of right-of-use assets		48.6	5.2
Purchase of property, plant and equipment		(7,273.5)	(7,217.6)
Deposit paid for acquisition of an associate		_	(394.1)
Increase in other intangible assets		(25.2)	_
Payment for right-of-use assets		(1,113.2)	(77.3)
Increase in investments in associates		(6,255.6)	(268.5)
Increase in loans to associates		(264.0)	(75.5)
Repayment of loans by associates		432.8	172.9
Increase in investments in joint ventures		(118.8)	(307.8)
Increase in loans to joint ventures		(68.8)	(48.7)
Decrease in amounts due to joint ventures		(295.1)	(303.5)
Repayment of loans by joint ventures		86.1	317.1
Acquisition of businesses	42(a)	(128.5)	18.2
Sale of financial assets at fair value through profit or loss		272.3	149.3
Sale of financial assets at fair value through other comprehensive income		101.0	79.5
Purchase of financial assets at fair value through profit or loss		(271.8)	(120.1)
Purchase of financial assets at fair value through other comprehensive income		(140.6)	(99.0)
Decrease/(increase) in time deposits over three months		97.5	(8.8)
Interest received		171.7	183.4
Dividends received from investments in securities		153.3	143.9
Dividends received from associates		1,067.7	1,001.7
Dividends received from joint ventures		508.9	827.5
Net cash used in investing activities		(12,922.0)	(5,989.6)

Consolidated Cash Flow Statement (Continued)

for the year ended 31st December 2021

	Note	2021 HK\$'M	2020 HK\$'M
Financing activities			
Change in loans with non-controlling shareholders		57.7	47.1
Capital injection by non-controlling shareholders		191.4	38.1
Further acquisition of subsidiaries	42(b)	(50.0)	(63.1)
Increase in borrowings		27,341.3	20,221.8
Proceeds from issue of convertible bonds		2,349.7	_
Repayment of borrowings		(16,859.0)	(16,566.4)
Principal elements of lease payments		(141.6)	(134.8)
Interest paid for the lease liability		(13.5)	(13.2)
Interest paid to holders of perpetual capital securities		(110.7)	(110.5)
Interest paid		(1,643.8)	(1,373.6)
Dividends paid to shareholders of the Company	43(a)	(6,326.6)	(6,025.4)
Dividends paid to non-controlling shareholders		(612.2)	(540.5)
Proceeds from deemed partial disposal of subsidiaries	41(d)	1,232.2	_
Purchase of shares under share award scheme of a subsidiary		(19.9)	
Net cash generated from/(used in) financing activities		5,395.0	(4,520.5)
Increase/(decrease) in cash and cash equivalents		2,942.5	(599.9)
Cash and cash equivalents at 1st January		7,455.0	7,848.9
Effect of foreign exchange rate changes		159.5	206.0
Cash and cash equivalents at 31st December		10,557.0	7,455.0
Analysis of the balances of cash and cash equivalents			
Cash and bank balances		9,375.4	5,775.4
Time deposits up to three months		1,181.6	1,679.6
		.,101.0	.,070.0
		10,557.0	7,455.0

Consolidated Statement of Changes in Equity

for the year ended 31st December 2021

	Attributable to shareholders of the Company		Holders of perpetual	Non-	
	Share capital HK\$'M	Reserves HK\$'M	capital securities HK\$'M	controlling interests HK\$'M	Total HK\$'M
As at 1st January 2021	5,474.7	61,283.8	2,384.0	10,010.8	79,153.3
Profit for the year	-	5,017.0	110.9	1,097.8	6,225.7
Other comprehensive income:					
Movement in reserve of financial assets at fair value through other comprehensive income	_	(218.7)	_	(67.6)	(286.3)
Remeasurements of retirement benefit	_	82.8	_	_	82.8
Change in fair value of cash flow hedges	_	14.8	_	10.0	24.8
Share of other comprehensive loss of an associate	_	(3.5)	_	_	(3.5)
Exchange differences	_	1,937.2	_	340.0	2,277.2
Total comprehensive income for the year	_	6,829.6	110.9	1,380.2	8,320.7
Capital injections in subsidiaries	_	17.6	_	173.8	191.4
Further acquisition of subsidiaries (note 42(b))	_	(29.6)	_	(20.4)	(50.0)
Acquisition of businesses (note 42(a))	_	_	_	24.1	24.1
Share-based payments of a subsidiary	_	36.5	_	_	36.5
Deemed partial disposal of subsidiaries (note 41(d))	_	136.1	_	1,096.1	1,232.2
Interest paid on perpetual capital securities	_	_	(110.7)	_	(110.7)
Dividends paid to shareholders of the Company	_	(6,326.6)	_	_	(6,326.6)
Dividends paid to non-controlling shareholders	_	_	_	(612.2)	(612.2)
Share award scheme of a subsidiary	_	4.3	_	(24.2)	(19.9)
As at 31st December 2021	5,474.7	61,951.7	2,384.2	12,028.2	81,838.8

Consolidated Statement of Changes in Equity (Continued)

for the year ended 31st December 2021

	Attributable to shareholders of the Company		sharehold	Holders of perpetual	Non-	
	Share capital HK\$'M	Reserves HK\$'M	capital securities HK\$'M	controlling interests HK\$'M	Total HK\$'M	
As at 1st January 2020	5,474.7	58,734.7	2,384.2	8,803.1	75,396.7	
Profit for the year	_	6,007.3	110.3	1,094.8	7,212.4	
Other comprehensive income:						
Movement in reserve of financial assets at fair value through other comprehensive income	_	(405.2)	_	(187.9)	(593.1)	
Remeasurements of retirement benefit	_	55.2	_	_	55.2	
Change in fair value of cash flow hedges	_	(83.6)	_	(3.5)	(87.1)	
Share of other comprehensive loss of associates	_	(15.6)	_	_	(15.6)	
Exchange differences	_	2,975.9	_	891.6	3,867.5	
Total comprehensive income for the year	_	8,534.0	110.3	1,795.0	10,439.3	
Capital injection	_	_	_	38.1	38.1	
Further acquisition of subsidiaries	_	40.5	_	(103.6)	(63.1)	
Acquisition of business	_	_	_	18.7	18.7	
Interest paid on perpetual capital securities	_	_	(110.5)	_	(110.5)	
Dividends paid to shareholders of the Company	_	(6,025.4)	_	_	(6,025.4)	
Dividends paid to non-controlling shareholders	-	-	_	(540.5)	(540.5)	
As at 31st December 2020	5,474.7	61,283.8	2,384.0	10,010.8	79,153.3	

Notes to the Consolidated Financial Statements

1 General information

The Hong Kong and China Gas Company Limited (the "Company") and its subsidiaries (collectively, the "Group") have been diversified into different fields of businesses and principally engage in the production, distribution and marketing of gas, water supply and emerging environmentally-friendly energy businesses in Hong Kong and the mainland of the People's Republic of China (the "PRC"). The Group is also engaged in property development and investment activities in Hong Kong.

The Company is a limited liability company incorporated and domiciled in Hong Kong and listed on The Stock Exchange of Hong Kong Limited. The address of its registered office is 23rd Floor, 363 Java Road, North Point, Hong Kong.

2 Summary of significant accounting policies

The principal accounting policies applied in the preparation of the consolidated financial statements are set out below. These policies have been consistently applied to both years presented, unless otherwise stated.

(a) Basis of preparation

The consolidated financial statements of the Company have been prepared in accordance with Hong Kong Financial Reporting Standards ("HKFRS"). They have been prepared under the historical cost convention, as modified by the revaluation of investment property, financial assets and liabilities at fair value through profit or loss ("FVPL"), financial assets and liabilities at fair value through other comprehensive income ("FVOCI") and derivative financial instruments, which are carried at fair value.

As at 31st December 2021, the Group was in a net current liabilities position of approximately HK\$14.3 billion. This is mainly because of management utilisation of the relatively favourable short term borrowings under the low interest rate environment in recent years to finance (i) the settlement of the USD1 billion guaranteed notes in August 2018, (ii) the acquisition of 25% equity interest in Shanghai Gas Co., Ltd. ("Shanghai Gas") (Note 39(c) provides for details about the transaction) and (iii) other working capital and capital expenditure requirements. Taking into consideration the Group's available facilities, history of obtaining external financing and the Group's expected cash flows from operations, management believes that there are sufficient financial resources available to the Group to meet its liabilities as and when they fall due. Accordingly, these consolidated financial statements have been prepared on a going concern basis.

The preparation of financial statements in conformity with HKFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 4.

(i) Amendments to standards adopted in 2021

The Group has adopted the following amendments to standards which are effective for the Group's financial year beginning 1st January 2021 and relevant to the Group.

Amendments to HKFRS 9, HKAS 39, HKFRS 7, HKFRS 4 and HKFRS 16

Interest Rate Benchmark Reform – Phase 2

In addition, the Group has early adopted amendments to HKFRS 16 "COVID-19-related Rent Concessions" ahead of the effective date and applied the amendments from 1st January 2021.

The adoption of the amendments to standards has no significant impact on the Group's results and financial position or any substantial changes in Group's accounting policies.

(a) Basis of preparation (Continued)

(ii) New standards, amendments and interpretations to existing standards which are not yet effective for the year ended 31st December 2021 but relevant to the Group and have not been early adopted by the Group

Annual Improvements Project (1)	Annual Improvements to HKFRSs 2018-2020
Amendments to HKFRS 3, HKAS 16 and HKAS 37 (1)	Narrow-scope amendments
AG5 (revised) (1)	Revised Accounting Guideline 5 Merger Accounting for Common Control Combinations
Amendments to HKAS 1 (2)	Classification of Liabilities as Current or Non-current
HKFRS 17 and Amendments to HKFRS 17 ⁽²⁾	Insurance Contracts
HK Int 5 (2020) (1)	Hong Kong Interpretation 5 (2020) Presentation of Financial Statements – Classification by the Borrower of a Term Loan that Contains a Repayment on Demand Clause (HK Int 5 (2020))
Amendments to HKAS 1 and HKFRS Practice Statement 2 ⁽²⁾	Disclosure of Accounting Policies
Amendments to HKAS 8 (2)	Definition of Accounting Estimates
Amendments to HKAS 12 (2)	Deferred tax related to assets and liabilities arising from a single transaction
Amendments to HKFRS10 and HKAS 28 (3)	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture

- (1) Effective for annual periods beginning 1st January 2022
- (2) Effective for annual periods beginning 1st January 2023
- (3) To be determined

Except for the amendments to HKFRSs mentioned below, the directors of the Company anticipate that the application of all other new standards, amendments and interpretations to existing standards will have no material impact on the consolidated financial statements in the foreseeable future.

Amendments to HKAS 1 "Classification of Liabilities as Current or Non-current and related amendments to Hong Kong Interpretation 5 (2020)"

The amendments provide clarification and additional guidance on the assessment of right to defer settlement for at least 12 months from reporting date for classification of liabilities as current or non-current, which:

- specify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period. Specifically, the amendments clarify that:
 - (i) the classification should not be affected by management intentions or expectations to settle the liability within 12 months; and
 - (ii) if the right is conditional on the compliance with covenants, the right exists if the conditions are met at the end of the reporting period, even if the lender does not test compliance until a later date; and
- clarify that if a liability has terms that could, at the option of the counterparty, result in its settlement by
 the transfer of the entity's own equity instruments, these terms do not affect its classification as current
 or non-current only if the entity recognises the option separately as an equity instrument applying
 HKAS 32 "Financial Instruments: Presentation".

(a) Basis of preparation (Continued)

(ii) New standards, amendments and interpretations to existing standards which are not yet effective for the year ended 31st December 2021 but relevant to the Group and have not been early adopted by the Group (Continued)

Amendments to HKAS 1 "Classification of Liabilities as Current or Non-current and related amendments to Hong Kong Interpretation 5 (2020)" (Continued)

In addition, Hong Kong Interpretation 5 was revised as a consequence of the "Amendments to HKAS 1" to align the corresponding wordings with no change in conclusion.

As at 31st December 2021, the Group's right to defer settlement for certain borrowings are subject to compliance with certain financial ratios within 12 months from the reporting date. Such borrowings were classified as non-current as the Group met such ratios at 31st December 2021. Pending clarification on the application of relevant requirements of the amendments, the Group will further assess the potential impacts of the amendments in relation to the borrowings with financial and other covenants. The impacts on application, if any, will be disclosed in the Group's future consolidated financial statements.

As at 31st December 2021, the Group's outstanding convertible bonds include counterparty conversion options that do not meet equity instruments classification by applying HKAS 32. The Group classified as current or non-current based on the earliest date in which the Group has the obligation to redeem these instruments through cash settlement. The debt component is measured at amortised cost with carrying amount of HK\$1,956.6 million and the embedded derivative component (including the conversion options) is measured at fair value with carrying amount of HK\$776.6 million as at 31st December 2021, both of which are classified as non-current as set out in note 32 and note 25 respectively. Upon the application of the amendments, in addition to the obligation to redeem through cash settlement, the transfer of equity instruments upon the exercise of the conversion options that do not meet equity instruments classification also constitute settlement of the convertible instruments. Given that the conversion options are exercisable anytime, the debt and the embedded derivative components of the convertible bonds would be reclassified to current liabilities as the holders have the option to convert within 12 months.

Except for as disclosed above, the application of the amendments is not expected to result in reclassification of the Group's other liabilities as at 31st December 2021.

(b) Consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries made up to 31st December.

(i) Subsidiaries

Subsidiaries are entities (including a structured entity) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The Group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the date of acquisition. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in accordance with HKFRS 9 in the profit or loss. Contingent consideration that is classified as equity is not remeasured, and its subsequent settlement is accounted for within equity. The Group recognises any non-controlling interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the recognised amounts of acquiree's net identifiable assets.

(b) Consolidation (Continued)

(i) Subsidiaries (Continued)

Goodwill is initially measured as the excess of the aggregate of the consideration transferred and the fair value of non-controlling interest over the net identifiable assets acquired and liabilities assumed. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognised in the profit or loss.

Inter-company transactions, balances, income and expenses on transactions between group companies are eliminated. Profits and losses resulting from inter-company transactions that are recognised in assets are also eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

In the Company's statement of financial position, the investments in subsidiaries are stated at cost less provision for impairment. Cost also includes direct attributable cost of investment. The results of subsidiaries are accounted by the Company on the basis of dividend received and receivable.

(ii) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(iii) Disposal of subsidiaries

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognised in the profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, a joint venture or a financial asset. In addition, any amounts previously recognised in the other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in the other comprehensive income are reclassified to the profit or loss.

(iv) Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20 per cent and 50 per cent of the voting rights. Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investment in associates includes goodwill identified on acquisition. Upon the acquisition of the ownership interest in an associate, any difference between the cost of the associate and the Group's share of the net fair value of the associate's identifiable assets and liabilities is accounted for as goodwill.

If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in the other comprehensive income is reclassified to the profit or loss where appropriate.

The Group's share of its associates' post-acquisition profits or losses is recognised in the profit or loss, and its share of post-acquisition movements in the other comprehensive income is recognised in the other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate.

(b) Consolidation (Continued)

(iv) Associates (Continued)

The Group determines at each reporting date whether there is any objective evidence that the investment in the associate is impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognises the amount in the profit or loss.

Profits and losses resulting from upstream and downstream transactions between the Group and its associate are recognised in the Group's financial statements only to the extent of unrelated investor's interests in the associates. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

Dilution gains and losses in associates are recognised in the profit or loss.

In the Company's statement of financial position, the investment in an associate is stated at the cost less provision for impairment. The result of the associate is accounted for by the Company on the basis of dividend received and receivable.

(v) Joint ventures

Joint ventures are joint ventures whereby the Group and other parties undertake an economic activity which is subject to joint control and none of the participating parties has unilateral control over the economic activity. Investments in joint ventures are accounted for by the equity method of accounting. Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investment in joint ventures includes goodwill identified on acquisition. Upon the acquisition of the ownership interest in a joint venture, any difference between the cost of the joint venture and the Group's share of the net fair value of the joint venture's identifiable assets and liabilities is accounted for as goodwill.

If the ownership interest in a joint venture is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in the other comprehensive income is reclassified to the profit or loss where appropriate.

The Group's share of its joint ventures' post-acquisition profits or losses is recognised in the profit or loss, and its share of post-acquisition movements in the other comprehensive income is recognised in the other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the Group's share of losses in a joint venture equals or exceeds its interest in the joint venture, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the joint venture.

The Group determines at each reporting date whether there is any objective evidence that the investment in the joint venture is impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the joint venture and its carrying value and recognises the amount in the profit or loss.

Profits and losses resulting from upstream and downstream transactions between the Group and its joint venture are recognised in the Group's financial statements only to the extent of unrelated investor's interests in the joint ventures. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

Dilution gains and losses in joint ventures are recognised in the profit or loss.

In the Company's statement of financial position, the investments in joint ventures are stated at cost less provision for impairment. The results of joint ventures are accounted for by the Company on the basis of dividend received and receivable.

(c) Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the executive committee members that makes strategic decisions.

(d) Foreign currency translation

(i) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in Hong Kong dollars ("HKD"), which is the Company's functional and presentation currency.

(ii) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognised in profit or loss. They are deferred in equity if they relate to qualifying cash flow hedges and qualifying net investment hedges or are attributable to part of the net investment in a foreign operation.

Foreign exchange gains and losses that relate to borrowings are presented in the income statement, within finance costs. All other foreign exchange gains and losses are presented in the income statement on a net basis within other losses, net.

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on non-monetary assets and liabilities such as equities held at FVPL are recognised in profit or loss as part of the fair value gain or loss and translation differences on non-monetary assets such as equities classified as FVOCI are recognised in other comprehensive income.

(iii) Group companies

The results and financial position of all the Group entities, including associates and joint ventures, (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position;
- income and expenses for each income statement are translated at average exchange rates (unless this
 average is not a reasonable approximation of the cumulative effect of the rates prevailing on the
 transaction dates, in which case income and expenses are translated at the dates of the transactions);
 and
- all resulting exchange differences are recognised in other comprehensive income.

On consolidation, exchange differences arising from the translation of the net investment in foreign operations are taken to other comprehensive income. When a foreign operation is sold, exchange differences that were recorded in equity are recognised in the profit or loss as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

(e) Exploration and evaluation expenditure

Exploration and evaluation expenditure comprises costs which are directly attributable to: researching and analysing historical exploration data; conducting geological studies, exploratory drilling and sampling; examining and testing extraction and treatment methods; and compiling pre-feasibility and feasibility studies. Exploration and evaluation expenditure also includes the costs incurred in acquiring mining and oil properties, the entry premiums paid to gain access to areas of interest and amounts payable to third parties to acquire interests in existing projects.

During the initial stage of a project, exploration and evaluation costs, other than costs incurred in acquiring land use right and mining and oil properties, are expensed as incurred. Expenditure on a project after it has reached a stage at which there is a high degree of confidence in its viability is capitalised and transferred to property, plant and equipment if the project proceeds. If a project does not prove viable, all irrecoverable costs associated with the project are expensed in the profit or loss.

(f) Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment. The capitalised costs in respect of capital work in progress include direct materials, direct labour costs, subcontracting costs, capitalised borrowing costs and other direct overheads. Capital work in progress is transferred to relevant categories of property, plant and equipment upon completion of their respective work.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance incurred in restoring property, plant and equipment to their normal working condition are charged to the profit or loss.

Depreciation of property, plant and equipment is calculated on a straight-line basis to allocate the cost less accumulated impairment of each component of the asset to its residual value over its estimated useful life as follows:

Production plant and related equipment 10 - 40 years Vehicles, office furniture and equipment 5 – 15 years Gas mains and risers 25 - 40 years 30 - 50 years Water mains Gasholders, office, store and buildings 20 - 40 years Meters and installations 5 - 30 years Mining and oil properties Based on the unit-of-production method utilising only estimated recoverable coal and oil reserves as the depletion base 5 - 30 years Others No depreciation Capital work in progress

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each date of statement of financial position.

Gain or loss on disposal of a property, plant and equipment is the difference between the net sales proceeds and the carrying amount of the relevant asset and is recognised in the profit or loss.

(g) Deferred overburden removal costs

Mining structures include deferred stripping costs and mining related property, plant and equipment. When estimated coal reserves have been determined, stripping costs incurred to develop coal mines are capitalised as part of the cost of the mining structures. Stripping costs incurred during the production phase are variable production costs that are included in the costs of inventory produced during the period that the stripping costs are incurred, unless the stripping activity can be shown to give rise to future benefits from the mineral properties, in which case the stripping costs would be capitalised into property, plant and equipment as mining structures. Future benefits arise when stripping activity increases the future output of the mine by providing access to a new ore body.

Mining structures are depreciated on the unit-of-production method utilising only estimated coal reserves in the depletion base, or based on the useful lives of respective items of property, plant and equipment, whichever is appropriate.

(h) Investment property

Property owned or held by the lessee as a right-of-use asset that is held for long-term rental yields or for capital appreciation or both, and that is not occupied by the Group, is classified as investment property.

Investment property is measured initially at its cost, including related transaction costs. After initial recognition, investment property is carried at fair value. Fair value is based on active market value, adjusted, if necessary, for any difference in the nature, location or condition of the specific asset. If this information is not available, the Group uses alternative valuation methods such as recent prices on less active markets or discounted cash flow projections. These valuations are performed in accordance with the HKIS Valuation Standards (2020 Edition) published by The Hong Kong Institute of Surveyors ("HKIS"). These valuations are reviewed annually by qualified valuers. The fair value of investment property reflects, among other things, rental income from current leases and assumptions about rental income from future leases in the light of current market conditions. The fair value also reflects, on a similar basis, any cash outflows that could be expected in respect of the property.

Subsequent expenditure is charged to the asset's carrying amount only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs are expensed in the profit or loss during the financial period in which they are incurred.

Changes in fair values are recognised in the profit or loss.

Property that is being constructed or developed for future use as investment property is classified as investment properties and measured at fair value unless fair value cannot be reliably determined. Any difference between the fair value of the property at that date and its previous carrying amount is recognised in the profit or loss.

If an item of property, plant and equipment becomes an investment property because its use has changed, any difference resulting between the carrying amount and the fair value of this item at the date of transfer is recognised in equity as a revaluation of property, plant and equipment. However, if a fair value gain reverses a previous impairment, the gain is recognised in the profit or loss.

(i) Leases

Leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group.

Contracts may contain both lease and non-lease components. The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices.

(i) Leases (Continued)

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- variable lease payment that are based on an index or a rate, initially measured using the index or rate as at the commencement date
- amounts expected to be payable by the Group under residual value guarantees
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the Group exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases in the Group, the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions.

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Lease payments are allocated between principal and finance cost. The finance cost is charged to the profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- · any lease payments made at or before the commencement date less any lease incentives received
- · any initial direct costs, and
- · restoration costs.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Lease income from operating leases where the Group is a lessor is recognised in the profit or loss on a straight-line basis over the lease term.

(j) Intangible assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net identifiable assets of the acquired subsidiaries, associates and joint ventures at the date of acquisition. Goodwill on acquisitions of subsidiaries is included in "intangible assets". Goodwill arising on an acquisition of an associate or a joint venture is included in the cost of the investment of the relevant associate or joint venture. Separately recognised goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on separately recognised goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Separately recognised goodwill is allocated to cash-generating units, primarily individual projects, for the purpose of impairment testing. The allocation is made to those cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

Other intangible assets are carried at cost less accumulated amortisation and impairment. Amortisation is calculated using the straight-line method to allocate the cost over the period of the relevant right from 15 years to 50 years.

(k) Impairment of investments in subsidiaries, associates, joint ventures and non-financial assets

Goodwill are at least tested annually for impairment and are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

An impairment is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value-in-use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Assets other than separately recognised goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

(I) Investments and other financial assets

(i) Classification

The Group classifies its financial assets in the following categories: those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss) and those to be measured at amortised cost. The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

For assets measured at fair value, gains and losses will either be recorded in the profit or loss or other comprehensive income. For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investments at FVOCI.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

(ii) Recognition and derecognition

Regular way purchases and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

(iii) Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in the profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset. The Group classifies its debt instruments as FVOCI where assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment gains or losses, interest income and foreign exchange gains and losses which are recognised in the profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in other comprehensive income is reclassified from equity to the profit or loss and recognised in other losses, net. Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other losses, net and impairment expenses are presented as separate line item in the income statement.

(I) Investments and other financial assets (Continued)

(iii) Measurement (Continued)

Equity instruments

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to the profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in the profit or loss as other losses, net when the Group's right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in other losses, net in the income statement as applicable. Impairment losses (and reversal of impairment losses) on equity investments measured at FVOCI are not reported separately from other changes in fair value.

(iv) Impairment

The Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Group applies the simplified approach permitted by HKFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables, with further details set out in note 29.

(m) Derivative financial instruments and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as hedges of a particular risk associated with a recognised asset or liability or a highly probable forecast transaction (cash flow hedge).

At the inception of the hedging, the Group documents the economic relationship between hedging instruments and hedged items, including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items. The Group documents its risk management objective and strategy for undertaking its hedge transactions.

The fair values of derivative financial instruments designated in hedge relationships are disclosed in note 25. Movements in the hedging reserve in shareholders' equity are shown in note 36. The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months. Trading derivatives are classified as a current asset or liability.

Cash flow hedge that qualify for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in the profit or loss within other losses, net.

When option contracts are used to hedge forecast transactions, the Group designates only the intrinsic value of the options as the hedging instrument.

Gains or losses relating to the effective portion of the change in intrinsic value of the options are recognised in the cash flow hedge reserve within equity. The changes in the time value of the options that relate to the hedged item ('aligned time value') are recognised within other comprehensive income in the costs of hedging reserve within equity.

(m) Derivative financial instruments and hedging activities (Continued)

When forward contracts are used to hedge forecast transactions, the Group generally designates only the change in fair value of the forward contracts related to the spot component as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot component of the forward contracts are recognised in the cash flow hedge reserve within equity. The change in the forward element of the contracts that relates to the hedged item ('aligned forward element') is recognised within other comprehensive income in the costs of hedging reserve within equity. In some cases, the entity may designate the full change in fair value of the forward contracts (including forward points) as the hedging instrument. In such cases, the gains or losses relating to the effective portion of the change in fair value of the entire forward contracts are recognised in the cash flow hedge reserve within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects the profit or loss, as follows:

- Where the hedged item subsequently results in the recognition of a non-financial asset (such as inventory), both the deferred hedging gains and losses and the deferred time value of the option contracts or deferred forward points, if any, are included within the initial cost of the asset. The deferred amounts are ultimately recognised in the profit or loss as the hedged item affects the profit or loss (for example through cost of sales).
- The gain or loss relating to the effective portion of the interest rate swaps hedging variable rate borrowings is recognised in the profit or loss within finance cost at the same time as the interest expense on the hedged borrowings.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecast transaction occurs, resulting in the recognition of a non-financial asset such as inventory. When the forecast transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to the profit or loss.

(n) Inventories

Inventories comprise stores and materials and work in progress and are stated at the lower of cost and net realisable value. Cost, calculated on the weighted average basis, comprises materials, direct labour and an appropriate proportion of overheads. Net realisable value is determined on the basis of anticipated sales proceeds less estimated selling expenses.

(o) Contract assets and contract liabilities

Upon entering into a contract with a customer, the Group obtains rights to receive consideration from the customer and assumes performance obligations to transfer goods or provide services to the customer.

The combination of those rights and performance obligations gives rise to a net contract asset or a net contract liability depending on the relationship between the remaining rights and the performance obligations. The contract is an asset and recognised as contract assets if the cumulative revenue recognised in the profit or loss exceeds cumulative payments made by customers. Conversely, the contract is a liability and recognised as contract liabilities if the cumulative payments made by customers exceeds the revenue recognised in the profit or loss.

Contract assets are assessed for impairment under the same approach adopted for impairment assessment of financial assets carried at amortised cost. Contract liabilities are recognised as revenue when the Group transfers the goods or services to the customers and therefore satisfied its performance obligation.

The incremental costs of obtaining a contract with a customer are capitalised and presented as contract related assets, if the Group expects to recover those costs, and are subsequently amortised on a systematic basis that is consistent with the transfer to the customers of the goods or services to which the assets relate. The Group recognises an impairment loss in the profit or loss to the extent that the carrying amount of the contract related assets recognised exceeds the remaining amounts of consideration that the Group expects to receive less the costs that relate directly to providing those goods or services that have not been recognised as expenses.

(p) Construction contracts

Contract costs are recognised as expenses in the period in which they are incurred.

When the outcome of a construction contract cannot be reasonably measured, but the Group expects to recover the costs incurred in satisfying the performance obligation, contract revenue is recognised only to the extent of contract costs incurred that are expected to be recovered until such time that the outcome of the performance obligation can be reasonably measured.

When the outcome of a construction contract can be reasonably measured, contract revenue is recognised over time by measuring the progress towards complete satisfaction of that performance obligation. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised as an expense immediately.

Variations in contract work, claims and incentive payments are included in contract revenue to the extent that they have been agreed with the customer and are capable of being reliably measured.

(q) Trade and other receivables

Trade receivables are amounts due from customers for merchandises sold or services performed in the ordinary course of business. If collection of trade and other receivables is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade and other receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognised at fair value. The Group holds with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost using the effective interest method, less provision for impairment. A provision for impairment is established when there is no reasonable expectation of recovery.

(r) Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits held at call with banks, other short term highly liquid investments with original maturities of three months or less and bank overdrafts. In the statement of financial position, cash and cash equivalents are presented as time deposits up to three months, cash and bank balances in current assets and bank overdrafts are included in borrowings in current liabilities.

(s) Trade payables

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

(t) Borrowings and borrowing costs

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the profit or loss over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the drawdown occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a prepayment for liquidity services and amortised over the period of the facility to which it relates.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the statement of financial position date.

Borrowing costs that are directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of that asset. All other borrowing costs are charged to the profit or loss in the year in which they are incurred.

(t) Borrowings and borrowing costs (Continued)

Convertible bonds

A conversion option that will be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the Group's own equity instruments is a conversion option derivative.

At the date of the issue, both the debt instrument and the derivative components are recognised at fair value. In subsequent periods, the debt component of the convertible bonds is carried at amortised cost using the effective interest method. The derivative component is measured at fair value with changes in fair value recognised in profit or loss.

Transaction costs that relate to the issue of the convertible bonds are allocated to the debt and derivative components in proportion to their relative fair values. Transaction costs relating to the derivative component are charged to profit or loss immediately. Transaction costs relating to the debt component are included in the carrying amount of the debt portion and amortised over the period of the convertible bonds using the effective interest method.

(u) Current and deferred taxation

The tax expense for the year comprises current and deferred tax. Tax is recognised in the profit or loss, except to the extent that it relates to items recognised in the other comprehensive income or directly in equity. In this case, the tax is also recognised in the other comprehensive income or directly in equity.

The current taxation is calculated on the basis of the tax laws enacted or substantively enacted at the statement of financial position date in the jurisdictions where the Company, its subsidiaries, associates and joint ventures operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation and considers whether it is probable that a taxation authority will accept an uncertain tax treatment. The Group measures its tax balances either based on the most likely amount or the expected value, depending on which method provides a better prediction of the resolution of the uncertainty.

Deferred taxation is recognised using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill, deferred taxation is not accounted for if it arises from the initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred taxation is determined using tax rates (and laws) that have been enacted or substantively enacted by the date of statement of financial position and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred taxation is provided on temporary differences arising on investments in subsidiaries, associates and joint ventures, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

(v) Revenue and income recognition

- (i) Gas sales recognised at point in time and based on gas consumption primarily derived from meter readings.
- (ii) Water sales recognised at a point in time and based on water consumption primarily derived from meter readings.
- (iii) Liquefied petroleum gas sales recognised at a point in time and upon completion of the gas filling transaction.
- (iv) Equipment sales recognised at a point in time and upon completion of installation work or when equipment, materials and parts are delivered to customers and title has passed.

(v) Revenue and income recognition (Continued)

- (v) Oil, coal, hydro-treated vegetable oil and other chemical products related sales recognised at a point in time and upon completion of delivery and title has passed.
- (vi) Maintenance and service charges recognised over time when services are provided.
- (vii) Interest income recognised on a time proportion basis, taking into account the principal amounts outstanding and the interest rates applicable.
- (viii) Dividend income recognised when the right to receive payment is established.
- (ix) Rental income recognised on a straight-line accrual basis over the terms of lease agreements.
- (x) Construction and gas connection income recognised overtime or at a point in time depending on the terms of the contracts and actual work performed.

Revenue is recognised when or as the control of the goods or service is transferred to the customer, at the amount of promised consideration to which the Group is expected to be entitled. Depending on the terms of the contract and the laws that apply to the contract, control of the good or service may be transferred over time or at a point in time.

For contracts that contain more than one performance obligations, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

(w) Employee benefits

Salaries, bonuses and paid annual leave are accrued in the year in which the associated services are rendered by employees to the Group.

Equity-settled share-based payments are measured at fair value (excluding the effect of non-market-based vesting conditions) at the date of grant. The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's estimate of their shares that will eventually vest and adjusted for the effect of non-market-based vesting conditions.

The Group operates a number of defined contribution and one defined benefit retirement schemes and the assets of the schemes are held separately from those of the Group in independently administered funds. The retirement schemes are funded by payments from employees and by the Group, taking into account the recommendations of independent qualified actuaries.

(i) Defined contribution retirement schemes

The Group contributes to defined contribution retirement schemes and Mandatory Provident Fund schemes which are available to salaried employees in Hong Kong. The Group's contributions to these retirement schemes are calculated as a percentage of the employees' basic salaries or relevant income and are expensed as incurred. No forfeited contributions have been utilised by the Group to reduce the existing contributions.

For employees in the Chinese mainland, the Group contributes on a monthly basis to various defined contribution plans organised by the relevant municipal and provincial governments in the Chinese mainland based on a certain percentage of the relevant employees' monthly salaries. The municipal and provincial governments undertake to assume the retirement benefit obligations payable to all existing and future retired employees under these plans and the Group has no further constructive obligation for post-retirement benefits beyond the contributions made. Contributions to these plans are expensed as incurred.

(w) Employee benefits (Continued)

(ii) Defined benefit retirement scheme

The Group also operates a defined benefit retirement scheme, namely the Workmen Retirement Scheme, in Hong Kong. The scheme provides benefit to employees based on final salary. The Group's net obligation in respect of the defined benefit retirement scheme is calculated separately for the scheme using the projected unit credit method. The benefit obligation is measured as the present value of the estimated future benefit that employees have earned for their service in the current and prior years using interest rates of government bonds which have terms to maturity approximating the terms of the related liability.

The current service cost of the defined benefit plan, recognised in the profit or loss in employee benefit expense, except where included in the cost of an asset, reflects the increase in the defined benefit obligation results from employee service in the current year, benefit changes, curtailments and settlements.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. Past-service costs are recognised immediately in the profit or loss.

(x) Provisions and contingencies

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. Where the Group expects a provision to be reimbursed, the reimbursement is recognised as a separate asset when the reimbursement is virtually certain.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

A contingent liability is a possible obligation that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. It can also be a present obligation arising from past events that is not recognised because it is not probable that an outflow of economic resources will be required or the amount of obligation cannot be measured reliably. A contingent liability is not recognised but is disclosed in the notes to the consolidated financial statements. When a change in the probability of an outflow occurs so that the outflow is probable, it will then be recognised as a provision.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain events not wholly within the control of the Group. A contingent asset is not recognised but is disclosed in the notes to the consolidated financial statements when an inflow of economic benefits is probable. When inflow is virtually certain, an asset is recognised.

Asset retirement obligations which meet the criteria of provisions are recognised as provisions and the amount recognised is the present value of the estimated future expenditure determined in accordance with local conditions and requirements, while a corresponding addition to the related oil properties of an amount equivalent to the provision is also created. This is subsequently depleted as part of the costs of the oil properties. Interest expenses from the assets retirement obligations for each period are recognised with the effective interest method during the useful life of the related oil properties.

If the conditions for the recognition of the provisions are not met, the expenditures for the decommissioning, removal and site cleaning will be expensed in the profit or loss when occurred.

(y) Government grants

Grants from the government are recognised at their fair value when there is reasonable assurance that the grant will be received and the Group will comply with all the attached condition.

Government grants are recognised as income over the periods necessary to match them with the related costs which they are intended to compensate, on a systematic basis. Government grants relating to expenses are shown in other losses, net in the consolidated income statement.

In relation to the pandemic of COVID-19, the Group received government grants during 2020 in supporting its operations.

3 Financial risk management

Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, price risk and cash flow and fair value interest rate risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group uses derivative financial instruments to manage and reduce certain risk exposures.

Risk management is carried out by treasury department (Group Treasury) under policies approved by the Treasury Committee, comprising all the executive directors of the Company. Group Treasury identifies, evaluates and manages financial risks in close co-operation with the Group's operating units. The Treasury Committee provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

(a) Market risk

(i) Foreign exchange risk

The Group operates in Hong Kong, the Chinese mainland and Thailand and is exposed to foreign exchange risk arising from various unhedged currency exposures, primarily with respect to the United States dollars ("USD"), Renminbi ("RMB") and Thailand Baht ("THB"). Foreign exchange risk arises from future commercial transactions and recognised assets and liabilities.

To manage the foreign exchange risk arising from future commercial transactions and recognised assets and liabilities, the Group uses forward contracts. Foreign exchange risk arises when future commercial transactions or recognised assets or liabilities are denominated in a currency that is not the entity's functional currency. The Group has also entered into cross currency swap contracts to manage its exposure to foreign exchange risk from recognised liabilities, including medium-term notes denominated in foreign currencies. Group Treasury is responsible for managing the net position in each foreign currency by using external forward currency contracts and other suitable financial instruments.

Transactions denominated in the USD mainly arise from the Group's operation in Hong Kong. Pursuant to Hong Kong's Linked Exchange Rate System under which HKD is pegged to the USD, management considers there are no significant foreign exchange risks with respect to the USD. Furthermore, there are no significant transactions and recognised assets and liabilities of the Thailand business in currency other than THB. Management considers there is no significant foreign exchange risk from the Thailand business.

At 31st December 2021, if the RMB had weakened/strengthened by 2 per cent (2020: 2 per cent) against HKD with all other variables held constant, pre-tax profit for the year would have been HK\$37.1 million (2020: HK\$43.1 million) lower/higher.

Financial risk factors (Continued)

(a) Market risk (Continued)

(ii) Price risk

The Group is exposed to equity securities price risk for the listed equity investments held by the Group which are classified as financial assets at FVOCI and financial assets at FVPL of HK\$1,599.0 million (2020: HK\$1,930.7 million) and HK\$1,498.0 million (2020: HK\$1,742.0 million) respectively.

The Group did not hold any unlisted equity investments which are classified as FVPL under level 1 or level 2 (2020: HK\$56.3 million). The underlyings of the investments held by the Group as at 31st December 2020 were listed equity securities, which made them subject to equity securities price risk.

The Group controls this risk through active monitoring of price movements and changes in market conditions that may have an impact on the value of these financial assets and instruments.

Majority of the Group's equity securities are publicly traded and are included in one of the following indexes: Hang Seng Index, S&P 500 Index, Euro Stoxx 50 Price Index and Shanghai Stock Exchange A Share Index.

The table below summarises the impact of increases/decreases of the following indexes on the Group's pre-tax profit for the year and on other comprehensive income. The analysis is based on the assumption that the indexes had increased/decreased by 10 per cent with all other variables held constant and all the Group's equity securities moved according to the historical correlation with the indexes.

	Impact on pre-tax profit			ct on ensive income
	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M
Hang Seng Index	_	18.5	4.8	4.8
S&P 500 Index	_	4.4	_	_
Euro Stoxx 50 Price Index	_	4.7	_	_
Shanghai Stock Exchange A Share Index	89.1	153.2	96.1	148.4

Pre-tax profit for the year would increase/decrease as a result of gains/losses on equity securities classified as FVPL. Other comprehensive income would increase/decrease as a result of gains/losses on equity securities classified as FVOCI.

Financial risk factors (Continued)

(a) Market risk (Continued)

(iii) Cash flow and fair value interest rate risk

Financial instruments at fixed and variable rates expose the Group to fair value interest rate risk and cash flow interest rate risk respectively. The Group's interest-bearing assets mainly comprise floating and fixed rate bank deposits of HK\$10,634.9 million (2020: HK\$7,628.3 million). The Group's interest-bearing liabilities mainly comprises floating rate borrowings of HK\$22,333.8 million (2020: HK\$13,835.3 million), fixed rate borrowings of HK\$32,777.3 million (2020: HK\$28,303.3 million) and floating rate deposits received from customers of HK\$1,434.0 million (2020: HK\$1,392.2 million).

At 31st December 2021, if market interest rates on bank deposits had been 100 basis points (2020: 100 basis points) higher/lower with all other variables held constant, pre-tax profit for the year would have been HK\$81.1 million (2020: HK\$77.8 million) higher/lower, mainly as a result of higher/lower interest income on floating rate bank deposits.

At 31st December 2021, if market interest rates on borrowings and customers' deposits had been 100 basis points (2020: 100 basis points) higher/lower with all other variables held constant, pre-tax profit for the year would have been HK\$210.0 million (2020: HK\$172.9 million) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings and customers' deposits.

(b) Credit risk

Credit risk of the Group mainly arises from:

	2021 HK\$'M	2020 HK\$'M
Cash and bank deposits	10,634.9	7,628.3
Debt securities and derivative financial instruments	757.3	413.1
Trade receivables	4,211.8	3,827.9
Other receivables	3,153.7	2,586.0
Loan and other receivables from joint ventures	535.9	442.9
Loan and other receivables from associates	1,161.5	1,336.7
Loan and other receivables from non-controlling shareholders	306.6	206.3
Other non-current assets	3,586.0	3,283.1

The Group has no significant concentrations of credit risk. The Group has credit policy to handle credit risk of customers. There is no significant concentration of sales to any individual customer. The top five largest customers account for less than 30 per cent of the total revenues. Furthermore, security deposits are required for gas customers. This also applies to the Chinese mainland associates and joint ventures where there is no significant concentration of sales to any individual customer. Other non-current assets mainly represent aviation fuel facility construction receivable. Management considered that counterparty default risk is low and there is no history of default in repayment. Debt securities, derivative financial instruments entered with financial institutions and cash transactions counter parties are mostly with good credit rating of investment grade or above. The Group has policies that limit the amount of credit exposure to any one financial institution.

Financial risk factors (Continued)

(b) Credit risk (Continued)

The Group monitors the exposure to credit risk in respect of the financial assistance provided to its joint ventures and associates through exercising joint control or influence over their financial and operating policy decisions and reviewing their financial positions on a regular basis.

The credit quality of financial assets can be assessed by reference to external credit ratings (if available) or to historical information about counterparty default rates is as follows:

	2021 %	2020 %
Cash and bank deposits		
AA	2.1	1.6
A	58.7	74.4
BBB	31.4	17.8
Unrated	7.8	6.2
	100.0	100.0
Debt securities		
AA	10.2	27.7
A	21.0	67.0
BBB	1.7	5.3
Unrated	67.1	_
	100.0	100.0
Derivative financial instruments		
AA	3.5	3.8
A	94.5	96.2
BBB	2.0	_
	100.0	100.0

Credit ratings are quoted from Bloomberg.

Credit quality of loan and other receivables from associates, loan and other receivables from joint ventures, other non-current assets and trade and other receivables are disclosed in notes 21, 22, 27 and 29 respectively to the consolidated financial statements.

The Group has several types of financial assets that are subject to the expected credit loss model, including trade receivables, other receivables, loan and other receivables from associates, joint ventures and non-controlling shareholders, aviation fuel facility construction receivable and debt investments carried at amortised cost or FVOCI. While cash and cash equivalents are also subject to the impairment requirements of HKFRS 9, the identified impairment loss was immaterial.

Financial risk factors (Continued)

(b) Credit risk (Continued)

Trade receivables and contract assets

The Group applies the simplified approach to provide for expected credit losses prescribed by HKFRS 9, which permits the use of the lifetime expected credit loss provision for trade receivables and contract assets. The expected credit loss provision rates for trade receivables and contract assets are based on historical payment profiles and historical credit loss experience, adjusted to reflect, where relevant and appropriate, current and information specific to the debtors, future economic and market conditions and forward-looking information on macroeconomic factors (e.g. Gross Domestic Product) affecting the ability of the debtors to settle the receivables that the Group considers are reasonable and appropriate. To measure the expected credit losses, trade receivables and contract assets have been grouped based on the days past due. The gross carrying amount of the trade receivables, contract assets and the loss allowance provision analysed by aging band are set out below:

	Current	1-30 days	31-60 days	61-90 days	Over 90 days	Total
31st December 2021						
Expected loss rate	0.3%	0.3%	2.3%	4.0%	44.8%	4.9%
Gross carrying amount – trade receivables and contract assets	3,267.0	1,040.0	103.9	105.4	512.5	5,028.8
Loss allowance	6.9	3.3	2.4	4.2	229.4	246.2
31st December 2020						
Expected loss rate	0.3%	0.4%	2.6%	5.4%	49.4%	6.2%
Gross carrying amount – trade receivables and contract assets	3,316.1	787.7	128.5	53.8	576.1	4,862.2
Loss allowance	6.6	3.2	3.3	2.9	284.9	300.9

The closing loss allowance for trade receivables as at 31st December 2021 and 2020 reconcile to the opening loss allowance as follows:

		Loss allowance for trade receivables		
	2021 HK\$'M	2020 HK\$'M		
At 1st January	300.9	248.0		
Increase in loss allowance recognised in the profit or loss during the year	39.7	42.5		
Receivables written off during the year as uncollectible	(99.0)	(1.6)		
Unused amount reversed	(2.9)	(1.4)		
Exchange differences	7.5	13.4		
At 31st December	246.2	300.9		

A provision for impairment is established when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of a debtor to engage in a repayment plan with the Group, and a failure to make contractual payments after certain periods of time.

Financial risk factors (Continued)

(b) Credit risk (Continued)

Other receivables, loans and other receivables from associates, joint ventures and non-controlling shareholders, and aviation fuel facility construction receivable

Impairment on other receivables, loans and other receivables from associates, joint ventures and non-controlling shareholders, and aviation fuel facility construction receivable are measured as either 12-month expected credit losses or lifetime expected credit losses, depending on whether there has been a significant increase in credit risk since initial recognition. If a significant increase in credit risk of a receivable has occurred since initial recognition, then loss allowance is measured as lifetime expected credit losses.

The Group applies 12-month expected credit loss model under HKFRS 9 and considers there is no significant increase in credit risk since initial recognition. The loss allowance for other receivables and loans and other receivables from associates, joint ventures and non-controlling shareholders as a result of applying the expected credit loss model was immaterial.

Other financial investments

All of the Group's debt investments at FVOCI are considered to have low credit risk, and the loss allowance recognised during the year was therefore limited to 12-month expected credit losses. Management consider 'low credit risk' for most of the listed bonds to be an investment grade credit rating with at least one major rating agency. The issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

Taking into account the ongoing dealings with counterparties and securities pledged by the counterparties, management consider 'low credit risk' for the derivative financial instruments.

(c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of credit facilities and the ability to close out market positions. Due to the dynamic nature of the underlying businesses, Group Treasury aims to maintain flexibility in funding by keeping adequate free cash and credit lines available.

The Group determines that there is no significant liquidity risk in view of the adequate and stable sources of funds and unutilised banking facilities.

Financial risk factors (Continued)

(c) Liquidity risk (Continued)

The table below analyses the Group's major financial liabilities into relevant maturity groupings based on the remaining period at the date of statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows, except for derivative financial instruments. Non-interest-bearing balances due within 12 months equal their carrying balances, as the impact of discounting is not significant.

	Less than 1 year HK\$'M	Between 1 and 2 years HK\$'M	Between 2 and 5 years HK\$'M	Over 5 years HK\$'M
At 31st December 2021				
Trade and other payables	6,425.3	_	_	-
Loan and other payables to joint ventures	189.5	_	_	_
Loan and other payables to non-controlling shareholders	159.4	40.8	98.5	_
Borrowings	20,031.5	7,906.0	20,284.6	15,708.7
Lease liabilities	114.6	85.4	115.0	61.4
Derivative financial instruments	511.0	70.7	776.7	9.6
At 31st December 2020				
Trade and other payables	5,453.4	_	_	_
Loan and other payables to joint ventures	486.3	_	_	_
Loan and other payables to non-controlling shareholders	108.3	_	20.9	_
Borrowings	12,045.4	9,795.2	10,696.2	17,911.7
Lease liabilities	115.5	67.9	78.6	73.0
Derivative financial instruments	140.2	421.4	57.2	_

The customers' deposits are not presented in the above liquidity analysis as management considers it is not practical to allocate the deposits into maturity groupings and the net movement in customers' deposits is not significant based on past experience.

Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, buy back existing shares, drawdown and repay borrowings, issue and redeem perpetual capital securities, issue new shares or convertible bonds, or sell assets to reduce debt.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net borrowing divided by total equity and net borrowing. Net borrowing is calculated as total borrowings, less time deposits, cash and bank deposits as shown in the consolidated statement of financial position. Lease liabilities are excluded from the calculation of this ratio.

Capital risk management (Continued)

The gearing ratios at 31st December 2021 and 2020 are as follows:

	2021 HK\$'M	2020 HK\$'M
Total borrowings	(55,111.1)	(42,138.6)
Less: Time deposits, cash and bank deposits	10,634.9	7,628.3
Net borrowing	(44,476.2)	(34,510.3)
Total equity	(81,838.8)	(79,153.3)
Net borrowing	(44,476.2)	(34,510.3)
	(126,315.0)	(113,663.6)
	250	200/
Gearing ratio	35%	30%

Fair value estimation

The Group's financial instruments are measured in the statement of financial position at fair value, this requires disclosure of fair value measurements by level of the following fair value measurement hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

The following table presents the Group's financial assets and financial liabilities that are measured at fair value at 31st December 2021 and 2020.

	Leve	el 1	Level 2		Level 3		Total	
HK\$'M	2021	2020	2021	2020	2021	2020	2021	2020
Financial assets								
Financial assets at FVPL								
 Debt securities 	284.2	_	_	_	_	_	284.2	_
 Equity investments 	1,498.0	1,742.0	_	56.3	3,265.4	3,094.4	4,763.4	4,892.7
Derivative financial instruments	_	_	71.1	79.1	262.8	254.4	333.9	333.5
Financial assets at FVOCI								
 Debt securities 	139.2	158.7	_	_	_	_	139.2	158.7
 Equity investments 	1,599.0	1,930.7	_	_	432.3	403.4	2,031.3	2,334.1
Total financial assets	3,520.4	3,831.4	71.1	135.4	3,960.5	3,752.2	7,552.0	7,719.0
Financial liabilities								
Other payables	_	_	_	_	154.0	154.0	154.0	154.0
Derivative financial instruments	_	_	591.3	618.8	776.6	_	1,367.9	618.8
Total financial liabilities	_	_	591.3	618.8	930.6	154.0	1,521.9	772.8

Fair value estimation (Continued)

There are no changes in valuation techniques during the year.

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting year. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in level 1.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- The fair value of cross currency swaps is calculated as the present value of the estimated future cash flows based on observable foreign exchange rates and yield curves.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.
- The fair value of forward foreign exchange contracts is calculated as the present value of future cash flows based on the forward exchange rates at the end of the reporting period.

If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3.

- Financial assets include a total of approximately HK\$3.2 billion (2020: approximately HK\$3.1 billion) of an unlisted equity investment and its related derivative, which are considered entirely as financial assets at FVPL. In respect of the unlisted equity investment, the fair value is determined based on the discounted cash flow model. The significant unobservable inputs include discount rate of 12.0 per cent (2020: 13.0 per cent), sales price, sales volume and expected free cash flows of the investee. The fair value decreases with the increase in the discount rate, and increases with the increase in the sales price, sales volume or expected free cash flows of the investee. In respect of the related derivative, the fair value is determined based on the binomial and black scholes models. The significant unobservable inputs, except for those included in the fair value of the unlisted equity investment, mainly include 47.9 per cent (2020: 33.6 per cent) expected volatility of the fair value of the unlisted equity investment. The fair value increases with the increase in the expected volatility.
- Financial assets also include derivative financial instrument of approximately HK\$0.3 billion (2020: approximately HK\$0.3 billion), the fair value is determined based on the binomial model. The significant unobservable inputs include discount rate of 10.2 per cent (2020: 10.2 per cent) and share price expected volatility of the fair value of the underlying equity instrument of 36.2 per cent (2020: 35.5 per cent). The fair value increases with the decrease in discount rate and increase in share price expected volatility or decreases with the increase in the discount rate and decrease in share price expected volatility.
- Financial assets also include unlisted equity investments of approximately HK\$0.5 billion (2020: approximately HK\$0.4 billion), the fair values of which are determined with reference to their attributable net assets values and recent comparable transaction price, where available, being significant unobservable inputs. The fair value increases with the increase in the attributable net assets value and recent comparable transaction price, where available.

Fair value estimation (Continued)

- Financial liabilities include contingent consideration of approximately HK\$0.2 billion (2020: approximately HK\$0.2 billion), which is generated from the further acquisition of a subsidiary in 2015 under other payables in level 3. The fair value is determined based on discounted cash flow model. The significant unobservable inputs include discount rate of 3.1 per cent (2020: 3.1 per cent) and the rate of probability on the outflow of resources will be required to settle the obligation. The fair value decreases with the increase in the discount rate, and increases with the increase in the rate of probability.
- Financial liabilities also include embedded derivative component of convertible bonds of approximately
 HK\$0.8 billion, the fair value of which is determined based on binomial option pricing model. The significant unobservable inputs include share price expected volatility of 34.1 per cent. The fair value increases with the increase in the share price expected volatility.

The following table presents the changes in level 3 instruments of the Group for the year ended 31st December 2021 and 2020.

	Financial a	ssets	Financial liabilities		
	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M	
At 1st January	3,752.2	3,519.2	154.0	154.0	
Additions	164.8	40.2	409.4	_	
Change in fair value	(47.7)	(14.7)	358.6	_	
Exchange differences	91.2	207.5	8.6	_	
At 31st December	3,960.5	3,752.2	930.6	154.0	

The carrying amounts of financial assets and financial liabilities recorded at amortised cost in the consolidated financial statements approximate their fair values.

4 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated by management and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Management incorporates their assessment on the impact arising from the ongoing development of the COVID-19 pandemic and other relevant global political and economic situations into their evaluation.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results.

(a) Estimated impairment of assets

The Group tests annually whether goodwill has suffered any impairment or whenever events of changes in circumstances indicates that the carrying amount may not be recoverable. Other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets exceeds its recoverable amount. The recoverable amounts of the assets and cash-generating units have been determined based on the higher of fair value less costs of disposal and value-in-use calculations, and reflecting management's latest business plans and strategies in light of the latest market environment and the management's assessment on the business prospect thereof as of 31st December 2021. These calculations require the use of estimates which includes the following key assumptions as detailed below:

4 Critical accounting estimates and judgements (Continued)

(a) Estimated impairment of assets (Continued)

Mining and oil properties in the Chinese mainland and Thailand

In respect to the Group's mining and oil properties in the Chinese mainland and Thailand respectively (under New Energy business segment), the Group tested them for impairment by estimating the recoverable amount of these projects as at 31st December 2021. The key assumptions adopted in the test were coal and oil reserves, future business growth, future products selling prices and production costs, production volume and discount rate of 10.0 per cent to 11.2 per cent (2020: 10.5 per cent to 11.0 per cent). Based on the result of the tests, no impairment loss was recognised in the profit or loss for the year ended 31st December 2021 (2020: impairment loss of HK\$385.0 million). Assuming projected revenue decreased by 5.0 per cent and 3.0 per cent for mining and oil properties respectively or the discount rate increased by 100 basis point, the recoverable amount calculated for each of these projects would not result in a further material loss to the Group.

Chemical production project in the Chinese mainland

In respect to a chemical production project of the Group in the Chinese mainland which produces industrial chemical products including methanol (under New Energy business segment), the Group tested it for impairment by estimating the recoverable amount of the project as at 31st December 2021. The key assumptions adopted in the test were future business growth, future products selling prices and production costs, production volume and discount rate of 10.0 per cent (2020: 10.0 per cent). Based on the result of the tests, impairment loss of HK\$731.0 million against property, plant and equipment and HK\$25.1 million against goodwill were recognised in the profit or loss for the year ended 31st December 2021 (2020: Nil). Assuming projected revenue and projected production costs decreased by 5.0 per cent or the discount rate increased by 100 basis point, the recoverable amount calculated for the project would not result in a further material loss to the Group.

Goodwill, property, plant and equipment in relation to city-gas business in the Chinese mainland In 2017 and 2019, the National Development and Reform Commission issued "Guiding Opinion on Strengthening Gas Distribution Price Regulation" and the "Guiding Opinion on the Regulation of Installation Fees for Gas Facilities in Cities and Towns" respectively (collectively "Guiding Opinions"), which set out proposed return rates for both gas distribution and gas facility installation businesses of city-gas enterprises. In this regards, the Group has carried out assessment on the goodwill and property, plant and equipment of individual gas projects in the Chinese mainland, including those held through the Group's interests in associates and joint ventures.

The assessment for each of the city-gas projects is based on value-in-use approach using the discounted cash flow method. The estimated cash flows used in the assessment are derived based on the most recent financial budget as of 31st December 2021 for the next five years approved by management. Cash flows beyond five-year period until the end of the relevant concession periods are determined by considering both internal and external factors relating to the cash-generating units. The Group is of the view that, in order to achieve a smooth transition to both the gas project operators and the society, the existing gas pricing mechanism would be adopted continuously for certain years and thereafter gradually implemented before 2030. The connecting fee margin was also reduced by management to address the rationale that drove the issue of the Guiding Opinions. The terminal value is determined by management with reference to applicable valuation basis and relevant rules and regulations. Discount rate ranged between 8.2 per cent to 16.0 per cent (2020: 8.5 per cent to 11.0 per cent) was used to reflect specific risk relating to the investments. In relation to city-gas business in the Chinese mainland operated by the Group's subsidiaries, the aggregate carrying values of property, plant and equipment and goodwill related to these individual city-gas projects as at 31st December 2021 amounting to approximately HK\$38.7 billion, after impairment as detailed below (2020: HK\$34.6 billion). The Group's share of property, plant and equipment, together with goodwill related to individual city-gas projects accounted for as associates and joint ventures of the Group as at 31st December 2021 were carried at approximately HK\$18.9 billion and HK\$17.5 billion respectively (2020: approximately HK\$12.0 billion and HK\$17.0 billion respectively). Based on the assessment, provisions for impairment of HK\$89.3 million and HK\$31.0 million on goodwill and property, plant and equipment were recognised in the profit or loss for the year ended 31st December 2021 (2020: Nil).

4 Critical accounting estimates and judgements (Continued)

(a) Estimated impairment of assets (Continued)

Goodwill, property, plant and equipment in relation to city-gas business in the Chinese mainland (Continued)

The assumptions used in the assessment are highly judgemental, and heavily dependent on the timing and the extent the pricing mechanism as detailed in the Guiding Opinions will be implemented as well as the discount rate used and the terminal value. If the discount rate is increased by 50 basis points and all other variables are held constant, the recoverable amount calculated for each of these projects would not result in a further material loss to the Group. If the terminal value is decreased by 10 per cent and all other variables are held constant, the recoverable amount calculated for each of these projects would not result in a further material loss to the Group.

(b) Property, plant and equipment

The Group's management determines the estimated useful lives and related depreciation charges for its property, plant and equipment. This estimate is based on the historical experience of the actual useful lives of the property, plant and equipment of similar nature and functions. It could change significantly as a result of technical innovation. Management will change the depreciation charge where useful lives are different from the previously estimated lives. It will also write off or write down technically obsolete or non-strategic assets that have been abandoned or sold. For cost incurred and capitalised as property, plant and equipment, management assessed whether the Group has control over these assets based on relevant regulations and the terms as stipulated in the relevant agreements, where applicable.

(c) Estimate of fair value of investment property

The valuation of investment properties (including those held by an associate) is performed in accordance with The HKIS Valuation Standards (2020 Edition) published by HKIS and the 'International Valuation Standards' published by the International Valuation Standards Committee. The valuation is reviewed annually by qualified valuers by considering the information from a variety of sources including:

- current prices in an active market for properties of different nature, condition or location, adjusted to reflect those differences;
- recent prices of similar properties in less active markets, with adjustments to reflect any changes in economic conditions since the date of the transactions that occurred at those prices; and
- rental income derived from the terms of any existing lease and other contracts, and (where possible) from
 external evidence such as current market rents for similar properties in the same location and condition, and
 using capitalisation rates that reflect current market assessments of the uncertainty in the amount and timing
 of the rental income.

If information on current or recent prices of investment properties is not available, the fair values of investment properties are mainly determined using income capitalisation valuation techniques. The Group uses assumptions that are mainly based on market conditions existing at each date of statement of financial position.

The principal assumptions underlying management's estimation of fair value are those related to the capitalisation rate and market rentals. These valuations are regularly compared to actual market yield data, and actual transactions by the Group and those reported by the market.

(d) Estimate of gas and water consumption

Revenue for gas and water supply may include an estimation of the gas and water supplied to the customers of which actual meter reading is not available. The estimation is done mainly based on the past consumption records and recent consumption pattern of the customers. As of the year-end date, the overall billed gas and water sales are in line with the gas and water supplied to the customers.

4 Critical accounting estimates and judgements (Continued)

(e) Recognition of gas connection income and allocation of transaction price

Critical judgements in recognising revenue

Gas connection income is recognised when or as the control of the underlying performance over time, the progress towards complete satisfaction of the performance obligation is measured using input method. Management are required to exercise significant judgement in their review and revision of the estimates of the total contract costs and actual costs incurred up to the end of the reporting period for each contract as the contract progresses, based on past experience and specific circumstances.

Critical judgements in allocating the transaction price

Some gas connection contracts include installation services. Because these contracts include performance obligations, the transaction price must be allocated to the performance obligations on a relative stand-alone selling price basis.

Management estimates that the stand-alone selling price at contract inception based on expected cost plus a margin approach for installation services and residual approach for connection services.

(f) Reserves estimates

Reserves are estimates of the amount of product that can be economically and legally extracted from the Group's mining and oil properties for coal mines in the Chinese mainland and oil concession in Thailand. In order to calculate reserves, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand and commodity prices.

Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies or fields to be determined by analysing geological data such as drilling samples. This process may require complex and difficult geological judgements and calculations to interpret the data.

Because the economic assumptions used to estimate reserves changes from period to period, and because additional geological data is generated during the course of operations, estimates of reserves may change from period to period. Changes in reported reserves may affect the Group's financial results and financial position in a number of ways, including the following:

- Asset carrying values may be affected due to changes in estimated future cash flows.
- Depreciation charged in the profit or loss may change where such charges are determined by the units of production basis, or where the useful economic lives of assets change.
- Decommissioning, site restoration and environmental provisions may change where changes in estimated reserves affect expectations about the timing or cost of these activities.

(g) Estimate of fair value of equity investments

The fair value of financial assets that are not traded in an active market is determined by using valuation techniques. The Group uses its judgement to select a variety of methods (such as discounted cash flow model) and makes assumptions that are mainly based on market conditions existing at each date of statement of financial position. Details of the key assumptions used and the impact of changes to these assumptions are described in note 3.

(h) Estimate of purchase cost of natural gas

In respect of the purchase of natural gas of the Group's Chinese mainland city-gas projects, under certain situations, as at the end of the financial year, the ultimate purchase cost of certain portion of supplied natural gas of certain projects is yet to be finalised and subject to negotiation with the suppliers due to different supply allocation bases and volatile commodity price environment. The Group exercises judgement in estimating the purchase cost, taking into account latest negotiation status, past experience and other relevant factors. For the year ended 31st December 2021, the difference between the estimated and ultimate purchase cost is not expected to be material to the consolidated financial statements as a whole.

5 Segment information

The Group's principal activities are the production, distribution and marketing of gas, water supply and emerging environmentally-friendly energy businesses ("New Energy") in Hong Kong and the Chinese mainland. The revenue comprises the following:

	2021 HK\$'M	2020 HK\$'M
Gas sales before fuel cost adjustment	37,434.0	29,547.2
Fuel cost adjustment	806.7	447.2
Gas sales after fuel cost adjustment	38,240.7	29,994.4
Gas connection income	3,924.4	3,161.0
Equipment sales and maintenance services	3,456.3	2,867.5
Water and related sales	1,762.7	1,360.4
Oil and coal related sales	1,158.7	785.5
Hydro-treated vegetable oil related sales	2,604.9	964.3
Other sales	2,416.0	1,793.9
	53,563.7	40,927.0

The chief operating decision-maker has been identified as the executive committee members (the "ECM") of the Company. The ECM reviews the Group's internal reporting in order to assess performance and allocate resources. The ECM considers the business from both product and geographical perspectives. From a product perspective, management assesses the performance of (a) gas, water and related businesses; (b) New Energy and (c) property business. Gas, water and related businesses is further evaluated on a geographic basis (Hong Kong and the Chinese mainland).

The ECM assesses the performance of the operating segments based on a measure of adjusted EBITDA. Other information provided, except as noted below, to the ECM is measured in a manner consistent with that in the consolidated financial statements.

5 Segment information (Continued)

The segment information provided to the ECM for the reportable segments is as follows:

	Gas, wa related bu		New Energy	Property	Other segments	Total
2021 HK\$'M	Hong Kong	Chinese mainland				
Revenue recognised at a point in time	9,982.4	35,104.0	5,657.3	_	231.4	50,975.1
Revenue recognised over time	_	1,192.0	_	_	863.0	2,055.0
Finance and rental income	_	_	474.1	59.5	_	533.6
	9,982.4	36,296.0	6,131.4	59.5	1,094.4	53,563.7
Adjusted EBITDA	4,886.0	6,505.2	1,053.4	30.5	227.3	12,702.4
Depreciation and amortisation	(871.2)	(1,781.2)	(401.4)	_	(186.6)	(3,240.4)
Unallocated expenses						(642.3)
						8,819.7
Other losses, net						(1,563.3)
Interest expense						(1,408.2)
Share of results of associates	_	1,355.8	94.5	431.6	3.7	1,885.6
Share of results of joint ventures	_	638.1	1.0	10.6	(2.8)	646.9
Profit before taxation						8,380.7
Taxation						(2,155.0)
Profit for the year					_	6,225.7

There is no material change in the valuation of the Group's shared investment properties at the International Finance Centre complex for the year (2020: a decrease of HK\$477.0 million included in the share of results of associates).

5 Segment information (Continued)

	Gas, wa related bu		New Energy	Property	Other segments	Total
2020 HK\$'M	Hong Kong	Chinese mainland	-			
Revenue recognised at a point in time	9,516.7	25,914.0	3,041.8	_	189.8	38,662.3
Revenue recognised over time	_	994.4	_	_	783.7	1,778.1
Finance and rental income	_	_	434.6	52.0	_	486.6
	9,516.7	26,908.4	3,476.4	52.0	973.5	40,927.0
Adjusted EBITDA	4,865.7	6,067.2	793.0	25.4	197.6	11,948.9
Depreciation and amortisation	(857.0)	(1,535.0)	(319.6)	_	(177.1)	(2,888.7)
Unallocated expenses						(660.3)
						8,399.9
Other losses, net						(481.9)
Interest expense						(1,268.6)
Share of results of associates	_	1,186.9	32.6	(39.0)	6.5	1,187.0
Share of results of joint ventures	_	1,082.3	1.3	10.2	(4.6)	1,089.2
Profit before taxation					_	8,925.6
Taxation						(1,713.2)
Profit for the year						7,212.4

The segment assets at 31st December 2021 and 2020 are as follows:

	Gas, wa related bu		New Energy	Property	Other segments	Total
2021 HK\$'M	Hong Kong	Chinese mainland	-			
Segment assets	18,952.2	100,401.4	18,398.3	15,752.3	4,591.5	158,095.7
Unallocated assets:						
Financial assets at FVOCI						2,170.5
Financial assets at FVPL						5,047.6
Time deposits, cash and bank balances excluded						
from segment assets						1,314.0
Others (note)						1,439.6
Total assets						168,067.4

5 Segment information (Continued)

	Gas, wa related bu		New Energy	Property	Other segments	Total
2020 HK\$'M	Hong Kong	Chinese mainland				
Segment assets	17,756.5	82,048.7	18,587.0	15,707.0	4,702.0	138,801.2
Unallocated assets:						
Financial assets at FVOCI						2,492.8
Financial assets at FVPL						4,892.7
Time deposits, cash and bank balances excluded						
from segment assets						2,808.3
Others (note)						1,285.2
Total assets						150,280.2

Note

Other unallocated assets mainly include other receivables other than those included under segment assets, retirement benefit assets, derivative financial instruments and loan and other receivables from non-controlling shareholders.

The Company is domiciled in Hong Kong. The Group's revenue from external customers in Hong Kong for the year ended 31st December 2021 is HK\$11,728.9 million (2020: HK\$11,029.7 million), and the revenue from external customers in the Chinese mainland and other geographical locations is HK\$41,834.8 million (2020: HK\$29,897.3 million).

At 31st December 2021, the total of non-current assets other than financial instruments located in Hong Kong is HK\$35,093.8 million (2020: HK\$34,352.3 million), and the total of non-current assets other than financial instruments located in the Chinese mainland and other geographical locations is HK\$101,235.8 million (2020: HK\$88,286.2 million).

For the years ended 31st December 2021 and 2020, the percentage of revenues attributable to the Group's five largest customers is less than 30 per cent.

6 Total operating expenses

	2021 HK\$'M	2020 HK\$'M
Stores and materials used	32,591.8	21,986.5
Manpower costs (note 11)	3,623.8	3,284.2
Depreciation and amortisation	3,288.6	2,940.6
Other operating items	5,239.8	4,315.8
	44,744.0	32,527.1

7 Other losses, net

	2021 HK\$'M	2020 HK\$'M
Net investment gains/(losses) (note 8)	354.9	(162.3)
Fair value gain/(loss) on investment property (note 17)	22.0	(3.0)
Provision for assets (note)	(1,531.7)	(446.8)
Ineffective portion on cash flow hedges	4.9	6.9
Change in fair value of embedded derivative component of convertible bonds (note 32(b))	(358.6)	_
Others	(54.8)	123.3
	(1,563.3)	(481.9)

Note

For the year ended 31st December 2021, the amount included impairment provision against goodwill of HK\$25.1 million and property, plant and equipment of HK\$731.0 million in relation to a chemical production project under New Energy business segment, and included impairment provision against goodwill of HK\$89.3 million and property, plant and equipment of HK\$31.0 million in relation to several city-gas projects in the Chinese mainland. The remaining balance was provided mainly for other projects under the New Energy business segment and other segments. For the year ended 31st December 2020, the amount included an impairment provision of HK\$385.0 million in relation to oil properties under New Energy business segment.

8 Net investment gains/(losses)

		2021 HK\$'M	2020 HK\$'M
(a)	Interest income		
	Bank deposits	105.4	107.0
	Listed financial assets at FVOCI	2.2	3.0
	Loans to associates and joint ventures	51.5	63.9
	Others	11.9	13.3
		171.0	187.2
(b)	Net realised and unrealised (losses)/gains and interest income on financial assets at FVPL and derivative financial instruments		
	Listed securities	(31.8)	(570.4)
	Unlisted securities	(23.3)	(47.1)
	Exchange differences	2.3	(1.0)
		(52.8)	(618.5)
(c)	Net realised and unrealised gains/(losses) on financial assets at FVOCI		
	Exchange differences	1.7	(2.0)
		1.7	(2.0)
(d)	Dividend income		
	Listed financial assets at FVPL	43.2	36.8
	Listed financial assets at FVOCI	48.2	46.4
	Unlisted financial assets at FVOCI	61.9	60.7
		153.3	143.9
(e)	Exchange gains	81.7	127.1
		354.9	(162.3)

9 Interest expense

	2021 HK\$'M	2020 HK\$'M
Interest on bank loans and overdrafts wholly repayable within five years	906.6	851.0
Interest on guaranteed notes wholly repayable within five years	271.7	204.9
Interest on guaranteed notes not wholly repayable within five years	354.3	361.4
Interest on convertible bonds	9.3	_
Interest on lease liabilities	13.5	13.2
	1,555.4	1,430.5
Less: amount capitalised	(147.2)	(161.9)
	1,408.2	1,268.6

The interest expense is capitalised at average rates from 2.59 per cent to 6.18 per cent (2020: 2.96 per cent to 5.35 per cent) per annum.

10 Profit before taxation

Profit before taxation is stated after charging and (crediting) the following:

	2021 HK\$'M	2020 HK\$'M
Cost of inventories sold	32,045.3	23,054.0
Depreciation and amortisation	3,288.6	2,940.6
Loss on disposal/write off of property, plant and equipment	18.4	72.6
(Gain)/loss on disposal of right-of-use assets	(26.0)	1.4
Impairment loss of trade receivables	39.7	42.5
Rental income from investment property		
– gross rental income	(59.5)	(52.0)
outgoing expenses	28.8	26.4
Auditors' remuneration		
– audit services	32.7	30.0
– non-audit services	17.9	9.4
Net loss on residential maintenance (note)	81.5	70.4
Note		
Analysis of net loss on residential maintenance:		
Residential maintenance revenue	(218.9)	(213.6)
Less expenses:		
Manpower costs	175.1	169.7
Other operating and administrative expenses	125.3	114.3
Net loss	81.5	70.4

11 Manpower costs

(a) Staff costs

	2021 HK\$'M	2020 HK\$'M
Salaries and wages	3,178.1	3,009.3
Pension costs – defined contribution retirement schemes	431.0	261.0
Pension costs – defined benefit retirement scheme (note 26)	14.7	13.9
	3,623.8	3,284.2

During the year, a subsidiary of the Group issued equity-settled share-based payments to certain employees to allow them to invest indirectly in the equity interest in a subsidiary engaging in the New Energy business. Such expense of HK\$36.5 million (2020: Nil) is included in "Other losses, net" in the profit or loss as shown in note 7.

(b) Five highest paid individuals

The five individuals whose emoluments were the highest in the Group for the year include three (2020: three) directors whose emoluments are reflected in the analysis shown in note 12. Details of the emoluments payable to the remaining two (2020: two) individuals during the year are as follows:

	2021 HK\$'M	2020 HK\$'M
Fee, salaries, allowances and benefits in kind	5.2	5.3
Performance bonus	7.1	8.1
Contributions to retirement scheme	1.6	2.4
Share-based payment benefits	16.4	_
	30.3	15.8

Number of individuals whose emoluments fell within:

Emoluments band (HK\$'M)	2021	2020
20.0 – 20.5	1	_
9.5 – 10.0	1	_
8.5 – 9.0	-	1
7.0 – 7.5	_	1

(c) Emoluments of senior management

Senior management for the years ended 31st December 2021 and 2020 were all executive directors of the Company whose emoluments have been shown in note 12.

12 Benefits and interests of directors

(a) Directors' emoluments

Emoluments paid or payable to every director whether of the Company or its subsidiary undertaking

			•			
Name of director	Fees HK\$'M	Salary, allowances and benefits in kind HK\$'M	Performance bonus HK\$'M	Contributions to retirement scheme HK\$'M	Others HK\$'M	Total HK\$'M
2021						
Alfred Chan Wing-kin (Managing Director) (note (i) and (ii))	0.4	6.7	22.2	5.7	0.4	35.4
Peter Wong Wai-yee (Deputy Managing Director) (note (i))	0.4	6.2	16.6	5.0	_	28.2
John Ho Hon-ming (note (i))	0.4	5.3	6.0	2.3	_	14.0
Colin Lam Ko-yin	0.3	0.1	_	_	_	0.4
Lee Ka-kit (note (i))	0.8	0.1	_	_	_	0.9
Lee Ka-shing	0.7	0.2	_	_	_	0.9
David Li Kwok-po	0.7	0.1	_	_	_	0.8
Poon Chung-kwong	0.7	_	_	_	_	0.7
Moses Cheng Mo-chi	0.7	-	-	_	_	0.7
	5.1	18.7	44.8	13.0	0.4	82.0

Notes

- (i) Mr. Alfred Chan Wing-kin, Mr. Peter Wong Wai-yee, Mr. John Ho Hon-ming and Dr. Lee Ka-kit who are also directors of Towngas Smart Energy Company Limited ("Towngas Smart Energy") (formerly known as Towngas China Company Limited), a significant subsidiary of the Group. In this connection, the above emoluments included Mr. Alfred Chan Wing-kin, Mr. Peter Wong Wai-yee, Mr. John Ho Hon-ming and Dr. Lee Ka-kit each received directors' emoluments from Towngas Smart Energy of HK\$0.2 million, HK\$8.5 million, HK\$6.3 million and HK\$0.1 million (2020: HK\$0.2 million, HK\$7.2 million, HK\$1.2 million and nil) respectively, and no other share-based payment benefits were received from Towngas Smart Energy during the year and 2020.
- (ii) During the year and as at 31st December 2021, 66,409 shares in EcoCeres, Inc., a non-wholly-owned subsidiary of the Company, were beneficially owned by Everwealth Investment A, L.P. (the "Limited Partnership"). Mr. Alfred Chan Wing-kin, as a limited partner, had committed to make capital contribution of approximately USD2.2 million to the Limited Partnership representing more than one-third of the total capital contribution requirements of the Limited Partnership. The related equity-settled share-based payment benefits of HK\$0.4 million has been included in "Others" emoluments to Mr. Alfred Chan Wing-kin.

12 Benefits and interests of directors (Continued)

(a) Directors' emoluments (Continued)

Emoluments paid or payable to every director whether of the Company or its subsidiary undertaking

	or its substately undertaking				
Name of director	Fees HK\$'M	Salary, allowances and benefits in kind HK\$'M	Performance bonus HK\$'M	Contributions to retirement scheme HK\$'M	Total HK\$'M
2020					
Alfred Chan Wing-kin (Managing Director)	0.4	6.7	21.6	5.9	34.6
Peter Wong Wai-yee	0.4	4.8	9.4	2.6	17.2
John Ho Hon-ming (note (iii))	0.1	1.3	1.2	0.6	3.2
Colin Lam Ko-yin	0.3	0.1	_	_	0.4
Lee Ka-kit	0.7	0.2	_	_	0.9
Lee Ka-shing	0.7	0.2	_	_	0.9
David Li Kwok-po	0.7	0.1	_	_	0.8
Poon Chung-kwong	0.7	_	_	_	0.7
Moses Cheng Mo-chi	0.7	_	_	_	0.7
	4.7	13.4	32.2	9.1	59.4

(iii) Mr. John Ho Hon-ming was appointed as director on 1st October 2020. For the period from 1st January to 30th September 2020, in the role of Chief Financial Officer and Company Secretary, Mr. John Ho Hon-ming had a remuneration of HK\$8.1 million from the Group, including fees of HK\$0.1 million, salary, allowances and benefits in kind of HK\$3.2 million, performance bonus of HK\$4.0 million and contributions to retirement scheme of HK\$0.8 million.

The above remuneration paid to directors of the Company also represents the amounts of short-term employee benefits of HK\$68.6 million (2020: HK\$50.3 million), post-employment benefits of HK\$13.0 million (2020: HK\$9.1 million) and share-based payment benefits of HK\$0.4 million (2020: Nil) paid to the Group's key management personnel during the year ended 31st December 2021. There were no other long-term benefits and termination benefits paid to the Group's key management personnel during the year (2020: Nil).

(b) Directors' material interests in transactions, arrangements or contracts

No significant transactions, arrangements or contracts in relation to the Group's business to which the Company was a party, and in which a director of the Company had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

13 Taxation

The amount of taxation charged to the profit or loss represents:

	2021 HK\$'M	2020 HK\$'M
Current taxation – provision for Hong Kong Profits Tax at the rate of 16.5% (2020: 16.5%) on the estimated assessable profits for the year	741.5	738.6
Current taxation – provision for other jurisdictions income tax at the prevailing rates on the estimated assessable profits for the year (note)	1,066.9	979.2
Current taxation – under/(over) provision in prior years	10.2	(0.5)
Deferred taxation – origination and reversal of temporary differences	210.8	(114.9)
Withholding tax	125.6	110.8
	2,155.0	1,713.2

Note

The prevailing income tax rates of the Chinese mainland and Thailand range from 15 per cent to 25 per cent (2020: 15 per cent to 25 per cent) and 50 per cent (2020: 50 per cent) respectively.

The taxation on the Group's profit before taxation differs from the theoretical amount that would arise using the taxation rate of Hong Kong as follows:

	2021 HK\$'M	2020 HK\$'M
Profit before taxation	8,380.7	8,925.6
Less: Share of results of associates	(1,885.6)	(1,187.0)
Share of results of joint ventures	(646.9)	(1,089.2)
	5,848.2	6,649.4
Calculated at a tax rate of 16.5% (2020: 16.5%)	965.0	1,097.2
Effect of different tax rates in other jurisdictions	374.6	238.6
Income not subject to taxation	(101.6)	(313.6)
Expenses not deductible for taxation purposes	629.1	448.8
Utilisation of previously unrecognised tax losses	(15.1)	(37.2)
Under/(over) provision in prior years	10.2	(0.5)
Withholding tax	125.6	110.8
Unrecognised tax losses and others	167.2	169.1
	2,155.0	1,713.2

Share of associates' taxation for the year ended 31st December 2021 of HK\$556.1 million (2020: HK\$479.0 million) is included in the profit or loss as share of results of associates.

Share of joint ventures' taxation for the year ended 31st December 2021 of HK\$448.9 million (2020: HK\$409.7 million) is included in the profit or loss as share of results of joint ventures.

14 Dividends

	2021 HK\$'M	2020 HK\$'M
Interim, paid of HK12 cents per ordinary share (2020: HK12 cents per ordinary share)	2,239.2	2,132.6
Final, proposed of HK23 cents per ordinary share (2020: HK23 cents per ordinary share)	4,291.8	4,087.4
	6,531.0	6,220.0

At a meeting held on 21st March 2022, the directors of the Company declared a final dividend of HK23 cents per ordinary share for the year ended 31st December 2021. This proposed dividend is not reflected as a dividend payable in these consolidated financial statements, but will be reflected as an appropriation of retained earnings for the year ended 31st December 2021.

15 Earnings per share

The calculation of basic earnings per share is based on the profit attributable to shareholders of HK\$5,017.0 million (2020: HK\$6,007.3 million) and the weighted average of 18,659,870,098 shares (2020: 18,659,870,098 shares¹) in issue during the year.

The computation of diluted earnings per share for the year ended 31st December 2021 does not assume the conversion of all convertible bonds issued by a subsidiary as their assumed conversion would result in an increase in earnings per share. Accordingly, the diluted earnings per share for the year ended 31st December 2021 is the same as the basic earnings per share.

As there were no diluted potential ordinary shares outstanding during the year, the diluted earnings per share for the year ended 31st December 2020 was the same as the basic earnings per share.

1 Adjusted for the bonus share issue in 2021

16 Property, plant and equipment

	Buildings, plant and equipment HK\$'M	Mains and risers HK\$'M	Meters and installations HK\$'M	Mining and oil properties HK\$'M	Others HK\$'M	Capital work in progress HK\$'M	Total HK\$'M
Cost							
At 1st January 2021	27,987.9	46,861.3	4,369.2	3,770.0	987.9	12,057.3	96,033.6
Additions	1,411.2	713.1	311.3	23.3	58.9	4,458.6	6,976.4
Acquisition of businesses (note 42(a))	73.3	_	_	_	_	_	73.3
Transfers from capital work in progress	1,375.5	3,604.3	17.7	3.4	_	(5,000.9)	_
Disposals/write off	(214.2)	(35.9)	(115.6)	(3.2)	_	(7.4)	(376.3)
Exchange differences	704.7	1,158.6	5.8	(319.4)	32.0	313.4	1,895.1
At 31st December 2021	31,338.4	52,301.4	4,588.4	3,474.1	1,078.8	11,821.0	104,602.1
Accumulated depreciation and impairment losses							
At 1st January 2021	11,265.2	11,799.6	3,130.6	1,488.9	215.6	_	27,899.9
Charge for the year	1,372.8	1,364.4	292.7	23.3	21.0	_	3,074.2
Impairment	385.9	31.0	_	_	_	889.2	1,306.1
Disposals/write off	(161.3)	(6.2)	(96.2)	(1.0)	_	_	(264.7)
Exchange differences	224.4	233.5	3.2	(103.9)	7.9	_	365.1
At 31st December 2021	13,087.0	13,422.3	3,330.3	1,407.3	244.5	889.2	32,380.6
Net book value							
At 31st December 2021	18,251.4	38,879.1	1,258.1	2,066.8	834.3	10,931.8	72,221.5
At 31st December 2020	16,722.7	35,061.7	1,238.6	2,281.1	772.3	12,057.3	68,133.7

The carrying values of the property, plant and equipment related to city-gas projects in the Chinese mainland as at 31st December 2021 amounted to approximately HK\$36.0 billion (2020: HK\$31.8 billion) in total. An impairment loss of HK\$31.0 million was recognised in the profit or loss for the year ended 31st December 2021 (2020: Nil).

The carrying values of the property, plant and equipment related to a chemical production project in the Chinese mainland as at 31st December 2021 amounted to approximately HK\$2.9 billion (2020: HK\$3.7 billion) in total. An impairment loss of HK\$731.0 million was recognised in the profit or loss for the year ended 31st December 2021 (2020: Nil).

The additions to property, plant and equipment mainly included HK\$998.4 million (2020: HK\$1,040.0 million) and HK\$4,948.0 million (2020: HK\$4,967.9 million) in relation to gas, water and related businesses in Hong Kong and the Chinese mainland respectively. Remaining balance mainly included HK\$807.5 million (2020: HK\$1,297.9 million) in relation to New Energy business segment and HK\$222.5 million (2020: HK\$88.0 million) in other segments.

16 Property, plant and equipment (Continued)

	Buildings, plant and equipment HK\$'M	Mains and risers HK\$'M	Meters and installations HK\$'M	Mining and oil properties HK\$'M	Others HK\$'M	Capital work in progress HK\$'M	Total HK\$'M
Cost							
At 1st January 2020	23,968.1	41,262.5	4,196.7	3,794.6	916.4	11,202.6	85,340.9
Additions	811.2	747.2	262.3	3.0	22.1	5,548.0	7,393.8
Acquisition of business	_	_	_	_	_	0.4	0.4
Transfers from capital work in progress	2,292.7	2,929.4	8.5	_	_	(5,230.6)	_
Disposals/write off	(224.3)	(6.6)	(107.1)	(8.8)	(5.6)	(16.3)	(368.7)
Exchange differences	1,140.2	1,928.8	8.8	(18.8)	55.0	553.2	3,667.2
At 31st December 2020	27,987.9	46,861.3	4,369.2	3,770.0	987.9	12,057.3	96,033.6
Accumulated depreciation and impairment losses							
At 1st January 2020	9,847.1	10,230.3	2,919.6	1,076.2	185.0	_	24,258.2
Charge for the year	1,199.8	1,195.3	288.6	33.2	17.1	_	2,734.0
Impairment	28.4	_	_	385.0	_	_	413.4
Disposals/write off	(176.5)	(4.0)	(83.0)	_	_	_	(263.5)
Exchange differences	366.4	378.0	5.4	(5.5)	13.5	_	757.8
At 31st December 2020	11,265.2	11,799.6	3,130.6	1,488.9	215.6	_	27,899.9
Net book value							
At 31st December 2020	16,722.7	35,061.7	1,238.6	2,281.1	772.3	12,057.3	68,133.7
At 31st December 2019	14,121.0	31,032.2	1,277.1	2,718.4	731.4	11,202.6	61,082.7

17 Investment property

	2021 HK\$'M	2020 HK\$'M
At 1st January	827.0	830.0
Fair value gain/(loss) (note 7)	22.0	(3.0)
At 31st December	849.0	827.0

The Group's interest in the commercial investment property is located in Hong Kong under a land lease of over 50 years. The investment property was revalued at 31st December 2021 by an independent professionally qualified valuer, Knight Frank Petty Limited which conform to The HKIS Valuation Standards (2020 Edition) shown in note 2(h).

17 Investment property (Continued)

Fair value measurements using significant unobservable inputs

Fair value of completed commercial property in Hong Kong is generally derived using the income capitalisation method. This valuation method is based on the capitalisation of the net income and reversionary income potential by adopting appropriate capitalisation rates, which are derived from analysis of sale transactions and valuer's interpretation of prevailing investor requirements or expectations. The prevailing market rents adopted in the valuation have reference to valuer's view of recent lettings, within the subject properties and other comparable properties.

Information about fair value measurements using significant unobservable inputs is as follows:

Unobservable inputs	Commercial complex	Car park	Relationship of unobservable inputs to fair value
Capitalisation rate	5.4%	8.75%	The higher the capitalisation rate, the lower the fair value
Monthly rent	HK\$19.0 /sq.ft.	N/A	The higher the market rent, the higher the fair value

Valuation processes of the Group

The Group's finance division includes a team that review and analyse the valuation performed by the independent valuer for financial reporting purposes. At each financial year end, the finance division:

- Verifies all major inputs to the independent valuation report;
- Assesses property valuation movements when compared with the prior year valuation report;
- Holds discussions with the independent valuer.

18 Right-of-use assets

Prepaid leasehold land HK\$'M	Buildings, plant and equipment and others HK\$'M	Total HK\$'M
2,550.2	252.2	2,802.4
105.2	186.4	291.6
6.5	_	6.5
(74.3)	(139.2)	(213.5)
(22.6)	(4.1)	(26.7)
72.5	5.9	78.4
2,637.5	301.2	2,938.7
Prepaid leasehold land HK\$'M	Buildings, plant and equipment and others HK\$'M	Total HK\$'M
2,418.3	306.9	2,725.2
77.3	64.8	142.1
(68.8)	(134.5)	(203.3)
(8.9)	_	(8.9)
132.3	15.0	147.3
2,550.2	252.2	2,802.4
	Prepaid leasehold land HK\$'M 2,550.2 105.2 6.5 (74.3) (22.6) 72.5 2,637.5 Prepaid leasehold land HK\$'M 2,418.3 77.3 (68.8) (8.9) 132.3	Prepaid leasehold land HK\$'M 2,550.2 252.2 105.2 186.4 6.5 - (74.3) (139.2) (22.6) (4.1) 72.5 5.9 2,637.5 301.2 Prepaid leasehold land HK\$'M 2,418.3 306.9 77.3 64.8 (68.8) (134.5) (8.9) - 132.3 15.0

18 Right-of-use assets (Continued)

The Group leases various land, office buildings and customer service centres. Rental contracts are made for a range of fixed periods but may have extension options. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

Some leases contain variable payment terms that are linked to sales or net profits generated. Variable lease payments that depend on sales or net profits are recognised in the profit or loss in the period in which the condition that triggers those payments occurs. Most leases are subject to fixed payments.

Extension and termination options are included in a number of leases across the Group. These terms are used to maximise operational flexibility in terms of managing contracts. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessor. There are minimal lease contracts with extension or termination options.

19 Intangible assets

		2021 HK\$'M	2020 HK\$'M
(a)	Goodwill		
	At 1st January	5,081.3	4,913.6
	Acquisition of businesses (note 42(a))	41.7	_
	Impairment	(114.4)	_
	Exchange differences	95.0	167.7
	At 31st December	5,103.6	5,081.3
(b)	Other intangible assets		
	Cost		
	At 1st January	522.9	497.5
	Acquisition of businesses (note 42(a))	103.1	_
	Additions	25.2	_
	Exchange differences	14.3	25.4
	At 31st December	665.5	522.9
	Accumulated amortisation		
	At 1st January	(141.3)	(120.0)
	Amortisation	(22.6)	(17.5)
	Exchange differences	2.0	(3.8)
	At 31st December	(161.9)	(141.3)
	Net book value		
	At 31st December	503.6	381.6
	Total intangible assets	5,607.2	5,462.9

19 Intangible assets (Continued)

Goodwill is allocated to an individual cash-generating unit and a group of cash-generating units that are expected to benefit from the business combination in which the goodwill arose, majority related to segment – gas, water and related businesses in the Chinese mainland. The goodwill balance included HK\$2,242.0 million (2020: HK\$2,242.0 million) related to the Group's investments in Towngas Smart Energy. The remaining balance mainly represents goodwill associated with individual city-gas projects (approximately HK\$2.7 billion as of 31st December 2021) (2020: HK\$2.8 billion). The Group tests goodwill annually for impairment, or more frequently if there are indications that it might be impaired. For the purpose of impairment test, the recoverable amount of the cash-generating units is determined based on either fair value less costs of disposal or value-in-use calculations. The key assumptions used in the value-in-use calculations are detailed in note 4(a). Management assesses the fair value less costs of disposal in relation to the investments in certain subsidiaries by referencing to their market values (if applicable) as at the end of the reporting period.

Based on impairment tests performed, impairment provision on goodwill of HK\$114.4 million was recognised as at 31st December 2021 (2020: Nil).

20 Subsidiaries

Material non-controlling interests

The total non-controlling interest as at 31st December 2021 is HK\$12,028.2 million (2020: HK\$10,010.8 million) of which HK\$8,855.4 million (2020: HK\$7,163.3 million) is attributable to Towngas Smart Energy and the non-controlling interest in respect of other individual subsidiaries of the Group is not material.

Set out below are the summarised financial information of Towngas Smart Energy. The information below is the amount before inter-company eliminations.

Summarised statement of financial position	2021 HK\$'M	2020 HK\$'M
Assets		
Non-current assets	42,848.7	33,087.0
Current assets	7,535.9	6,037.8
	50,384.6	39,124.8
Liabilities		
Non-current liabilities	(12,681.3)	(8,197.6)
Current liabilities	(16,257.6)	(11,979.9)
	(28,938.9)	(20,177.5)
Net assets	21,445.7	18,947.3

20 Subsidiaries (Continued)

Summarised income statement and comprehensive income statement	2021 HK\$'M	2020 HK\$'M
Revenue	17,125.4	12,826.2
Profit before taxation	2,144.8	2,202.7
Taxation	(617.7)	(554.9)
Profit for the year	1,527.1	1,647.8
Other comprehensive income	640.1	827.1
Total comprehensive income	2,167.2	2,474.9
Total comprehensive income attributable to non-controlling interests	898.2	985.6
Dividend paid to non-controlling shareholders	275.3	247.5
Summarised cash flows statement	2021 HK\$'M	2020 HK\$'M
Net cash from operating activities	2,253.0	2,199.9
Net cash used in investing activities	(7,858.1)	(2,476.2)
Net cash from financing activities	7,374.2	463.4
Net increase in cash and cash equivalents	1,769.1	187.1
Cash and cash equivalents at beginning of year	2,226.0	1,937.4
Effect of foreign exchange rate changes	76.1	101.5
Cash and cash equivalents at end of year	4,071.2	2,226.0

21 Associates

	2021 HK\$'M	2020 HK\$'M
Investments in associates, including goodwill	35,407.2	27,735.3
Loans to associates – non-current	742.7	935.0
	36,149.9	28,670.3
Loan and other receivables from associates – current	418.8	401.7
Fair value of listed investments	13,352.2	13,952.4

The Group's share of property, plant and equipment, together with goodwill related to individual city-gas projects accounted for as associates of the Group as at 31st December 2021 were carried at approximately HK\$18.9 billion (2020: HK\$12.0 billion).

As at 31st December 2021, the Group's investments in associates, including goodwill in relation to the Chinese mainland's gas, water and related business, New Energy, Property and other segments amounted to HK\$20,268.0 million, HK\$263.5 million, HK\$14,842.9 million and HK\$32.8 million respectively (2020: HK\$12,743.7 million, HK\$162.2 million, HK\$14,798.5 million and HK\$30.9 million respectively).

Loan and other receivables from associates are analysed below:

- (i) Loans to associates in the Chinese mainland of HK\$1,062.8 million (2020: HK\$1,254.3 million) with effective interest rates ranging from 3.00 per cent to 7.20 per cent per annum (2020: 4.35 per cent to 7.20 per cent per annum) are unsecured and fully repayable in 2022 to 2023 (2020: 2021 to 2022).
- (ii) The remaining balances are unsecured, interest free and have no fixed terms of repayment.
- (iii) Loan and other receivables from associates are considered to have low credit risk and the loss allowance recognised during the year was therefore limited to 12-month expected credit loss.
- (iv) Loan and other receivables are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
USD	567.0	613.7
RMB	593.0	722.9
HKD	1.5	0.1
	1,161.5	1,336.7

Particulars of the principal associates as at 31st December 2021 are listed below:

Name	Note	Issued share capital/ registered capital	Percentage of the Group's equity interest	Place of incorporation/ operation	Principal activity
China-Singapore Suzhou Industrial Park Broad Energy Services Co., Ltd.		RMB71.1 million	25	PRC	Cooling and heating system business
Hainan Petrochina Kunlun Hong Kong & China Gas Co., Ltd.		RMB50.4 million	49	PRC	Gas sales and related businesses
^ Shenzhen Gas Corporation Ltd.		RMB2,876.8 million	26.5	PRC	Gas sales and related businesses
港華儲氣有限公司		RMB200.0 million	39	PRC	Gas storage project
Central Waterfront Property Investment Holdings Limited	(i)	US\$100	15.8	British Virgin Islands	Investment holding
GH-Fusion Limited	(ii)	US\$200	50	British Virgin Islands	Investment holding
蘇州工業園區蘇相合作區市政公用 發展有限公司		RMB50.0 million	49	PRC	Investment holding
河北金建佳天然氣有限公司		RMB90.0 million	20	PRC	LNG receiving terminal; pier
江蘇海企港華燃氣股份有限公司		RMB204.0 million	35	PRC	LNG refilling station for vessels
Hangzhou Natural Gas Company Limited		RMB1,195.0 million	32	PRC	Mid-stream natural gas and piped city-gas project
^ Anhui Province Natural Gas Development Co., Ltd.		RMB336.0 million	20.6	PRC	Mid-stream natural gas project
Hebei Natural Gas Company Limited		RMB1,900.0 million	43	PRC	Mid-stream natural gas project
河南省中原石油天然氣管網有限公司		RMB60.0 million	49	PRC	Mid-stream natural gas project
泰州城投天然氣有限公司(Formerly known as 泰州城投天然氣管網 有限公司)		RMB150.0 million	47.6	PRC	Natural gas pipeline project
S&T International Natural Gas Trading Company Limited		HK\$10.0 million	40	Hong Kong	Natural gas trading

[^] A listed company on the Shanghai Stock Exchange

Notes

- (i) The Group has an effective interest of approximately 15.8 per cent in the IFC complex through its interest in Central Waterfront Property Investment Holdings Limited ("CWPI"). With the Group's presence on the board of directors of CWPI and participation in the financial and operating policies of the IFC complex, the Group could exercise significant influence over CWPI and accordingly the investment is accounted for as an associate.
- (ii) The Group can only exercise significant influence over the board of directors in the associates.

Particulars of the principal associates as at 31st December 2021 are listed below: (Continued)

Name	Note	Issued share capital/ registered capital	Percentage of the Group's equity interest	Place of incorporation/ operation	Principal activity
Towngas DETA Telecom (Dalian) Co., Ltd.		RMB10.0 million	49	PRC	Telecommunications business
中經名氣網絡技術(北京)有限公司		RMB10.0 million	49	PRC	Telecommunications business
道勝環境產業有限公司		RMB1,000.0 million	49	PRC	Waste treatment project
# 佛山水務環保股份有限公司		RMB831.8 million	26.7	PRC	Water project
China-Singapore Suzhou Industrial Park Environmental Technology Co., Ltd.		RMB185.0 million	49	PRC	Water treatment project
¹ Dalian Deta Towngas China Energy Co., Ltd.		RMB101.0 million	49	PRC	Zero-carbon smart industrial park project
Held by Towngas Smart Energy and the	ne res _i	pective equity interes	t held by Towng	as Smart Energy	is shown accordingly.
四川能投分布式能源有限公司		RMB512.6 million	24.4	PRC	Distributed energy systems businesses
Zhuojia Public Engineering (Maanshan) Co., Ltd.		RMB12.0 million	37.5	PRC	Gas pipe assembly
^ Changchun Gas Co., Ltd.		RMB609.0 million	28.2	PRC	Gas sales and related businesses
Dalian DETA Hong Kong and China Gas Co., Ltd.		RMB137.2 million	40	PRC	Gas sales and related businesses
Ω Foran Energy Group Co., Ltd.		RMB945.2 million	38.7	PRC	Gas sales and related businesses
Shandong Jihua Gas Co., Ltd.		RMB700.0 million	49	PRC	Gas sales and related businesses
¹ Shanghai Gas Co., Ltd.	(i)	RMB1,333.3 million	25	PRC	Gas sales and related businesses
Zibo Lubo Gas Company Limited		RMB100.0 million	27	PRC	Gas sales and related businesses
撫州市撫北天然氣有限公司		RMB16.0 million	40	PRC	Gas sales and related businesses
臨朐港華燃氣有限公司		US\$10.6 million	42.4	PRC	Gas sales and related businesses
石家莊華博燃氣有限公司		RMB45.0 million	45	PRC	Gas sales and related businesses
Anhui Province Wenery Towngas Natural Gas Company Limited		RMB240.0 million	49	PRC	Mid-stream natural gas project

[#] Direct associate of the Company

Note

(i) Pursuant to a supplemental agreement entered between Shenergy (Group) Company Limited ("Shenergy Group"), the controlling shareholder of Shanghai Gas, and the Group, the financial results of Shanghai Gas for the period from the date of acquisition of Shanghai Gas by the Group to 31st December 2021 were borne by Shenergy Group.

Newly formed/acquired during the year

[^] A listed company on the Shanghai Stock Exchange

 $^{^{\}Omega}$ A listed company on the Shenzhen Stock Exchange

The following amounts represent the Group's share of income and results of the associates and are included in the consolidated income statement and statement of comprehensive income:

	2021 НК\$'М	2020 HK\$'M
Income	27,630.1	17,903.1
Expenses, including taxation	(25,744.5)	(16,716.1)
Profit after taxation	1,885.6	1,187.0
Other comprehensive loss	(3.5)	(15.6)
Total comprehensive income	1,882.1	1,171.4

Set out below are the summarised financial information of CWPI which is considered to be the only associate individually material to the Group and it is accounted for using the equity method. CWPI holds IFC complex as the commercial investment property for rental income in Hong Kong.

	CW	CWPI		
Summarised statement of financial position	2021 HK\$'M	2020 HK\$'M		
Assets				
Non-current assets	113,764.1	113,531.1		
Current assets	501.2	605.2		
	114,265.3	114,136.3		
Liabilities				
Non-current liabilities	(18,491.7)	(17,986.9)		
Current liabilities	(1,767.5)	(2,434.4)		
	(20,259.2)	(20,421.3)		
Net assets	94,006.1	93,715.0		

	CW	CWPI		
Summarised income statement and statement of comprehensive income	2021 HK\$'M	2020 HK\$'M		
Income	5,012.4	1,997.4		
Expenses, including taxation	(2,279.3)	(2,244.3)		
Profit/(loss) after taxation	2,733.1	(246.9)		
Other comprehensive (loss)/income	(22.0)	25.9		
Total comprehensive income/(loss)	2,711.1	(221.0)		
Share of total comprehensive income/(loss) (15.79%)	428.1	(34.9)		
Dividend received from the associate	382.1	418.4		

The information above reflects the amounts presented in the financial statements of the associate adjusted for differences in accounting policies between the Group and the associate.

Reconciliation of the summarised financial information presented to the carrying amount of its interest in the associate:

	CWPI		
	2021 HK\$'M	2020 HK\$'M	
Net assets			
At 1st January	93,715.0	96,586.0	
Profit/(loss) for the year	2,733.1	(246.9)	
Other comprehensive (loss)/income	(22.0)	25.9	
Dividend paid	(2,420.0)	(2,650.0)	
At 31st December	94,006.1	93,715.0	
	2021 HK\$'M	2020 HK\$'M	
Carrying value			
Interest in an associate (15.79%)	14,843.6	14,797.6	

22 Joint ventures

	2021 HK\$'M	2020 HK\$'M
Investments in joint ventures, including goodwill	12,575.2	11,981.2
Loan and other receivables from joint ventures – current	535.9	442.9
Amounts due to joint ventures – current	(189.5)	(486.3)

The Group's share of property, plant and equipment, together with goodwill related to individual city-gas projects accounted for as joint ventures of the Group as at 31st December 2021 were carried at approximately HK\$17.5 billion (2020: HK\$17.0 billion).

As at 31st December 2021, the Group's investments in joint ventures, including goodwill in relation to the Chinese mainland's gas, water and related business, New Energy and Property segments amounted to HK\$12,561.7 million, HK\$10.2 million and HK\$3.3 million respectively (2020: HK\$11,969.3 million, HK\$9.2 million and HK\$2.7 million respectively).

Loan and other receivables from joint ventures are analysed below:

- (i) Loans to joint ventures in the Chinese mainland of HK\$208.5 million (2020: HK\$209.7 million) with effective interest rates of 4.35 per cent per annum (2020: 4.35 per cent per annum) are unsecured and fully repayable in 2022 (2020: 2021).
- (ii) Loan to a joint venture in Hong Kong of HK\$84.9 million (2020: HK\$88.2 million) is unsecured, interest free and has no fixed terms of repayment.
- (iii) The remaining balances are unsecured, interest free and have no fixed terms of repayment.
- (iv) Loan and other receivables from joint ventures are considered to have low credit risk and the loss allowance recognised during the year was therefore limited to 12-month expected credit loss.
- (v) Loans and other receivables are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
RMB	451.0	354.7
HKD	84.9	88.2
	535.9	442.9

Amounts due to joint ventures are analysed below:

- (i) As at 31st December 2020, there was a loan from a joint venture of HK\$242.7 million with effective interest rate of 4.44 per cent per annum and was unsecured. The loan was fully repaid during 2021.
- (ii) Loans from joint ventures of HK\$189.5 million (2020: HK\$243.6 million) with effective interest rate of 2.15 per cent per annum (2020: 2.15 per cent per annum) are unsecured and have no fixed terms of repayment.
- (iii) The remaining balances are unsecured, interest free and have no fixed terms of repayment.
- (iv) Loan and other payables to joint ventures are denominated in RMB (2020: denominated in RMB).

22 Joint ventures (Continued)

Particulars of the principal joint ventures as at 31st December 2021 are listed below:

Name	Note	Issued share capital/ registered capital	Percentage of the Group's equity interest	Place of incorporation/ operation	Principal activity
Hua Yan Environmental Industry Development (Suzhou) Co., Ltd.	(i)	RMB75.0 million	55	PRC	Food and green waste treatment project
# Beijing Beiran & HKCG Gas Company Limited		RMB44.4 million	49	PRC	Gas sales and related businesses
Changzhou Hong Kong and China Gas Company Limited		RMB300.0 million	50	PRC	Gas sales and related businesses
Jinan Hong Kong and China Gas Company Limited		RMB700.0 million	49	PRC	Gas sales and related businesses
Nanjing Hong Kong and China Gas Company Limited		RMB700.0 million	49	PRC	Gas sales and related businesses
Suzhou Hong Kong and China Gas Company Limited	(i)	RMB200.0 million	55	PRC	Gas sales and related businesses
# Tongling Hong Kong and China Gas Co., Ltd.	(i)	RMB100.0 million	70	PRC	Gas sales and related businesses
Wuhan Natural Gas Co., Ltd.		RMB420.0 million	49	PRC	Gas sales and related businesses
# Xian Qinhua Gas Group Company Limited		RMB1,000.0 million	49	PRC	Gas sales and related businesses
Zhangjiagang Hong Kong and China Gas Company Limited		RMB100.0 million	50	PRC	Gas sales and related businesses
Jilin Province Natural Gas Limited Company		RMB220.0 million	49	PRC	Mid-stream natural gas project
Yieldway International Limited		HK\$2	50	Hong Kong	Property development
Ying Tong TGT Network Services (Shenzhen) Co. Ltd.		RMB100.0 million	49	PRC	Telecommunications business
Suzhou Industrial Park Qingyuan Hong Kong & China Water Co., Ltd.		RMB1,200.0 million	50	PRC	Water supply and sewage treatment

[#] Direct joint ventures of the Company

Note

(i) The Group can only exercise joint control over the board of directors in the joint ventures.

22 Joint ventures (Continued)

Particulars of the principal joint ventures as at 31st December 2021 are listed below: (Continued)

Name	Issued share capital/ registered capital	Percentage of the Group's equity interest	Place of incorporation/ operation	Principal activity
Held by Towngas Smart Energy and	I the respective equity in	terest held by Tov	vngas Smart Ene	ergy is shown accordingly.
Anhui Towngas Keda Power Sales Co., Ltd.	RMB200.0 million	50	PRC	Distributed energy systems businesses
Tongling Towngas China Energy Co., Ltd.	RMB24.5 million	40	PRC	Distributed energy systems businesses
Anqing Hong Kong and China Gas Company Limited	RMB73.0 million	50	PRC	Gas sales and related businesses
Hangzhou Hong Kong and China Gas Company Limited	US\$20.0 million	50	PRC	Gas sales and related businesses
Maanshan Hong Kong and China Gas Company Limited	US\$13.0 million	50	PRC	Gas sales and related businesses
Taian Taishan Hong Kong and China Gas Company Limited	RMB150.0 million	49	PRC	Gas sales and related businesses
Weifang Hong Kong and China Gas Company Limited	RMB400.0 million	50	PRC	Gas sales and related businesses
Weihai Hong Kong and China Gas Company Limited	RMB99.2 million	50	PRC	Gas sales and related businesses
Wuhu Hong Kong & China Gas Company Limited	RMB52.8 million	50	PRC	Gas sales and related businesses
Zibo Hong Kong and China Gas Company Limited	RMB100.0 million	50	PRC	Gas sales and related businesses
重慶港華燃氣有限公司	RMB20.0 million	50	PRC	Gas sales and related businesses
泰安市泰港燃氣有限公司	RMB139.2 million	49	PRC	Mid-stream natural gas project

The following amounts represent the Group's share of income and results of the joint ventures and are included in the consolidated income statement and statement of comprehensive income:

	2021 HK\$'M	2020 HK\$'M
Income	18,603.0	14,493.5
Expenses, including taxation	(17,956.1)	(13,404.3)
Profit after taxation and total comprehensive income	646.9	1,089.2

No individual joint ventures are considered to be material to the Group.

23 Financial assets at fair value through other comprehensive income

		2021 HK\$'M	2020 HK\$'M
Del	bt securities (note (a))	139.2	158.7
Equ	uity securities (note (b))	2,031.3	2,334.1
		2,170.5	2,492.8
Not	tes		
		2021 HK\$'M	2020 HK\$'M
(a)	Debt securities		
	Listed – Hong Kong	15.7	15.7
	Listed – outside Hong Kong	123.5	143.0
		139.2	158.7
		2021 HK\$'M	2020 HK\$'M
(b)	Equity securities		
	Listed – Hong Kong	163.7	247.9
	Listed – outside Hong Kong	1,435.3	1,682.8
	Unlisted	432.3	403.4
		2,031.3	2,334.1

Included in the equity securities, it comprises HK\$128.5 million (2020: HK\$200.1 million) of perpetual bonds and HK\$1,902.8 million (2020: HK\$2,134.0 million) of investments that are mainly engaged in the provision of natural gas and related services and gas pipeline construction services. These are strategic investments and the Group considers the classification of FVOCI to be more relevant.

Financial assets at FVOCI are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
RMB	1,810.7	1,982.0
HKD	92.0	120.6
USD	267.8	390.2
	2,170.5	2,492.8

24 Financial assets at fair value through profit or loss

		2021 HK\$'M	2020 HK\$'M
Deb	ot securities – non-current (note (a))	284.2	_
Equ	uity securities (note (b))		
- C	Current	_	205.4
- N	Ion-current	4,763.4	4,687.3
		5,047.6	4,892.7
Not	tes	2021 HK\$'M	2020 HK\$'M
(a)	Debt securities		
(4)	Listed – outside Hong Kong	284.2	_
		2021 HK\$'M	2020 HK\$'M
(b)	Equity securities		
	Listed – Hong Kong	_	110.0
	Listed – outside Hong Kong	1,498.0	1,632.0
	Unlisted	3,265.4	3,150.7
		4,763.4	4,892.7

Included in the unlisted equity securities, it comprises HK\$3,195.3 million (2020: HK\$3,093.4 million) of investments in certain equity interest of a company which owned a coking coal mine and related coke production and coke-gas conversion facility in the Chinese mainland.

Financial assets at FVPL are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
HKD	_	110.0
USD	70.1	95.4
RMB	4,977.5	4,687.3
	5,047.6	4,892.7

25 Derivative financial instruments

	202	21	202	20
	Assets HK\$'M	Liabilities HK\$'M	Assets HK\$'M	Liabilities HK\$'M
Non-current				
Cross currency swap and interest rate swap contracts – cash flow hedges	55.9	(9.6)	35.0	(477.3)
Foreign currency forward contracts – held-for-trading	5.2	_	0.9	(1.3)
Cross currency swap contracts – held-for-trading	7.9	_	8.7	_
Interest rate swap contracts – held-for-trading	_	(70.7)	6.0	_
Put option – held-for-trading (note 3)	262.8	_	254.4	_
Convertible bonds – embedded derivative component (note 32(b))	-	(776.6)	_	_
	331.8	(856.9)	305.0	(478.6)
Current				
Cross currency swap and interest rate swap contracts – cash flow hedges	_	(511.0)	28.5	(140.1)
Foreign currency forward contracts – held-for-trading	2.1	_	_	(0.1)
	2.1	(511.0)	28.5	(140.2)

The fair value of hedging derivatives is classified as current assets or liabilities when the remaining maturity of the hedged item is less than 12 months.

The full fair values of hedging derivatives are classified as non-current assets or liabilities when the remaining maturity of the hedged items is more than 12 months.

Hedge ineffectiveness

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments to ensure that an economic relationship exists between the hedged item and hedging instrument.

The ineffective portion recognised in the profit or loss that arises from cash flow hedges amounts to a gain of HK\$4.9 million (2020: HK\$6.9 million).

The major terms of the outstanding derivative contracts held for hedging as at 31st December 2021 are as follows:

Notional amount	Maturity	Forward contract rate
Cross currency swap and	interest rate swap contracts – c	eash flow hedges
RMB1,376 million	2022 – 2024	HKD1 to RMB0.8351 - RMB0.86
USD50 million	2024	USD1 to RMB6.927
AUD111 million	2022 – 2025	AUD1 to HKD5.42 – HKD8.21
JPY12 billion	2022 – 2027	JPY100 to HKD6.877 – HKD9.897

Gains and losses recognised in the hedging reserve in equity (note 36) on the swaps as of 31st December 2021 will be continuously released to the profit or loss until the repayment of relevant borrowings.

26 Retirement benefit assets

	2021 HK\$'M	2020 HK\$'M
At 31st December	184.0	111.9

The Group operates a defined benefit retirement scheme in Hong Kong, namely the Workmen Retirement Scheme which is a final salary defined benefit scheme.

The amounts recognised in the consolidated statement of financial position are shown as follows:

	2021 HK\$'M	2020 HK\$'M
Fair value of plan assets	744.9	730.1
Present value of funded obligations	(560.9)	(618.2)
Net assets in the consolidated statement of financial position	184.0	111.9

The plan assets did not include any shares of the Company as at 31st December 2021 (2020: Nil).

The cost of the defined benefit retirement scheme recognised in the consolidated income statement is as follows:

	2021 HK\$'M	2020 HK\$'M
Current service cost	15.8	15.1
Net interest income	(1.1)	(1.3)
Administrative expenses	_	0.1
Total (note 11)	14.7	13.9

The amounts recognised in the other comprehensive income are as follows:

	2021 HK\$'M	2020 HK\$'M
Actuarial gain due to liability experience	(22.7)	(6.3)
Actuarial (gain)/loss due to financial assumption changes	(31.2)	51.2
Actuarial gain due to demographic assumption changes	(0.1)	(0.1)
Actuarial (gains)/losses	(54.0)	44.8
Return on plan assets, excluding amounts included in interest income	(28.8)	(100.0)
Total	(82.8)	(55.2)

26 Retirement benefit assets (Continued)

The movements in the defined benefit obligations are as follows:

	2021 HK\$'M	2020 HK\$'M
At 1st January	618.2	566.3
Current service cost	15.8	15.1
Interest cost	5.5	9.9
Benefits paid	(24.6)	(17.9)
Actuarial (gains)/losses	(54.0)	44.8
At 31st December	560.9	618.2
The movements in the fair value of plan assets are as follows:	2021 HK\$'M	2020 HK\$'M
At 1st January	730.1	632.6
Return on plan assets, excluding amounts included in interest income	28.8	100.0
Interest income recognised in consolidated income statement	6.6	11.2
Contribution paid by employer	4.0	4.3
Benefits paid	(24.6)	(17.9)
Administrative expenses	_	(0.1)
At 31st December	744.9	730.1

 $The \ movements \ in \ the \ assets \ recognised \ in \ the \ consolidated \ statement \ of \ financial \ position \ are \ as \ follows:$

	2021 HK\$'M	2020 HK\$'M
At 1st January	111.9	66.3
Remeasurement effects recognised in other comprehensive income	82.8	55.2
Total cost of defined benefit retirement scheme (note 11)	(14.7)	(13.9)
Contribution paid by employer	4.0	4.3
At 31st December	184.0	111.9

The major categories of plan assets as a percentage of total plan assets are as follows:

	2021 %	2020 %
Equity securities	85.3	78.1
Debt securities	12.1	15.7
Cash	2.6	6.2

26 Retirement benefit assets (Continued)

The principal actuarial assumptions used are as follows:

	2021 %	2020 %
Discount rate	1.5	0.9
Expected rate of future salary increases	4.0	4.0

The sensitivity of the defined benefit obligation to changes in the weighted principal assumptions is:

	Impact on defined benefit obligations		
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.25%	Decrease by 2.2%	Increase by 2.3%
Salary increase rate	0.25%	Increase by 2.2%	Decrease by 2.2%
Maximum salary scale increase rate	0.25%	Increase by 0.0%	Decrease by 0.1%

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligations to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the pension liability recognised within the consolidated statement of financial position.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the previous year.

Expected contributions to the scheme for the year ending 31st December 2022 are HK\$3.7 million.

Through its defined benefit pension plans, the Group is exposed to a number of risks, the most significant of which are detailed below:

Investment risk	Strong investment returns tend to increase the fair value of scheme assets and therefore improve the scheme's financial position as measured by the net defined benefit asset/liability, whilst poor or negative investment returns tend to weaken the position. The scheme assets are invested in a diversified portfolio of equities, bonds and cash, covering major geographical locations around the world. The diversification of asset classes and geographical locations helps to reduce the concentration of risk associated with the scheme investments.
Interest rate risk	The defined benefit obligation is calculated using a discount rate based on market bond yields. A decrease in the bond yields will increase the defined benefit obligation.
Salary risk	The defined benefit obligation is calculated with reference to the future salaries of members because the scheme's benefits are salary-related. Salary increases that are higher than expected will increase the defined benefit obligation.

26 Retirement benefit assets (Continued)

The weighted average duration of the benefit obligation is 9.2 years. Expected maturity analysis of benefit undiscounted payments:

	Within 5 years HK\$'M	Beyond 5 years but within 10 years HK\$'M	Beyond 10 years HK\$'M
As 31st December 2021	LIV & IVI	LIV \$ MI	HIV \$ IVI
Expected benefit payments	163.2	188.4	438.3

27 Other non-current assets

	2021 HK\$'M	2020 HK\$'M
Aviation fuel facility construction receivable (note (a))	3,583.7	3,279.9
Other receivables and prepayments (note (b))	2,220.4	953.4
Deposit paid for acquisition of an associate (note 39(c))	_	415.8
	5,804.1	4,649.1

Notes

- (a) Aviation fuel facility construction receivable is denominated in HKD, unsecured and will be recovered by monthly instalments up to 2047.
- (b) The balance includes prepayments of HK\$1,474.0 million (2020: Nil) for the right to use two storage tanks at the liquefied natural gas receiving terminal in Tangshan city for a contract term of 50 years, and the remaining balance mainly represents prepayments for inventory and capital expenditures to suppliers.

28 Inventories

	2021 HK\$'M	2020 HK\$'M
Stores and materials	2,425.9	1,984.5
Work in progress	714.8	686.5
	3,140.7	2,671.0

The Group wrote down the carrying value of inventories by HK\$43.6 million (2020: HK\$20.2 million) to its net realisable value during the year ended 31st December 2021.

29 Trade and other receivables

	2021 HK\$'M	2020 HK\$'M
Trade receivables (note (a))	4,211.8	3,827.9
Payments in advance (note (b))	1,783.4	2,158.6
Other receivables	3,153.7	2,586.0
	9,148.9	8,572.5

Trade and other receivables are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
RMB	6,299.1	5,709.3
HKD	2,734.3	2,749.6
USD	94.0	106.6
Others	21.5	7.0
	9,148.9	8,572.5

Notes

(a) The Group has established credit policies for different types of customers. The credit periods offered for trade receivables, which are subject to periodic review by management, range from 30 to 60 days except for gas receivables of the Company which are due by 8 working days after billing date. The aging analysis of the trade receivables, net of impairment provision, is as follows:

	2021 HK\$'M	2020 HK\$'M
0 – 30 days	3,726.0	3,360.6
31 – 60 days	101.5	125.2
61 – 90 days	101.2	50.9
Over 90 days	283.1	291.2
	4,211.8	3,827.9

The Group applies the HKFRS 9 simplified approach to measure expected credit losses which uses a lifetime expected credit loss allowance for trade receivables. Note 3(b) provides for details about the calculation of the allowance.

The loss allowance decreased from HK\$300.9 million to HK\$246.2 million during the year.

(b) Balance mainly represents prepayment for purchase of materials and services in relation to the Group's gas, water and New Energy businesses in Hong Kong and the Chinese mainland. As at 31st December 2021, the directors of the Company reviewed the composition of the balance and considered the amount is recoverable.

30 Time deposits, cash and bank balances

	2021 HK\$'M	2020 HK\$'M
Time deposits over three months	77.9	173.3
Time deposits up to three months	1,181.6	1,679.6
Cash and bank balances	9,375.4	5,775.4
	10,557.0	7,455.0

The average effective interest rates on time deposits in Hong Kong and the Chinese mainland are 0.73 per cent and 2.08 per cent per annum respectively (2020: 1.75 per cent and 2.18 per cent per annum). These deposits have average maturity dates within 72 days (2020: 54 days).

Time deposits, cash and bank balances are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
RMB	8,464.2	6,162.1
USD	1,076.0	219.5
HKD	1,064.2	1,233.6
THB	19.6	9.7
Others	10.9	3.4
	10,634.9	7,628.3

The conversion of Renminbi denominated balances into foreign currencies and the remittance of foreign currencies denominated bank balances and cash out of the Chinese mainland are subject to relevant rules and regulations of foreign exchange control promulgated by the PRC government.

31 Trade payables and other liabilities

	2021 HK\$'M	2020 HK\$'M
Trade payables (note (a))	4,120.9	3,586.4
Other payables and accruals (note (b))	5,368.9	4,808.6
Contract liabilities (note (c))	8,894.8	8,531.3
Lease liabilities (note (d))	103.0	104.8
	18,487.6	17,031.1

31 Trade payables and other liabilities (Continued)

Notes

(a) The aging analysis of the trade payables is as follows:

	2021 HK\$'M	2020 HK\$'M
0 – 30 days	1,790.5	1,587.5
31 – 60 days	583.2	464.3
61 – 90 days	617.6	327.2
Over 90 days	1,129.6	1,207.4
	4,120.9	3,586.4

- (b) The balances mainly represent accrual for services or goods received from suppliers.
- (c) The balances mainly represent non-refundable advance received from customers for utility connection services, provision of gas and provision of maintenance services.

The following table shows the amount of the revenue recognised in the current reporting period relates to contract liabilities balance at the beginning of the year:

	2021 HK\$'M	2020 HK\$'M
Revenue recognised that was included in the contract liabilities balance at the beginning of the year	4,075.4	3,463.9

- (d) As at 31st December 2021, the weighted average incremental borrowing rate applied to the lease liabilities were 3.0 per cent (2020: 3.0 per cent) for leases in Hong Kong and 5.0 per cent (2020: 5.0 per cent) for leases in the Chinese mainland.
- (e) As at 31st December 2021, the amount of unsatisfied performance obligations expected to be recognised within one year and after one year are HK\$3,462.8 million (2020: HK\$4,471.9 million) and HK\$5,740.6 million (2020: HK\$5,300.9 million) respectively.

Trade payables and other liabilities are denominated in the following currencies:

	2021 НК\$'М	2020 HK\$'M
RMB	15,686.1	14,538.0
HKD	2,535.2	2,159.8
USD	251.9	313.7
Others	14.4	19.6
	18,487.6	17,031.1

32 Borrowings

	2021 HK\$'M	2020 HK\$'M
Non-current		
Bank and other loans	16,232.8	12,164.8
Guaranteed notes (note (a))	18,666.5	19,121.5
Convertible bonds (note (b))	1,956.6	_
	36,855.9	31,286.3
Current		
Bank and other loans	15,623.0	9,809.2
Guaranteed notes (note (a))	2,632.2	1,043.1
	18,255.2	10,852.3
Total borrowings	55,111.1	42,138.6

Notes

(a) Guaranteed notes comprise:

The principal amounts of HK\$17,980.5 million, RMB1,635.0 million, AUD111.0 million and JPY12,000.0 million (2020: HK\$17,330.5 million, RMB935.0 million, AUD161.0 million and JPY12,000.0 million) which in aggregate is equivalent to HK\$21,428.6 million (2020: HK\$20,302.3 million) guaranteed notes were issued by HKCG (Finance) Limited or TCCL (Finance) Limited, subsidiaries of the Group, between 2nd June 2009 and 12th November 2021. The notes are unsecured and guaranteed by the Company or Towngas Smart Energy as to repayment, carry fixed coupon rates ranging from 0.35 per cent to 5.85 per cent per annum payable guarterly, half-yearly or annually in arrear and have maturity terms between 3 to 40 years.

(b) Convertible bonds

In November 2021, Towngas Smart Energy, a listed subsidiary of the Company, issued and allotted new shares and convertible bonds due 2026 of principal amount of RMB1,835.6 million (equivalent to HK\$2,217.7 million at an agreed exchange rate) to an investor. Details of the transactions were disclosed in Towngas Smart Energy's announcements dated 25th October 2021 and 18th November 2021.

Total gross proceeds received by Towngas Smart Energy amounted to HK\$2,801.6 million. The subscription of shares and issue of convertible bonds are considered to be a single transaction. On initial recognition, the convertible bonds are measured at fair value at HK\$2,349.7 million and the remaining balance of HK\$451.9 million is recorded as share capital and share premium of Towngas Smart Energy.

There was no movement in the number of the convertible bonds during the year ended 31st December 2021.

32 Borrowings (Continued)

Notes (Continued)

(b) Convertible bonds (Continued)

The convertible bonds entitle the investor to convert them into ordinary shares of Towngas Smart Energy in whole or in part at any time during the conversion period at a conversion price of HK\$6.33 per convertible bond, subject to adjustments. The conversion period commences from the date of issue and will expire on the close of business on the earlier of (i) the date which is 5 business days prior to the maturity date, i.e. 18th November 2026, or (ii) if the convertible bonds shall have been called for redemption prior to the maturity date, the date which is 5 business days prior to the date fixed for redemption. The convertible bonds carry interest at a rate of 1% per annum, which is payable annually in arrears.

The convertible bonds comprise two components:

- (i) The debt component was initially measured at fair value amounting to RMB1,590.5 million (equivalent to HK\$1,940.3 million). It is subsequently measured at amortised cost using the effective interest method after considering the effect of the transaction costs. The effective interest rate of the debt component is 4% per annum.
- (ii) The embedded derivative component comprises conversion options, which were initially measured at fair value with an amount of RMB335.6 million (equivalent to HK\$409.4 million).

	Debt component HK\$'M	Embedded derivative component HK\$'M	Total HK\$'M
Fair value of convertible bonds at issuance	1,940.3	409.4	2,349.7
Exchange differences	11.1	8.6	19.7
Direct transaction costs attributable to debt component	(1.5)	_	(1.5)
Interest expense	9.3	_	9.3
Interest paid	(2.6)	_	(2.6)
Change in fair value	_	358.6	358.6
As at 31st December 2021	1,956.6	776.6	2,733.2

(c) The maturity of borrowings is as follows:

	Bank and o	other loans	Guaranteed convertib	d notes and ble bonds
	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M
Within 1 year	15,623.0	9,809.2	2,632.2	1,043.1
Between 1 and 2 years	5,209.7	5,909.8	1,757.6	2,720.5
Between 2 and 5 years	10,540.8	5,847.3	7,666.1	3,333.5
Wholly repayable within 5 years	31,373.5	21,566.3	12,055.9	7,097.1
Wholly repayable over 5 years	482.3	407.7	11,199.4	13,067.5

32 Borrowings (Continued)

Notes (Continued)

(c) As at 31st December 2021, the Group's borrowings amounted to HK\$55,111.1 million (2020: HK\$42,138.6 million). While the guaranteed notes, convertible bonds together with the bank and other loans of HK\$9,522.1 million (2020: HK\$8,138.7 million) had fixed interest rate and were unsecured, the remaining bank and other loans were unsecured and had a floating interest rate, of which HK\$10,221.4 million (2020: HK\$6,935.4 million) were long-term bank loans and HK\$12,112.3 million (2020: HK\$6,899.9 million) had maturities within one year on revolving credit or term loan facilities. Guaranteed notes of HK\$2,527.8 million (2020: HK\$2,971.5 million) were hedged.

The exposure of the Group's borrowings to interest rate changes and the contractual repricing dates are mainly within 6 months from the date of statement of financial position, except for guaranteed notes, convertible bonds and some bank loans as they are subjected to fixed interest rate and with maturity term ranged from 1 to 40 years. The effective interest rates of the Group's borrowings at the date of statement of financial position are as follows:

		2021			2020					
	HKD	USD	RMB	AUD	JPY	HKD	USD	RMB	AUD	JPY
Bank and other loans	1.0%	4.0%	4.0%	N/A	1.2%	1.1%	4.3%	3.9%	N/A	1.2%
Guaranteed notes	2.9%	N/A	2.1%	3.0%	3.3%	3.0%	N/A	0.9%	3.1%	3.3%
Convertible bonds	N/A	N/A	4.0%	N/A						

- (d) The carrying values of borrowings approximate their fair values as the balances impact of discounting is not significant.
- (e) The carrying amounts of the borrowings are denominated in the following currencies:

	2021 HK\$'M	2020 HK\$'M
HKD	28,300.0	23,128.6
RMB	24,957.2	15,960.5
USD	401.2	1,175.0
AUD	628.3	959.6
JPY	824.4	914.9
	55,111.1	42,138.6

33 Deferred taxation

The movements in the deferred taxation are as follows:

	2021 HK\$'M	2020 HK\$'M
At 1st January	7,059.1	7,180.5
Charged/(credited) to the profit or loss	336.4	(4.1)
Credited to other comprehensive income	(72.1)	(195.8)
Withholding tax	(84.8)	(51.2)
Exchange differences	(13.2)	129.7
At 31st December	7,225.4	7,059.1

Prior to offsetting of balances within the same taxation jurisdiction, the movements in deferred tax liabilities and assets during the year are as follows:

		ated tax ciation		g and perties		ncial ments	Oth	ers	То	tal
Deferred tax liabilities	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M
At 1st January	3,924.6	3,608.0	1,490.7	1,718.3	713.2	1,034.0	949.7	839.3	7,078.2	7,199.6
Charged/(credited) to profit or loss	256.7	247.4	(6.1)	(210.3)	(38.1)	(150.4)	123.9	109.2	336.4	(4.1)
Credited to other comprehensive income	_	_	_	_	(72.1)	(195.8)	_	_	(72.1)	(195.8)
Withholding tax	_	_	_	_	_	_	(84.8)	(51.2)	(84.8)	(51.2)
Exchange differences	62.3	69.2	(140.0)	(17.3)	13.8	25.4	50.7	52.4	(13.2)	129.7
At 31st December	4,243.6	3,924.6	1,344.6	1,490.7	616.8	713.2	1,039.5	949.7	7,244.5	7,078.2

	Provis	sions	Tax Io	sses	Total	
Deferred tax assets	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M	2021 HK\$'M	2020 HK\$'M
At 1st January and 31st December	(8.3)	(8.3)	(10.8)	(10.8)	(19.1)	(19.1)
Net deferred tax liabilities at 31st December					7,225.4	7,059.1

Deferred tax assets are recognised for tax loss carry-forwards to the extent that the realisation of the related tax benefit through future taxable profits is probable. The Group did not recognise deferred tax assets of HK\$927.7 million (2020: HK\$807.9 million) in respect of losses amounting to HK\$3,956.9 million (2020: HK\$3,461.7 million) that can be carried forward and set off against future taxable income. These tax losses have no expiry dates except for the tax losses of HK\$3,232.7 million (2020: HK\$2,784.7 million) which will expire at various dates up to and including 2026 (2020: 2025).

34 Other non-current liabilities

	2021 HK\$'M	2020 HK\$'M
Customers' deposits (note (a))	1,434.0	1,392.2
Contract liabilities (note (b))	889.9	839.4
Loan payable to non-controlling shareholders	136.0	20.9
Lease liabilities (note (c))	223.3	175.0
Asset retirement obligations	73.5	69.1
	2,756.7	2,496.6

Notes

- (a) Customers' deposits mainly represent deposits received from customers pursuant to gas supply contracts agreed with customers and are repayable upon termination of gas supply contracts subject to the customers' fulfilment of certain conditions.
- (b) Contract liabilities include only the non-current portion. The current portion is disclosed in note 31.
- (c) Lease liabilities include only lease with contractual maturities over 1 year, the current portion is disclosed in note 31.

35 Share capital

	Number	of shares	Share	capital
	2021	2020	2021 HK\$'M	2020 HK\$'M
Issued and fully paid:				
At beginning of year	17,771,304,856	16,925,052,244	5,474.7	5,474.7
Bonus shares	888,565,242	846,252,612	_	_
At end of year	18,659,870,098	17,771,304,856	5,474.7	5,474.7

36 Reserves

	Investment revaluation reserve HK\$'M	Hedging reserve HK\$'M	Exchange reserve HK\$'M	Other reserves (note) HK\$'M	Retained profits HK\$'M	Total HK\$'M
As at 1st January 2021	770.0	(30.1)	1,547.6	_	58,996.3	61,283.8
Profit attributable to shareholders	_	_	_	_	5,017.0	5,017.0
Other comprehensive income:						
Movement in reserve of financial assets at FVOCI	(218.7)	_	_	_	_	(218.7)
Remeasurements of retirement benefit	_	_	_	_	82.8	82.8
Change in fair value of cash flow hedges	_	14.8	_	_	_	14.8
Share of other comprehensive loss of an associate	_	(3.5)	_	_	_	(3.5)
Exchange differences	_	_	1,937.2	_	_	1,937.2
Total comprehensive income for the year	(218.7)	11.3	1,937.2	_	5,099.8	6,829.6
Capital injections in subsidiaries	_	_	_	_	17.6	17.6
Further acquisition of subsidiaries (note 42(b))	_	_	_	_	(29.6)	(29.6)
Share-based payments of a subsidiary	_	_	_	36.5	_	36.5
Deemed partial disposal of subsidiaries	_	_	_	_	136.1	136.1
2020 final dividend paid	_	_	_	_	(4,087.4)	(4,087.4)
2021 interim dividend paid	_	_	_	_	(2,239.2)	(2,239.2)
Share award scheme of a subsidiary	_	_	_	4.3	_	4.3
At 31st December 2021	551.3	(18.8)	3,484.8	40.8	57,893.6	61,951.7
Balance after 2021 final dividend proposed	551.3	(18.8)	3,484.8	40.8	53,601.8	57,659.9
2021 final dividend proposed	551.5	(10.0)	3,404.0	40.8	4.291.8	4,291.8
2021 Illiai dividena proposed	551.3	(18.8)	3,484.8	40.8	57,893.6	61,951.7

Note

Other reserves arise from the issue of equity-settled share-based payments to certain employees to allow them to invest indirectly in the equity interest in a subsidiary engaging in the New Energy business and the purchase of shares under a share award scheme of Towngas Smart Energy in 2021.

On 17th August 2021, Towngas Smart Energy adopted a share award scheme (the "Scheme") for the purposes of recognising the contributions by certain employees and attracting suitable personnel. The Scheme does not constitute a share option scheme or an arrangement analogous to a share option scheme for the purpose of Chapter 17 of the Listing Rules and accordingly, no shareholders' approval of Towngas Smart Energy is required to adopt the Scheme. Unless terminated earlier by the board of Towngas Smart Energy, pursuant to the Scheme, the Scheme shall be valid and effective for a period of ten years commencing on the adoption date. Details of the Scheme were disclosed in the announcement of Towngas Smart Energy dated 17th August 2021.

During the year ended 31st December 2021, 3,772,000 shares were purchased by the trustee from the market. No shares were granted to eligible employees pursuant to the Scheme during the year. At the end of the reporting period, there are 3,772,000 shares held by the trustee.

36 Reserves (Continued)

	Investment revaluation reserve HK\$'M	Hedging reserve HK\$'M	Exchange reserve HK\$'M	Retained profits HK\$'M	Total HK\$'M
As at 1st January 2020	1,194.9	49.4	(1,428.3)	58,918.7	58,734.7
Profit attributable to shareholders	_	_	_	6,007.3	6,007.3
Other comprehensive income:					
Remeasurements of retirement benefit	_	_	_	55.2	55.2
Change in value of financial assets at FVOCI	(405.2)	_	_	_	(405.2)
Change in fair value of cash flow hedges	_	(83.6)	_	_	(83.6)
Share of other comprehensive loss of associates	(19.7)	4.1	_	_	(15.6)
Exchange differences	_	_	2,975.9	_	2,975.9
Total comprehensive income for the year	(424.9)	(79.5)	2,975.9	6,062.5	8,534.0
Further acquisition of subsidiaries	_	_	_	40.5	40.5
2019 final dividend paid	_	_	_	(3,892.8)	(3,892.8)
2020 interim dividend paid	_	_	_	(2,132.6)	(2,132.6)
At 31st December 2020	770.0	(30.1)	1,547.6	58,996.3	61,283.8
Balance after 2020 final dividend proposed	770.0	(30.1)	1,547.6	54,908.9	57,196.4
2020 final dividend proposed	_	_	_	4,087.4	4,087.4
	770.0	(30.1)	1,547.6	58,996.3	61,283.8

37 Perpetual capital securities

In February 2019, the Group issued the new perpetual capital securities, amounting to USD300 million, through Towngas (Finance) Limited, a wholly-owned subsidiary for cash. The proceeds were mainly used to refinance the 2014 first-issued perpetual capital securities redeemed in January 2019.

The new perpetual capital securities are guaranteed by the Company, bear distribution at a rate of 4.75 per cent per annum for the first five years and thereafter at a fixed distribution rate. With no fixed maturity and the distribution payment can be deferred at the discretion of the Group, and these perpetual capital securities are redeemable at the Group's option on or after 12th February 2024, they are classified as equity instruments, and recorded in equity in the consolidated statement of financial position.

38 Contingent liabilities

The Company and the Group did not have any material contingent liabilities as at 31st December 2021 and 2020.

39 Commitments

(a) Capital expenditures for property, plant and equipment

capital experience or property, plant and equipment		
	2021	2020
	HK\$'M	HK\$'M
Contracts had been entered into but not brought into the consolidated		
financial statements at 31st December	5,868.7	5,662.6
		•
Share of capital expenditures for property, plant and equipment of joint v	ventures	,
Share of capital expenditures for property, plant and equipment of joint v	ventures	2020
Share of capital expenditures for property, plant and equipment of joint v		2020 HK\$'M
Share of capital expenditures for property, plant and equipment of joint values of capital expenditures for property, plant and equipment of joint values. Contracts had been entered into but not brought into the consolidated	2021	

(c) The Group has committed to provide sufficient funds in the forms of capital and loan contributions to finance certain new projects under various contracts in the Chinese mainland. The directors of the Company estimate that as at 31st December 2021, the Group's commitments to these projects were approximately HK\$5,142.1 million (2020: HK\$9,658.4 million).

Included in the above commitments as at 31st December 2020, Towngas Smart Energy entered into a capital increase agreement with Shenergy Group and Shanghai Gas on 27th October 2020, pursuant to which Towngas Smart Energy agreed to increase the registered capital and capital reserves of Shanghai Gas by way of capital contribution in the amount of RMB4,700.0 million (equivalent to approximately HK\$5,583.3 million) and Towngas Smart Energy will own 25 per cent equity interests in Shanghai Gas upon completion. An amount of RMB350.0 million (equivalent to approximately HK\$415.8 million) (note 27) was paid to Shanghai United Assets and Equity Exchange as a deposit for such acquisition of associate of Towngas Smart Energy in 2020. The acquisition was completed in July 2021.

(d) Lease commitments

Lessor

The Group leases out the building facilities of the commercial complex and car parks of Grand Waterfront (further details of the carrying value of the property are contained in note 17). Except for certain car parks rented out on an hourly or a monthly basis, these leases typically run for a period of 2 to 5 years.

At 31st December 2021 and 2020, future aggregate minimum lease payments receivable under noncancellable operating leases are as follows:

	2021 HK\$'M	2020 HK\$'M
Not later than 1 year	21.3	19.3
Later than 1 year and not later than 5 years	17.6	5.7
	38.9	25.0

40 Related party transactions

Henderson Land Development Company Limited ("Henderson") is a related party of the Group by virtue of its significant interest in and influence over the Group. Other related parties include subsidiaries of Henderson and one bank with a common director with the Company during the year. During the year, the transactions carried out and year end balances with the associates, joint ventures and other related parties are shown as follows:

(a) Interest income and sale of goods and services

	2021 HK\$'M	2020 HK\$'M
Associates		
Sale of goods and services (note (i))	204.7	257.6
Loan interest income (note (ii))	49.9	60.3
Joint ventures		
Sale of goods and services (note (i))	431.4	143.4
Loan interest income (note (ii))	1.6	3.6
Other related parties		
Sale of goods and services (notes (i) and (iii))	112.4	26.3
Interest income from bank deposits (note (i))	_	3.3
Interest expense and purchase of goods and services	2021 HK\$'M	2020 HK\$'M
Associates		
Purchase of goods and services (note (i))	443.1	623.6
Purchase of goods and services (note (i)) Joint ventures	443.1	623.6
	443.1	623.6 53.4
Joint ventures		
Joint ventures Purchase of goods and services (note (i))	33.7	53.4
Joint ventures Purchase of goods and services (note (i)) Loan interest expenses (note (ii))	33.7	53.4

Notes

- (i) These related party transactions were conducted at prices and terms as agreed by parties involved.
- (ii) For the terms and year end balances of loans, please refer to notes 21 and 22.
- (iii) This amount includes HK\$40.8 million (2020: HK\$1.8 million) that are also connected transactions under the Listing Rules.

40 Related party transactions (Continued)

(c) Year end balances arising from interest expense and sale of goods and services from other related parties

	2021 HK\$'M	2020 HK\$'M
Bank loans and interest payables	40.6	_
Trade receivables	2.2	2.5

Note

For the terms and year end balances of bank loans and interest payables, and trade receivables, please refer to notes 32 and 29.

(d) Other related party transactions are also disclosed in note 12.

41 Notes to consolidated cash flow statement

(a) Reconciliation of profit before taxation to net cash from operating activities

	2021 HK\$'M	2020 HK\$'M
Profit before taxation	8,380.7	8,925.6
Share of results of associates	(1,885.6)	(1,187.0)
Share of results of joint ventures	(646.9)	(1,089.2)
Fair value (gain)/loss on investment property	(22.0)	3.0
Impairment loss of trade receivables	39.7	42.5
Provision for assets	1,531.7	446.8
Ineffective portion on cash flow hedges	(4.9)	(6.9)
Interest income	(171.0)	(187.2)
Interest expense	1,408.2	1,268.6
Dividend income from investments in securities	(153.3)	(143.9)
Depreciation and amortisation	3,288.6	2,940.6
Loss on disposal/write off of property, plant and equipment	18.4	72.6
(Gain)/loss on disposal of right-of-use assets	(26.0)	1.4
Net realised and unrealised (gains)/losses on financial assets at FVOCI	(1.7)	2.0
Net realised and unrealised losses on financial assets at FVPL and derivative financial instruments	52.7	618.5
Change in fair value of embedded derivative component of convertible bonds	358.6	_
Share-based payments	36.5	_
Tax paid	(2,197.8)	(1,871.4)
Exchange differences	(81.7)	(127.1)
Changes in working capital		
Increase in customers' deposits	92.3	98.7
Increase in inventories	(385.9)	(216.5)
Increase in trade and other receivables	(161.7)	(783.5)
Increase in trade payables and other liabilities	985.5	1,102.0
Increase/(decrease) in asset retirement obligations	4.4	(9.0)
Changes in retirement benefit assets	10.7	9.6
Net cash from operating activities	10,469.5	9,910.2

41 Notes to consolidated cash flow statement (Continued)

(b) Reconciliation of liabilities arising from financing activities

	Leases HK\$'M	Borrowings HK\$'M
At 1st January 2020	338.4	37,936.2
Cash flows	(148.0)	3,655.4
Exchange differences	24.6	376.9
Other non-cash movement	64.8	170.1
At 31st December 2020	279.8	42,138.6
Cash flows	(155.1)	12,422.6
Exchange differences	5.8	470.7
Other non-cash movement	195.8	79.2
At 31st December 2021	326.3	55,111.1

- (c) During the year ended 31st December 2021, total cash outflow for lease was included in the statement of cash flows in (a) interest paid of HK\$13.5 million (2020: HK\$13.2 million) under "financing activities", (b) principal elements of lease payments of HK\$141.6 million (2020: HK\$134.8 million) under "financing activities".
- (d) During the year, Towngas Smart Energy issued shares to an investor for a proceed of HK\$451.9 million (note 32(b)). EcoCeres, Inc., a subsidiary of the Group also issued shares to an investor for a proceed of HK\$780.3 million. The net gain of HK\$136.1 million arising from these transactions with non-controlling interests was directly recognised in equity.

42 Business combinations

(a) Business combinations

For the year ended 31st December 2021, the Group acquired the following businesses:

	Purchase consideration HK\$'M
銅陵市隆中環保有限公司	134.6
Jiangsu Jinzhuo Construction Engineering Co., Ltd	96.5

The inclusion of the acquired businesses does not have a significant impact of the Group's turnover and profit for the year.

42 Business combinations (Continued)

(a) Business combinations (Continued)

The details of fair value of net identifiable assets acquired are as follows:

	Acquiree's fair value at acquisition date HK\$'M
Property, plant and equipment (note 16)	73.3
Right-of-use assets (note 18)	6.5
Intangible assets (note 19(b))	103.1
Inventories	35.0
Trade and other receivables	70.0
Cash and bank balances	87.0
Trade payables and other liabilities	(151.5)
Loan and other payables due to a non-controlling shareholder	(9.9)
Net assets	213.5
Non-controlling interests	(24.1)
Net identifiable assets acquired	189.4
Goodwill (note 19(a))	41.7
Purchase consideration	231.1

The goodwill is attributable to the future profitability of the acquired businesses and the synergies to arise after the Group's acquisition.

The non-controlling interests were measured on the basis of proportionate share of the fair value of net identifiable assets acquired as of the acquisition date.

Net cash flow arising on acquisition:

	HK\$'M
Purchase consideration for acquisition of businesses, settled in cash	215.5
Cash and cash equivalents in businesses acquired	(87.0)
Cash outflow on acquisition of businesses	128.5

As at 31st December 2021, purchase consideration of HK\$15.6 million remained unpaid and included in trade payables and other liabilities.

(b) Further acquisition of subsidiaries

During the year, the Group has further acquired the interest in several subsidiaries. The total consideration for all further acquisitions is approximately HK\$50.0 million. The difference between the share of net assets value acquired and total consideration of HK\$29.6 million was recognised directly in equity for these transactions with non-controlling interests.

(c) Apart from the above, there were no other material acquisitions of subsidiaries during the year ended 31st December 2021.

43 Statement of financial position of the Company

	2021 HK\$'M	2020 HK\$'M
Assets		
Non-current assets		
Property, plant and equipment	12,895.9	12,731.5
Right-of-use assets	263.0	262.8
Subsidiaries	24,670.7	22,842.0
Associate	664.7	664.7
Joint ventures	831.7	831.7
Financial assets at fair value through other comprehensive income	_	31.3
Retirement benefit assets	184.0	111.9
	39,510.0	37,475.9
Current assets		
Inventories	1,187.0	1,071.1
Trade and other receivables	2,313.1	2,256.9
Loan and other receivables from associates	22.4	22.3
Other receivables from joint ventures	27.9	30.6
Derivative financial instruments	1.3	_
Time deposits up to three months, cash and bank balances	898.5	1,063.8
	4,450.2	4,444.7
Current liabilities		
Trade payables and other liabilities	(1,817.4)	(1,790.0)
Provision for taxation	(162.6)	(640.3)
Borrowings	(1,250.0)	_
	(3,230.0)	(2,430.3)
Total assets less current liabilities	40,730.2	39,490.3
Non-current liabilities		
Loan and other payables to subsidiaries	(18,341.7)	(15,887.3)
Deferred taxation	(1,487.9)	(1,463.8)
Borrowings	(1,493.9)	(1,489.4)
Other non-current liabilities	(1,432.9)	(1,402.2)
	(22,756.4)	(20,242.7)
Net assets	17,973.8	19,247.6

43 Statement of financial position of the Company (Continued)

	2021 НК\$'М	2020 HK\$'M
Capital and reserves		
Share capital	5,474.7	5,474.7
Retained profits (note (a))	12,499.1	13,772.9
	17,973.8	19,247.6

Approved by the Board of Directors on 21st March 2022

Lee Ka-kit Director David Li Kwok-po Director

43 Statement of financial position of the Company (Continued)

Note

(a) Retained profits

	HK\$'M
At 1st January 2021	13,772.9
Profit attributable to shareholders	4,970.0
Other comprehensive income:	
Remeasurements of retirement benefit	82.8
Total comprehensive income for the year	5,052.8
2020 final dividend paid	(4,087.4)
2021 interim dividend paid	(2,239.2)
At 31st December 2021	12,499.1
Balance after 2021 final dividend proposed	8,207.3
2021 final dividend proposed	4,291.8
	12,499.1
At 1st January 2020	14,441.7
Profit attributable to shareholders	5,301.4
Other comprehensive income:	
Remeasurements of retirement benefit	55.2
Total comprehensive income for the year	5,356.6
2019 final dividend paid	(3,892.8)
2020 interim dividend paid	(2,132.6)
At 31st December 2020	13,772.9
Balance after 2020 final dividend proposed	9,685.5
2020 final dividend proposed	4,087.4
	13,772.9

Subsidiaries

Name		ued share oital/ registered oital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
Gas and related businesse	s in Hona Kona				
Towngas Enterprise Limited	•	\$2	100	Hong Kong	Café, restaurant and retail sales
Summit Result Developments Li	mited HK	\$100	100	Hong Kong	Customers centre
Uticom Limited	HK	\$100	100	Hong Kong	Development of automatic meter reading system
# Quality Testing Services Limited	I HK	\$10,000	100	Hong Kong	Laboratory testing
Gas, water and related bus	inesses in the (Chinese mainland			
† Hong Kong and China Gas Agri- Investment (Nanjing) Limited	cultural RM	1B50.0 million	100	PRC	Agricultural and related businesses
港華紫荊農莊(句容)有限公司] RM	1B40.0 million	78.3	PRC	Agricultural and related businesses
Jiangsu Jinzhuo Construction El Co., Ltd.	ngineering RM	1B100.0 million	62.8	PRC	Engineering work services
Chaozhou Hong Kong and Chin Co., Ltd.	ia Gas HK	\$100.0 million	60	PRC	Gas sales and related businesses
Danyang Hongkong and China Co., Ltd.	Gas RM	1B60.0 million	80	PRC	Gas sales and related businesses
Fengcheng Hong Kong & China Co. Ltd.	Gas RM	1B88.0 million	55	PRC	Gas sales and related businesses
Guangzhou Dongyong Hong Ko China Gas Company Limited	ong & HK	\$71.3 million	82.6	PRC	Gas sales and related businesses
Guangzhou Hong Kong and Ch Company Limited	ina Gas RM	1B105.0 million	80	PRC	Gas sales and related businesses
Jiangxi Hong Kong & China Gas	Co., Ltd. RM	1B25.9 million	56	PRC	Gas sales and related businesses
Jilin Hong Kong and China Gas Company Limited	RM	1B100.0 million	63	PRC	Gas sales and related businesses
Jingxian Hong Kong and China Company Limited	Gas RM	1B79.0 million	81	PRC	Gas sales and related businesses
† Peixian Hongkong and China G Company Limited	as RM	1B100.0 million	100	PRC	Gas sales and related businesses
† Pingxiang Hong Kong & China (Co., Ltd.	Gas RM	1B104.8 million	100	PRC	Gas sales and related businesses
† Suining Hong Kong and China C Co., Ltd.	Gas RM	1B66.5 million	100	PRC	Gas sales and related businesses
Taizhou Hong Kong and China Company Limited	Gas RM	1B83.0 million	65	PRC	Gas sales and related businesses
Taizhou Yongan Hong Kong & (Co., Ltd.	China Gas US	\$10.0 million	93.9	PRC	Gas sales and related businesses
Wujiang Hong Kong and China Company Limited	Gas RM	1B60.0 million	80	PRC	Gas sales and related businesses
Xuzhou Hong Kong and China (Company Limited	Gas RM	1B125.0 million	80	PRC	Gas sales and related businesses
Yixing Hong Kong and China Ga Company Limited	as RM	1B172.0 million	80	PRC	Gas sales and related businesses
† Zhang Shu Hong Kong & China Co., Ltd.	Gas US	\$5.0 million	100	PRC	Gas sales and related businesses

[#] Direct subsidiaries of the Company
† Wholly foreign-owned enterprises
1 Newly formed/acquired during the year

Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
Gas, water and related businesses in t	he Chinese mainland	(Continued)		
Zhongshan Hong Kong and China Gas Limited	RMB96.0 million	70	PRC	Gas sales and related businesses
常州金壇港華燃氣有限公司	RMB120.0 million	60	PRC	Gas sales and related businesses
†豐縣港華燃氣有限公司	US\$4.5 million	100	PRC	Gas sales and related businesses
饒平港華燃氣有限公司	HK\$126.0 million	60	PRC	Gas sales and related businesses
† 新密港華燃氣有限公司	US\$12.5 million	100	PRC	Gas sales and related businesses
† 港華儲氣(金壇)有限公司	RMB300.0 million	100	PRC	Gas storage project
† C-Tech Investment Company Limited	RMB210.0 million	100	PRC	Investment holding
† Hong Kong & China Gas Investment Limited	US\$75.0 million	100	PRC	Investment holding
† Hua Yan Environmental Investment (JiangSu) Co., Ltd.	RMB800.0 million	100	PRC	Investment holding
* Towngas Smart Energy Company Limited	3,159,895,343 shares of HK\$0.1 each	66	Cayman Islands/ Hong Kong	Investment holding
丹陽卓惠洗滌有限公司	RMB20.0 million	80	PRC	Laundry business
唐山卓惠洗滌有限公司	RMB20.0 million	80	PRC	Laundry business
† 唐山皓華貿易有限公司	RMB250.0 million	100	PRC	LNG storage tanks and terminal
[†] Maanshan Hong Kong and China Water Company Limited	RMB212.6 million	100	PRC	Water supply and related businesses
# Wuhu Hong Kong and China Water Company Limited	RMB400.0 million	75	PRC	Water supply and related businesses
Wujiang Hong Kong & China Water Co., Ltd.	RMB860.0 million	80	PRC	Water supply and related businesses
† 安徽省江北華衍水務有限公司	RMB374.4 million	100	PRC	Water supply and related businesses
The following subsidiaries engaged in gas an held by Towngas Smart Energy is shown according to U-Tech (Guang Dong) Engineering		held by Town	gas Smart Energy a	nd the respective equity interest Engineering and related business
Construction Co., Ltd	7.11.127 7.10 77.11.11.01.1	, 00	7.1.0	2.1.geeg and related 2 demices
† An Shan Hong Kong and China Gas Company Limited	US\$20.0 million	100	PRC	Gas sales and related businesses
Baotou Hong Kong & China Gas Company Limited	RMB20.0 million	85	PRC	Gas sales and related businesses
Beipiao Hong Kong and China Gas Company Limited	RMB56.0 million	80	PRC	Gas sales and related businesses
Ben Xi Hongkong and China Gas Company Limited	RMB335.0 million	80	PRC	Gas sales and related businesses
Boxing Hong Kong & China Gas Co., Ltd	RMB40.0 million	65	PRC	Gas sales and related businesses
† Cang Xi Hong Kong and China Gas Company Limited	RMB20.0 million	100	PRC	Gas sales and related businesses
Cangxian Hong Kong & China Gas Co., Ltd.	RMB10.0 million	90	PRC	Gas sales and related businesses
Changting Hong Kong and China Gas Company Limited	RMB22.0 million	90	PRC	Gas sales and related businesses

[†] Wholly foreign-owned enterprises

* Listed on The Stock Exchange of Hong Kong Limited

Direct subsidiaries of the Company

	Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
	Gas, water and related businesses in t	he Chinese mainlar	nd (Continued)		
	Chaoyang Hongkong and China Gas Company Limited	US\$10.8 million	90	PRC	Gas sales and related businesses
	Chi Ping Hongkong and China Gas Co. Ltd.	RMB40.0 million	85	PRC	Gas sales and related businesses
t	Chizhou Hong Kong and China Gas Company Ltd	RMB70.0 million	100	PRC	Gas sales and related businesses
	Da Yi Hong Kong and China Gas Company Limited	RMB20.0 million	100	PRC	Gas sales and related businesses
	Dafeng Hong Kong and China Gas Company Limited	RMB80.0 million	51	PRC	Gas sales and related businesses
†	Dalian Changxing Hong Kong and China Gas Co. Ltd.	US\$14.0 million	100	PRC	Gas sales and related businesses
†	Dalian Lvshun Hong Kong and China Gas Co. Ltd.	US\$15.0 million	100	PRC	Gas sales and related businesses
†	Feicheng Hong Kong and China Gas Company Limited	RMB32.0 million	100	PRC	Gas sales and related businesses
	Fuxin Hongkong and China Gas Company Limited	RMB77.2 million	90	PRC	Gas sales and related businesses
†	Gao Chun Hong Kong and China Gas Co., Ltd.	US\$11.0 million	100	PRC	Gas sales and related businesses
†	Gongzhuling Hong Kong and China Gas Company Limited	RMB88.0 million	100	PRC	Gas sales and related businesses
†	Guilin Hong Kong & China Gas Co., Ltd.	RMB30.0 million	100	PRC	Gas sales and related businesses
	Huang Shan Hong Kong & China Gas Co., Ltd.	RMB40.0 million	100	PRC	Gas sales and related businesses
†	Huang Shan Taiping Hong Kong & China Gas Co., Ltd.	US\$3.5 million	100	PRC	Gas sales and related businesses
†	Huangshan Huizhou Hong Kong & China Gas Co., Ltd.	US\$2.1 million	100	PRC	Gas sales and related businesses
	Huzhou Hong Kong and China Gas Company Limited	US\$10.5 million	98.9	PRC	Gas sales and related businesses
	Ji Nan Ping Yin Hong Kong & China Gas Co., Ltd.	RMB200.0 million	82.2	PRC	Gas sales and related businesses
	Jiajiang Hong Kong & China Gas Company Limited	RMB20.0 million	70	PRC	Gas sales and related businesses
	Jianping Hong Kong and China Gas Company Limited	RMB58.0 million	80	PRC	Gas sales and related businesses
†	Kazuo Hong Kong & China Gas Co., Ltd.	US\$6.4 million	100	PRC	Gas sales and related businesses
†	Laiyang Hong Kong and China Gas Co., Ltd.	US\$11.5 million	100	PRC	Gas sales and related businesses
	Lezhi Hong Kong and China Gas Company Limited	RMB30.0 million	100	PRC	Gas sales and related businesses
†	Liuzhou Hong Kong & China Gas Co., Ltd.	RMB50.0 million	100	PRC	Gas sales and related businesses
†	Longkou Hongkong and China Gas Company Limited	US\$7.1 million	100	PRC	Gas sales and related businesses

[†] Wholly foreign-owned enterprises

Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
Gas, water and related businesses in	the Chinese mainlar	nd (Continued)		
† Luliang Hong Kong & China Gas Company Limited	RMB52.0 million	100	PRC	Gas sales and related businesses
Maanshan Bowang Hong Kong & China Gas Co., Ltd.	US\$10.0 million	75.1	PRC	Gas sales and related businesses
† Maanshan Jiangbei Hong Kong and China Towngas Company Limited	US\$10.0 million	100	PRC	Gas sales and related businesses
Mei Shan Peng Shan Hong Kong and China Gas Company Limited	RMB20.0 million	70	PRC	Gas sales and related businesses
Mengcun Hong Kong & China Gas Co., Ltd.	RMB10.0 million	90	PRC	Gas sales and related businesses
Mianyang Heqing Towngas Co., Ltd.	RMB10.0 million	80	PRC	Gas sales and related businesses
† Mianyang Hong Kong & China Gas Co., Ltd.	RMB90.0 million	100	PRC	Gas sales and related businesses
Mianzhu Hong Kong and China Gas Co., Ltd.	RMB30.0 million	80	PRC	Gas sales and related businesses
Mianzhu Yuquan Hong Kong and China Gas Co., Ltd.	RMB5.0 million	80	PRC	Gas sales and related businesses
Miluo Hong Kong and China Gas Co. Ltd	RMB50.0 million	70	PRC	Gas sales and related businesses
Peng Xi Hong Kong and China Gas Company Limited	RMB20.0 million	100	PRC	Gas sales and related businesses
Qingdao Dong Yi Hong Kong and China Gas Company Limited	RMB30.0 million	60	PRC	Gas sales and related businesses
Qingdao Zhongji Hong Kong and China Gas Company Limited	RMB73.5 million	90	PRC	Gas sales and related businesses
Qinhuangdao Hong Kong & China Gas Co., Ltd.	RMB15.0 million	51	PRC	Gas sales and related businesses
† Shenyang Hong Kong & China Gas Company Limited	US\$24.5 million	100	PRC	Gas sales and related businesses
Siping Hong Kong & China Gas Company Limited	RMB45.0 million	80	PRC	Gas sales and related businesses
Tie Ling Hong Kong and China Gas Company Limited	RMB233.0 million	80	PRC	Gas sales and related businesses
† Tongshan Hong Kong and China Gas Co. Ltd	RMB124.0 million	100	PRC	Gas sales and related businesses
Tongxiang Hong Kong and China Gas Company Limited	US\$7.0 million	76	PRC	Gas sales and related businesses
† Wuhu Jiangbei Hong Kong & China Gas Company Limited	RMB200.0 million	100	PRC	Gas sales and related businesses
Wulian Hong Kong & China Gas Company Limited	RMB20.0 million	70	PRC	Gas sales and related businesses
† Wuning Hong Kong & China Gas Co., Ltd.	RMB40.0 million	100	PRC	Gas sales and related businesses
Xin Jin Hong Kong and China Gas Company Limited	RMB40.0 million	60	PRC	Gas sales and related businesses
Xingyi Hong Kong & China Gas Company Limited	RMB50.0 million	70	PRC	Gas sales and related businesses

[†] Wholly foreign-owned enterprises

_	Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
	Gas, water and related businesses in	the Chinese mainlar	d (Continued)		
	Yan Shan Hong Kong & China Gas Co., Ltd.	RMB10.0 million	90	PRC	Gas sales and related businesses
t	Yang Jiang Hong Kong and China Gas Company Limited	RMB50.0 million	100	PRC	Gas sales and related businesses
	Yangxin Hongkong & China Gas Company Limited	RMB18.0 million	51	PRC	Gas sales and related businesses
†	Yifeng Hongkong and China Gas Co., Ltd.	RMB32.0 million	100	PRC	Gas sales and related businesses
t	Yingkou Hong Kong and China Gas Co., Ltd.	US\$9.4 million	100	PRC	Gas sales and related businesses
	Yue Chi Hong Kong and China Gas Company Limited	RMB30.0 million	90	PRC	Gas sales and related businesses
†	Zhao Yuan Hong Kong & China Gas Co., Ltd.	RMB22.0 million	100	PRC	Gas sales and related businesses
†	Zhong Jiang Hong Kong and China Gas Company Limited	RMB30.0 million	100	PRC	Gas sales and related businesses
†	Zhongxiang Hong Kong & China Gas Co., Ltd.	RMB42.0 million	100	PRC	Gas sales and related businesses
	潮州楓溪港華燃氣有限公司	RMB60.0 million	60	PRC	Gas sales and related businesses
	成都新都港華燃氣有限公司	RMB50.0 million	100	PRC	Gas sales and related businesses
	大連瓦房店港華燃氣有限公司	RMB40.0 million	90	PRC	Gas sales and related businesses
†	阜新大力燃氣有限責任公司	RMB13.9 million	100	PRC	Gas sales and related businesses
†	阜新新邱港華燃氣有限公司	RMB34.0 million	100	PRC	Gas sales and related businesses
†	廣西中威管道燃氣發展集團有限責任公司	RMB30.0 million	100	PRC	Gas sales and related businesses
	簡陽港華燃氣有限公司	RMB150.0 million	100	PRC	Gas sales and related businesses
	九江港華燃氣有限公司	RMB10.0 million	60	PRC	Gas sales and related businesses
	平昌港華燃氣有限公司	RMB20.0 million	90	PRC	Gas sales and related businesses
	齊齊哈爾港華燃氣有限公司	RMB128.6 million	61.7	PRC	Gas sales and related businesses
	青島嶗山灣港華能源有限公司	RMB30.0 million	60	PRC	Gas sales and related businesses
	清遠港華燃氣有限公司	RMB50.0 million	80	PRC	Gas sales and related businesses
	韶關港華燃氣有限公司	RMB50.0 million	100	PRC	Gas sales and related businesses
	松陽港華燃氣有限公司	RMB80.0 million	51.4	PRC	Gas sales and related businesses
	威遠港華燃氣有限公司	RMB30.0 million	100	PRC	Gas sales and related businesses
	修水港華燃氣有限公司	RMB30.0 million	80	PRC	Gas sales and related businesses
	資陽港華燃氣有限公司	RMB30.0 million	90	PRC	Gas sales and related businesses
†	C-Tech Laundry Company Limited	RMB50.0 million	100	PRC	Investment holding
†	Towngas China Energy Investment Limited	RMB250.0 million	100	PRC	Investment holding
†	Towngas Investments Limited	US\$200.0 million	100	PRC	Investment holding
†	港華舒適家 (成都) 科技服務有限公司	RMB10.0 million	100	PRC	Investment holding
	內蒙古港億天然氣有限公司	RMB80.0 million	85	PRC	Mid-stream natural gas project
†	Towngas Natural Gas Sales Co., Ltd.	RMB50.0 million	100	PRC	Procurement of natural gas sources
	四川港華合縱能源有限公司	RMB230.0 million	98.8	PRC	Upstream natural gas project
	Heilongjiang Hong Kong & China Lianfu New Energy Company Limited	RMB13.0 million	55	PRC	Vehicle gas refilling stations
†	Qiqihar Xingqixiang Gas Company Limited	RMB60.0 million	100	PRC	Vehicle gas refilling stations

[†] Wholly foreign-owned enterprises

Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
Smart Energy businesses				
長沙港能投智慧能源有限公司	RMB5.0 million	100	PRC	Energy conservation project
1 深圳港華綜合能源有限公司	RMB14.0 million	100	PRC	Energy conservation project
Dunhuang Towngas China Energy Storage Power Plant Co., Ltd.	RMB14.0 million	100	PRC	Energy storage project
港華綜合電能投資(深圳)有限公司	RMB610.0 million	100	PRC	Investment holding
Foshan Towngas China PV Power Generation Co., Ltd.	RMB21.0 million	100	PRC	Photovoltaic project
1 常州港能投智慧能源有限公司	RMB100.0 million	55	PRC	Photovoltaic project
廣東晟桂電力有限公司	RMB15.0 million	100	PRC	Photovoltaic project
1 江門市南盈太陽能科技有限公司	RMB16.0 million	100	PRC	Photovoltaic project
1 濟寧道宏新能源有限公司	RMB11.0 million	100	PRC	Photovoltaic project
泉州港能投光伏有限公司	RMB24.0 million	100	PRC	Photovoltaic project
宿遷港能投光伏有限公司	RMB30.0 million	100	PRC	Photovoltaic project
廈門港能投光伏有限公司	RMB46.0 million	100	PRC	Photovoltaic project
新野縣啟電光伏科技有限公司	RMB13.0 million	100	PRC	Photovoltaic project
held by Towngas Smart Energy is shown according Changzhou Towngas China Energy Co., Ltd.		45	PRC	Distributed energy systems businesses
Maanshan Towngas China Energy Co., Ltd.	RMB50.0 million	85	PRC	Distributed energy systems businesses
Qingdao Towngas China Energy Co., Ltd.	RMB15.4 million	62.4	PRC	Distributed energy systems businesses
† Shenzhen Towngas China Energy Co., Ltd.	RMB6.0 million	100	PRC	Distributed energy systems businesses
Songyang Towngas China Energy Co., Ltd	RMB30.0 million	85.4	PRC	Distributed energy systems businesses
Tangshan Fengnan Towngas China Energy Co., Ltd.	RMB96.0 million	51	PRC	Distributed energy systems businesses
Xuzhou Economic and Technological Development Zone Towngas China Energy Co., Ltd.	RMB80.0 million	70	PRC	Distributed energy systems businesses
† 廣西港華智慧能源有限公司	RMB10.0 million	100	PRC	Distributed energy systems businesses
瀋陽智慧能源系統科技有限公司	RMB100.0 million	55	PRC	Distributed energy systems businesses
「 唐山港能投智慧能源有限公司	RMB80.0 million	49	PRC	Distributed energy systems businesses
「徐州工業園區中港熱力有限公司	RMB160.0 million	49.8	PRC	Distributed energy systems businesses
陽信港能投智慧能源有限公司	RMB15.0 million	67.8	PRC	Distributed energy systems businesses

Newly formed/acquired during the yearWholly foreign-owned enterprises

The Group can exercise control over the boards of directors in these subsidiaries

	Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
	Smart Energy businesses (Continued)				
1	濟寧港華智慧能源有限公司	RMB200.0 million	85	PRC	Smart energy businesses
	即城港能投光伏發電有限公司	RMB28.0 million	100	PRC	Smart energy businesses
	港華時代智慧能源科技 (蘇州) 有限公司	RMB20.0 million	65	PRC	Smart energy businesses
	崇陽禾沐新能源科技有限公司	RMB10.0 million	100	PRC	Smart energy businesses
	港華 (深圳) 碳資產運營有限公司	RMB40.0 million	100	PRC	Smart energy businesses
	Anqiu Towngas China PV Power Generation Co., Ltd.	RMB47.0 million	100	PRC	Smart energy businesses
†	Qingdao Towngas China PV Power Generation Co., Ltd.	RMB29.0 million	100	PRC	Smart energy businesses
†	Shuyang Zhongye Shukai New Energy Co., Ltd.	RMB30.0 million	100	PRC	Smart energy businesses
†	Binzhou Xinrunfeng New Energy Co., Ltd.	RMB15.0 million	100	PRC	Smart energy businesses
†	Yancheng Towngas China Smart Energy Co., Ltd.	RMB34.0 million	100	PRC	Smart energy businesses
†	Maanshan Zhengpugang New District Towngas China Photovoltaic Co., Ltd.	RMB3.5 million	100	PRC	Smart energy businesses
†	Qingdao Towngas China Photovoltaic Co., Ltd.	RMB80.0 million	100	PRC	Smart energy businesses
t	Ben Xi Towngas China Energy Co., Ltd.	RMB100.0 million	100	PRC	Smart energy businesses
†	Wuhan Towngas China Energy Co., Ltd.	RMB12.0 million	100	PRC	Smart energy businesses
†	Tangshan Towngas China Integrated Energy Co., Ltd.	RMB150.0 million	100	PRC	Smart energy businesses
†	Yangtze River Delta Integrated Development Demonstration Zone (Suzhou Wujiang) Towngas China Energy Co., Ltd.	RMB150.0 million	100	PRC	Smart energy businesses
	Liyang Hengdian Towngas China PV Power Generation Co., Ltd.	RMB22.5 million	60	PRC	Smart energy businesses
	Danyang Towngas China Energy Storage Power Plant Co., Ltd.	RMB30.0 million	90	PRC	Smart energy businesses
	Suzhou Guangchen Towngas China PV Power Generation Co., Ltd.	RMB15.0 million	80	PRC	Smart energy businesses
	Taizhou Towngas China Energy Co., Ltd.	RMB210.0 million	80	PRC	Smart energy businesses
	New Energy businesses				
	ECO Aviation Fuel Development Limited	HK\$2	100	Hong Kong	Aviation fuel facility
	ECO Aviation Fuel Services Limited	HK\$10,000	100	Hong Kong	Aviation fuel facility
	P-Tech Landfill Gas (NENT) Limited (formerly known as ECO Landfill Gas (NENT) Limited)	HK\$100	100	Hong Kong	Landfill gas project
	P-Tech Landfill Gas (SENT) Company Limited	HK\$100	100	Hong Kong	Landfill gas project
	內蒙古易高煤化科技有限公司	RMB1,407.2 million	100	PRC	Chemical business
†	Inner Mongolia Ke Jian Coal Company Limited	RMB486.0 million	100	PRC	Coal related business
	秦皇島易騰商貿有限公司	US\$20.0 million	100	PRC	Coal related business

Newly formed/acquired during the yearWholly foreign-owned enterprises

	Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
	New Energy businesses (Continued)				
t	易高卓新節能技術(上海)有限公司	RMB14.0 million	100	PRC	Consultancy service
	易高清潔能源管理服務(西安)有限公司	US\$1.5 million	100	PRC	Consultancy service
t	易高新能源工程管理服務(深圳)有限公司	RMB15.0 million	100	PRC	Research and development
	易高環保能源科技(張家港)有限公司	US\$3.3 million	100	PRC	Research and development
1	EcoCeres, Inc.	US\$28,746	90	Cayman Islands	Investment holding
	ECO Environmental Energy Investments Limited	US\$100.0 million	100	PRC	Investment holding
	1 宜安(內蒙古)控股有限公司	US\$238.2 million	100	PRC	Investment holding
	Shanxi ECO Coalbed Methane Co., Ltd.	RMB200.0 million	70	PRC	LNG business
	徐州易高中泰新能源有限公司	US\$24.5 million	100	PRC	LNG business
t	寧夏易達天然氣有限公司	RMB210.0 million	70	PRC	LNG business
	山東嘉祥易隆港務有限公司	RMB180.0 million	88	PRC	Logistics business
	ECO Orient Resources (Thailand) Ltd.	THB425.0 million	100	Thailand	Oil business
†	ECO Services Management Company Limited	RMB80.0 million	100	PRC	Project management
	The following subsidiaries are held by EcoCeres, Inc.	and the respective eq	uity interest held	d by EcoCeres, Inc.	is shown accordingly.
	ECO Biochemical Technology (Zhangjiagang) Company Limited	US\$59.9 million	100	PRC	Chemical business
†	Hebei ECO Biofuel Company Limited	RMB200.0 million	100	PRC	Chemical business
†	Hebei ECO Bioenergy Company Limited	RMB187.5 million	100	PRC	Chemical business
	唐山易高農業科技有限公司	RMB3.0 million	100	PRC	Chemical business
	ECO Biofuel Technology Company Limited	HK\$100	100	Hong Kong	Investment holding
	ECO Biotechnology Company Limited	HK\$100	100	Hong Kong	Investment holding
	ECO Environmental Investments (China) Limited	HK\$92	100	Hong Kong	Investment holding
†	ECO Environmental Resources Investments Limited	US\$60.8 million	100	PRC	Investment holding
	EcoCeres Limited (formerly known as ECO Resources Trading Limited)	HK\$100	100	Hong Kong	Trading of chemicals
	Other businesses				
#	P-Tech Engineering Company Limited	HK\$2	100	Hong Kong	Engineering and related businesses
	U-Tech Engineering Company Limited	HK\$22.2 million	100	Hong Kong	Engineering and related businesses
	M-Tech Instrument (Hong Kong) Limited	HK\$100	100	Hong Kong	Gas meter and related businesses
†	卓度計量技術 (深圳) 有限公司	RMB60.0 million	100	PRC	Gas meter and related businesses
1	卓明信息 (深圳) 有限公司	RMB49.0 million	100	PRC	Payment gateway and related businesses
	G-Tech Piping Company Limited	HK\$100	100	Hong Kong	PE piping business
†	卓通管道系統(中山)有限公司	RMB41.0 million	100	PRC	PE piping business

[†] Wholly foreign-owned enterprises1 Newly formed/acquired during the year# Direct subsidiaries of the Company

	Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
	Other businesses (Continued)		400	5	
	Starmax Assets Limited	HK\$90.0 million	100	British Virgin Islands/ Hong Kong	Property development
	卓鋭智高 (武漢) 科技有限公司	RMB51.2 million	100	PRC	System development & consulting services
1	珠海卓鋭高科信息技術有限公司	RMB7.0 million	100	PRC	System development & consulting services
	HDC Data Centre Limited	HK\$100	100	Hong Kong	Telecommunications business
	TGT China Cloud Data Services (Harbin) Co., Ltd.	RMB112.0 million	88.8	PRC	Telecommunications business
	TGT Union Financial Data Services (Dongguan) Co., Ltd.	RMB80.0 million	60	PRC	Telecommunications business
	Towngas Chibo Data Service (Jinan) Co., Ltd.	RMB168.0 million	90.5	PRC	Telecommunications business
- 1	Towngas Telecom (Fengxian) Company Limited	RMB7.5 million	100	PRC	Telecommunications business
1	Towngas Telecom (Peixian) Co., Ltd.	RMB9.0 million	100	PRC	Telecommunications business
	Towngas Telecom (Shandong) Company Limited	RMB40.0 million	90.1	PRC	Telecommunications business
1	Towngas Telecommunications (Shenzhen) Limited	RMB6.0 million	100	PRC	Telecommunications business
	Towngas Telecommunications Fixed Network Limited	HK\$35.0 million	100	Hong Kong	Telecommunications business
	北京馳波名氣通數據服務有限公司	RMB10.0 million	99.1	PRC	Telecommunications business
	大連億達名氣通數據服務有限公司	RMB76.0 million	90	PRC	Telecommunications business
	萊陽名氣通電訊有限公司	US\$1.6 million	90	PRC	Telecommunications business
1	名氣通網絡(深圳)有限公司	RMB179.5 million	100	PRC	Telecommunications business
	Financing & securities investments				
	C-Tech (Finance) Limited	HK\$100	100	Hong Kong	Financing
#	Eagle Legend International Limited	HK\$100	100	Hong Kong	Financing
#	# HKCG (Finance) Limited	HK\$100	100	Hong Kong	Financing
	Hong Kong and China Energy (Finance) Limited	HK\$100	100	Hong Kong	Financing
	Hong Kong and China Power (Finance) Limited	HK\$100	100	Hong Kong	Financing
	TCCL (Finance) Limited	HK\$1	66	Hong Kong	Financing
	TCCL (Project Finance) Limited	HK\$100	66	Hong Kong	Financing
#	t Towngas (Finance) Limited	HK\$100	100	British Virgin Islands	Financing
	Barnaby Assets Limited	US\$1	100	British Virgin Islands/ Hong Kong	Securities investment
	China Guide Resources Limited	HK\$100	100	Hong Kong	Securities investment
	Danetop Services Limited	US\$1	100	British Virgin Islands/ Hong Kong	Securities investment
	Investstar Limited	HK\$100	100	Hong Kong	Securities investment
	Premier Century Investments Limited	HK\$100	100	Hong Kong	Securities investment
	Superfun Enterprises Limited	US\$1	100	British Virgin Islands/ Hong Kong	Securities investment
	Upwind International Limited	US\$1	100	British Virgin Islands/ Hong Kong	Securities investment

[#] Direct subsidiaries of the Company

[†] Wholly foreign-owned enterprises

Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/operation	Principal activity
		•	·	. ,
Investment holding				
Apex Time Holdings Limited	HK\$100	100	Hong Kong	Investment holding
C-Tech Laundry (0003) Investment Company Limited	HK\$100	100	Hong Kong	Investment holding
ECO Advanced Carbon Materials Company Limited	HK\$100	100	Hong Kong	Investment holding
ECO Coal Chemical Technology (Inner Mongolia) Limited	HK\$100	100	Hong Kong	Investment holding
ECO Environmental Energy (China) Limited	HK\$100	100	Hong Kong	Investment holding
ECO Environmental Investments (China) Limited	US\$1	100	British Virgin Islands	Investment holding
ECO Environmental Investments Limited	HK\$2	100	Hong Kong	Investment holding
ECO Natural Gas (China) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
ECO Natural Gas (Xian) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
ECO Orient Energy (Thailand) Ltd.	US\$12,000	100	Bermuda	Investment holding
¹ EcoCeres, Inc.	US\$4	100	British Virgin Islands	Investment holding
Fanico Investments Limited	HK\$1	100	Hong Kong	Investment holding
G-Tech Piping Technologies Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong & China Gas (Anhui) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Changzhou) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Chaozhou) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (China) Limited	HK\$10,000	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Danyang) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Fengcheng) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Guangzhou) Limited	HK\$1,000	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Hebei) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Jilin Province) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Jinan) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Jintan) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Nanjing) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Panyu) Limited	HK\$1,000	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Suzhou) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Taizhou) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Wuhan) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding

¹ Newly formed/acquired during the year

Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/operation	Principal activity
Investment holding (Continued)				
Hong Kong & China Gas (Wujiang) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Xuzhou) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Yixing) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Zhangjiagang) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas (Zhongshan) Limited	HK\$1,000	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Gas LNG International Trading Limited	US\$1	100	British Virgin Islands	Investment holding
Hong Kong & China Water (Suzhou) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Water (Wujiang) Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong & China Water Limited (carrying on business in Hong Kong as Hua Yan Water (China) Limited)	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
Hong Kong and China Energy Holdings Company Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Energy Investment Holdings Company Limited	US\$1	100	British Virgin Islands	Investment holding
Hong Kong and China Environmental Holdings Company Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Hainan) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Jiangsu) Agricultural Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Jiangxi) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Jingxian) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Qianhai) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Suxiang) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Tangshan) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Xinmi) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Zhangshu) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Gas (Zhengzhou) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Power Holdings Company Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Power Investment Holdings Company Limited	US\$1	100	British Virgin Islands	Investment holding
Hong Kong and China Water (Anhui Jiangbei) Limited	HK\$100	100	Hong Kong	Investment holding
Hong Kong and China Water (Maanshan) Limited	HK\$100	100	Hong Kong	Investment holding
Meter Technologies Limited	HK\$100	100	Hong Kong	Investment holding
M-Tech Instrument Corporation (Holding) Limited	HK\$119	100	Hong Kong	Investment holding
Sky Global Limited (carrying on business in Hong Kong as Hong Kong & China (Jilan Gas) Limited)	US\$100	100	British Virgin Islands/ Hong Kong	Investment holding

The following is a list of the principal subsidiaries as at 31st December 2021: (Continued)

Name	Issued share capital/ registered capital	Percentage of issued/ registered capital held	Place of incorporation/ operation	Principal activity
Investment holding (Continued)				
TGT BROADBANDgo Company Limited	US\$1	100	British Virgin Islands	Investment holding
TGT Destic Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Fengxian Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Harbin Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Laiyang Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Peixian Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Shanghai Data Services Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Shenzhen Data Services Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT Songshanhu Company Limited	HK\$100	100	Hong Kong	Investment holding
TGT TGgo Company Limited	US\$1	100	British Virgin Islands	Investment holding
Towngas – China Power (HK) Integrated Energy Company Limited	HK\$100	100	Hong Kong	Investment holding
Towngas Global Net Limited	HK\$0.2	100	Cayman Islands	Investment holding
# Towngas International Company Limited	US\$1	100	British Virgin Islands/ Hong Kong	Investment holding
# Towngas Investment Company Limited	HK\$2	100	Hong Kong	Investment holding
Towngas Renewable Energy (HK) Company Limited	HK\$100	100	Hong Kong	Investment holding
Towngas Renewable Energy Company Limited	US\$1	100	British Virgin Islands	Investment holding
# Towngas Smart Energy Company Limited	US\$1	100	British Virgin Islands	Investment holding
Towngas Telecommunications (China) Limited	US\$1	100	British Virgin Islands	Investment holding
Towngas Telecommunications Company Limited	HK\$100	100	Hong Kong	Investment holding

[#] Direct subsidiaries of the Company

The above table lists the subsidiaries of the Group which, in the opinion of the directors of the Company, principally affected the results or assets of the Group. To give details of other subsidiaries would, in the opinion of the directors of the Company, result in particulars of excessive length.