

# Consolidated Financial Statements



for the year ended  
30 June 2016

## Contents

Consolidated comprehensive income statement	2
Consolidated statement of changes in equity	3
Consolidated balance sheet	4
Consolidated cash flow statement	5
Notes to the consolidated financial statements	7

## Notes to the consolidated financial statements

Note	
1	General information 7
2	Basis of accounting 7
3	Segment reporting 9
4	Other revenue and operating expenses 11
5	Depreciation, depletion and amortisation 11
6	Change in fair value of financial instruments 11
7	Finance expense 12
8	Income tax 12
9	Earnings per share 13
10	Dividends 14
11	Share capital 14
12	Share-based payments 14
13	Receivables and prepayments 15
14	Inventories 15
15	Property, plant and equipment 16
16	Oil and gas assets 18
17	Intangible assets 20
18	Investments in subsidiaries 21
19	Joint operations 21
20	Related-party transactions 21
21	Payables and accruals 22
22	Borrowings 22
23	Provisions 24
24	Derivatives 25
25	Financial instruments and financial risk management 28
26	Fair value 32
27	Commitments 35
28	Contingent assets and liabilities 36
29	Events occurring after balance date 36

## Consolidated comprehensive income statement

For the year ended 30 June 2016

	Note	2016 \$ million	2015 \$ million
<b>Operating revenue</b>			
Electricity revenue		1,676.7	1,730.4
Gas revenue		242.4	282.9
Petroleum revenue		53.8	64.7
Other revenue	4	38.4	19.6
		<b>2,011.3</b>	<b>2,097.6</b>
<b>Operating expenses</b>			
Electricity purchases, transmission and distribution		(910.9)	(953.7)
Gas purchases, transmission and distribution		(252.0)	(297.1)
Petroleum production, marketing and distribution		(23.0)	(26.1)
Fuels consumed		(196.3)	(187.4)
Employee benefits	4	(81.8)	(80.6)
Other operating expenses	4	(212.0)	(207.9)
		<b>(1,676.0)</b>	<b>(1,752.8)</b>
<b>Earnings before net finance expense, income tax, depreciation, depletion, amortisation, impairment, fair value changes and other gains and losses</b>			
		<b>335.3</b>	<b>344.8</b>
Depreciation, depletion and amortisation	5	(127.5)	(155.7)
Impairment of non-current assets	15	-	(14.0)
Revaluation of generation assets	15	138.0	-
Change in fair value of financial instruments	6	(26.6)	32.1
Other gains (losses)		(3.0)	(0.2)
		<b>(19.1)</b>	<b>(137.8)</b>
<b>Profit before net finance expense and income tax</b>			
		<b>316.2</b>	<b>207.0</b>
Finance revenue		2.0	1.3
Finance expense	7	(65.2)	(68.0)
<b>Profit before income tax</b>			
		<b>253.0</b>	<b>140.3</b>
Income tax (expense)	8	(68.8)	(35.5)
<b>Net profit for the year</b>			
		<b>184.2</b>	<b>104.8</b>
<b>Other comprehensive income</b>			
<b>Items that may be reclassified subsequently to profit or loss:</b>			
Change in cash flow hedge reserve	24	(33.6)	(20.1)
Income tax credit (expense) relating to items that may be reclassified	8	9.4	5.6
<b>Total items that may be reclassified subsequently to profit or loss</b>			
		<b>(24.2)</b>	<b>(14.5)</b>
<b>Items that will not be reclassified subsequently to profit or loss:</b>			
Change in asset revaluation reserve	15	232.6	-
Income tax (expense) relating to items that will not be reclassified	8	(65.1)	-
<b>Total items that will not be reclassified subsequently to profit or loss</b>			
		<b>167.5</b>	<b>-</b>
<b>Total other comprehensive income (expense) for the year</b>			
		<b>143.3</b>	<b>(14.5)</b>
<b>Total comprehensive income for the year</b>			
		<b>327.5</b>	<b>90.3</b>
<b>Earnings per share from operations attributable to shareholders of the Parent</b>			
Basic and diluted earnings per share (cents)	9	18.43	10.49

The above statements should be read in conjunction with the accompanying notes.

## Consolidated statement of changes in equity

For the year ended 30 June 2016

	Note	Share capital \$ million	Share-based payments reserve \$ million	Asset revaluation reserve \$ million	Cash flow hedge reserve \$ million	Retained earnings \$ million	Total \$ million
<b>Balance as at 1 July 2014</b>		539.7	-	805.8	(5.1)	540.3	1,880.7
Net profit for the year		-	-	-	-	104.8	104.8
<b>Other comprehensive income</b>							
Change in cash flow hedge reserve	24	-	-	-	(20.1)	-	(20.1)
Income tax credit relating to other comprehensive income	8	-	-	-	5.6	-	5.6
<b>Total comprehensive income (expense) for the year</b>		-	-	-	(14.5)	104.8	90.3
Share-based payments	12	-	0.3	-	-	-	0.3
Dividends	10	-	-	-	-	(145.9)	(145.9)
<b>Balance as at 30 June 2015</b>		539.7	0.3	805.8	(19.6)	499.2	1,825.4
Net profit for the year		-	-	-	-	184.2	184.2
<b>Other comprehensive income</b>							
Change in cash flow hedge reserve	24	-	-	-	(33.6)	-	(33.6)
Change in asset revaluation reserve	15	-	-	232.6	-	-	232.6
Income tax (expense)/credit relating to other comprehensive income	8	-	-	(65.1)	9.4	-	(55.7)
<b>Total comprehensive income (expense) for the year</b>		-	-	167.5	(24.2)	184.2	327.5
Revaluation reserve reclassified to retained earnings on disposal of assets		-	-	(0.4)	-	0.4	-
Share-based payments	12	-	0.2	-	-	-	0.2
Dividends	10	-	-	-	-	(161.9)	(161.9)
<b>Balance as at 30 June 2016</b>		<b>539.7</b>	<b>0.5</b>	<b>972.9</b>	<b>(43.8)</b>	<b>521.9</b>	<b>1,991.2</b>

The above statements should be read in conjunction with the accompanying notes.

## Consolidated balance sheet

As at 30 June 2016

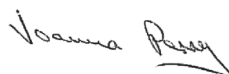
	Note	2016 \$ million	2015 \$ million
<b>Current assets</b>			
Cash and cash equivalents		34.9	21.0
Receivables and prepayments	13	188.8	187.7
Inventories	14	79.3	80.0
Assets held for sale		–	3.1
Intangible assets	17	4.8	4.3
Tax receivable		4.1	16.2
Derivatives	24	19.9	34.2
<b>Total current assets</b>		<b>331.8</b>	<b>346.5</b>
<b>Non-current assets</b>			
Receivables and prepayments	13	4.2	0.9
Inventories	14	–	24.4
Property, plant and equipment	15	2,988.0	2,682.5
Oil and gas assets	16	267.5	292.4
Intangible assets	17	133.7	127.4
Derivatives	24	53.0	53.9
<b>Total non-current assets</b>		<b>3,446.4</b>	<b>3,181.5</b>
<b>Total assets</b>		<b>3,778.2</b>	<b>3,528.0</b>
<b>Current liabilities</b>			
Payables and accruals	21	166.8	158.3
Borrowings	22	136.2	117.8
Provisions	23	15.3	12.3
Derivatives	24	27.6	21.5
<b>Total current liabilities</b>		<b>345.9</b>	<b>309.9</b>
<b>Non-current liabilities</b>			
Payables and accruals	21	0.8	0.7
Borrowings	22	776.0	840.4
Provisions	23	123.2	123.7
Deferred tax liability	8	484.3	397.2
Derivatives	24	56.8	30.7
<b>Total non-current liabilities</b>		<b>1,441.1</b>	<b>1,392.7</b>
<b>Total liabilities</b>		<b>1,787.0</b>	<b>1,702.6</b>
<b>Shareholders' equity</b>			
Share capital	11	539.7	539.7
Reserves		1,451.5	1,285.7
<b>Total equity</b>		<b>1,991.2</b>	<b>1,825.4</b>
<b>Total equity and liabilities</b>		<b>3,778.2</b>	<b>3,528.0</b>

The Directors of Genesis Energy Limited authorise these financial statements for issue on behalf of the Board.



**Rt Hon Dame Jenny Shipley, DNZM**  
Chairman of the Board

Date: 23 August 2016



**Joanna Perry, MNZM**  
Chairman of the Audit and Risk Committee

Date: 23 August 2016

The above statements should be read in conjunction with the accompanying notes.

## Consolidated cash flow statement

For the year ended 30 June 2016

	2016 \$ million	2015 \$ million
<b>Cash flows from operating activities</b>		
Cash was provided from:		
Receipts from customers	2,009.2	2,122.0
Interest received	2.0	1.3
Tax received	20.9	-
	<b>2,032.1</b>	2,123.3
Cash was applied to:		
Payments to suppliers and related parties	1,578.7	1,687.6
Payments to employees	82.6	81.0
Tax paid	46.0	36.2
	<b>1,707.3</b>	1,804.8
<b>Net cash inflows from operating activities</b>	<b>324.8</b>	318.5
<b>Cash flows from investing activities</b>		
Cash was provided from:		
Proceeds from disposal of property, plant and equipment	6.4	1.3
	<b>6.4</b>	1.3
Cash was applied to:		
Purchase of property, plant and equipment	19.1	35.5
Purchase of oil and gas assets	8.8	4.1
Purchase of intangibles (excluding emission units and deferred customer acquisition costs)	10.6	10.3
	<b>38.5</b>	49.9
<b>Net cash (outflows) from investing activities</b>	<b>(32.1)</b>	(48.6)
<b>Cash flows from financing activities</b>		
Cash was provided from:		
Proceeds from borrowings	100.0	193.0
	<b>100.0</b>	193.0
Cash was applied to:		
Repayment of borrowings	155.0	256.1
Interest paid and other finance charges	61.9	61.6
Repayment of principal on finance lease liabilities	-	1.6
Dividends	161.9	145.9
	<b>378.8</b>	465.2
<b>Net cash (outflows) from financing activities</b>	<b>(278.8)</b>	(272.2)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>13.9</b>	(2.3)
Cash and cash equivalents at 1 July	21.0	23.3
<b>Cash and cash equivalents at 30 June</b>	<b>34.9</b>	21.0

The above statements should be read in conjunction with the accompanying notes.

## Consolidated cash flow statement (continued)

For the year ended 30 June 2016

Reconciliation of net profit to net cash inflow from operating activities	Note	2016 \$ million	2015 \$ million
<b>Net profit for the year</b>		<b>184.2</b>	104.8
<b>Items classified as investing/financing activities</b>			
Net (gain) loss on disposal of property, plant and equipment		<b>(0.3)</b>	2.5
Interest and other finance charges paid		<b>59.1</b>	61.8
		<b>58.8</b>	64.3
<b>Non-cash items</b>			
Depreciation, depletion and amortisation expense	5	<b>127.5</b>	155.7
Revaluation of generation assets	15	<b>(138.0)</b>	-
Impairment of non-current assets	15	-	14.0
Change in fair value of financial instruments	6	<b>26.6</b>	(32.1)
Deferred tax expense	8	<b>31.4</b>	18.6
Change in capital expenditure accruals		<b>(4.6)</b>	1.9
Change in rehabilitation and contractual arrangement provisions		<b>1.7</b>	(0.3)
Other non-cash items		<b>(0.8)</b>	2.0
		<b>43.8</b>	159.8
<b>Movements in working capital</b>			
Change in receivables and prepayments		<b>(4.4)</b>	28.7
Change in inventories		<b>25.1</b>	23.5
Change in emission units on hand		<b>(2.0)</b>	(2.0)
Change in deferred customer acquisition costs		<b>(3.9)</b>	-
Change in payables and accruals		<b>8.6</b>	(36.5)
Change in tax receivable/payable		<b>12.1</b>	(19.6)
Change in provisions		<b>2.5</b>	(4.5)
		<b>38.0</b>	(10.4)
<b>Net cash inflow from operating activities</b>		<b>324.8</b>	318.5

The above statements should be read in conjunction with the accompanying notes.

## Notes to the consolidated financial statements

For the year ended 30 June 2016

### 1. General information

Genesis Energy Limited (the 'Parent') is a company registered under the Companies Act 1993. The Parent is majority owned by Her Majesty the Queen in Right of New Zealand (the 'Crown') and is listed on the NZSX, NZDX and ASX. The Parent, as a mixed ownership model company, is bound by the requirements of the Public Finance Act 1989. The liabilities of the Parent are not guaranteed in any way by the Crown. The Parent is an FMC Reporting Entity under the Financial Markets Conduct Act 2013 and the Financial Reporting Act 2013.

The consolidated financial statements comprise the Parent, its subsidiaries and the Group's interests in joint operations (together, the 'Group'). The Group is designated as a profit-oriented entity for financial reporting purposes.

The Group's core business is located in New Zealand and involves the generation of electricity, retailing and trading of energy, and the development and procurement of fuel sources. To support these functions, the Group's scope of business includes retailing and trading of related complementary products designed to support its key energy business.

### 2. Basis of accounting

#### Basis of preparation

The financial statements have been prepared in accordance with and comply with New Zealand Generally Accepted Accounting Practice ('NZ GAAP'), New Zealand Equivalents to International Financial Reporting Standards ('NZ IFRS') and other applicable New Zealand Financial Reporting Standards as appropriate for profit-oriented entities. These financial statements comply with International Financial Reporting Standards ('IFRS').

The financial statements have been prepared in accordance with the Financial Markets Conduct Act 2013, the Financial Reporting Act 2013 and the Companies Act 1993, and are presented in New Zealand dollars rounded to the nearest one hundred thousand. The accounting policies adopted in the preparation of these financial statements are set out below and in the relevant notes to the financial statements. These policies have been applied consistently to all years presented, unless otherwise stated.

The financial statements have been prepared under the historical-cost convention, modified by the revaluation of derivatives and generation assets.

The financial statements are prepared on a GST exclusive basis with the exception of receivables and payables, which include GST where GST has been invoiced.

#### Basis of consolidation

##### Subsidiaries

Subsidiaries are all those entities (including structured entities) controlled by the Group. Control is achieved when the Parent has exposure or rights to variable returns and has the power to affect those returns. Subsidiaries are consolidated from the date control is acquired. They are de-consolidated from the date control ceases. The acquisition method of accounting is used to account for the acquisition of subsidiaries.

##### Joint operations

Where the Group invests in joint operations, the Group's share of revenue, expenditure, assets and liabilities is included in the appropriate categories within the Group financial statements on a proportionate line-by-line basis.

##### Transactions and balances eliminated on consolidation

Intercompany transactions, balances, revenue and expenditure between Group companies are eliminated on consolidation.

##### Critical accounting estimates and judgements

The preparation of financial statements requires management to make estimates and assumptions that affect the application of policies and the reported amounts of assets, liabilities, revenues and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are reasonable under the circumstances. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Significant areas of estimation in these financial statements are as follows:

##### Valuation of generation assets

The Group's generation assets are carried at fair value. The fair value is based on the present value of the estimated future cash flows of the assets. The key assumptions used in the valuation and the carrying value of generation assets are disclosed in note 15.

##### Depletion of oil and gas producing assets

Depletion of oil and gas producing assets is based on the proven reserves to which the assets relate. Proven reserve estimates can change over time. The proven reserve estimates used to deplete oil and gas producing assets and the carrying value of the assets are disclosed in note 16.

##### Valuation of rehabilitation and restoration provision

The financial statements include an estimate of the liability in relation to the abandonment and restoration of generation and oil and gas production sites. Such estimates are measured at the present value of the cash flows estimated to settle the obligation. The key assumptions used in the calculation and the carrying value of the rehabilitation and restoration provision are disclosed in note 23.

##### Valuation of electricity derivatives

The valuation of electricity derivatives classified as level three financial instruments is based on forecasted internally generated electricity price paths which incorporate a number of assumptions. The key assumptions used in the valuation and the carrying value of electricity derivatives classified as level three financial instruments are disclosed in note 26.

##### Impairment of assets

Assets that have indefinite useful lives are not subject to amortisation and are tested annually for impairment. Assets that are subject to depletion, depreciation or amortisation are reviewed for impairment annually, or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If an asset's carrying value exceeds its recoverable amount, the difference is recognised as an impairment loss in profit or loss, except where the asset is carried at a revalued amount then it is treated as a revaluation decrease.

The recoverable amount is the higher of an asset's fair value less costs to sell, and the asset's value in use. In assessing value in use, the estimated future cash flows are discounted to their present value at a rate that reflects current market assessments of the time value of money. This discount rate is adjusted for the risks specific to the asset where the estimated cash flows have not been adjusted.

For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that have been impaired are reviewed for possible reversal of the impairment at each reporting date.

## 2. Basis of accounting (continued)

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but only to the extent the carrying amount of the asset at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised. A reversal of an impairment loss is recognised in profit or loss immediately, unless the relevant asset is carried at fair value, in which case the reversal of the impairment loss is treated as a revaluation increase. Impairment of goodwill is not reversed.

### Foreign currency transactions

Transactions denominated in a foreign currency are converted at the exchange rate in effect at the date of the transaction. At balance date monetary assets and liabilities denominated in foreign currencies are translated at the closing rate. Exchange gains and losses arising from these translations and the settlement of these items are recognised in profit or loss, except when deferred in equity where cash flow hedging is applied (refer to the derivatives accounting policy disclosed in note 24).

### Statement of cash flows

The following definitions are used in the statement of cash flows:

#### Operating activities

Operating activities include all transactions and other events that are not investing or financing activities.

#### Investing activities

Investing activities are those activities relating to the acquisition, holding and disposal of property, plant and equipment, oil and gas assets, intangible assets (excluding emission units and deferred customer acquisition costs) and investments.

#### Financing activities

Financing activities are those activities that result in changes to the size and composition of the capital structure of the Group. They include both equity and debt not falling within the definition of cash. Dividends and interest paid in relation to the capital structure are included in financing activities. Payments to suppliers and related parties disclosed in operating activities include the net amount of GST paid/received during the year. GST is disclosed on a net basis as the gross amounts do not provide meaningful information for financial statement purposes.

### Capital and reserves

#### Asset revaluation reserve

The asset revaluation reserve is used to record movements in the fair value of generation assets in accordance with the property, plant and equipment accounting policy disclosed in note 15.

#### Cash flow hedge reserve

The cash flow hedge reserve comprises the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedge transactions that have not yet occurred.

#### Share-based payments reserve

The share-based payments reserve is used to recognise the value of equity-settled share-based payments provided to employees, including key management personnel, as part of their remuneration.

#### New accounting treatment

Genesis Energy has implemented new accounting treatments during the year to defer the recognition of incentives provided to customers and the cost of acquisition of customers. Due to the level of competition in the retail energy market, Genesis Energy increased its expenditure on acquisition costs and incentives to customers to stabilise and extract longer-term value from the retail customer base. Customer incentives such as account credits are included in the measurement of revenue and are spread over the length of the average customer tenure where there is evidence that the return from the customer over the amortisation period is positive, in line with the future revenue standard NZ IFRS 15 *Revenue from Contracts with Customers*. Customer acquisition costs which are directly attributable to securing a particular customer contract, and meet the definition of an intangible asset under NZ IAS 38 *Intangible Assets*, are now capitalised and amortised over the average customer tenure.

The new accounting treatment resulted in the recognition of a \$7.0 million asset in receivables and prepayments and a \$3.9 million asset in intangibles at 30 June 2016 (refer to notes 13 and 17).

There have been no significant changes in accounting policies or methods of computation since 30 June 2015.

### Adoption of new and revised accounting standards, interpretations and amendments

There have been no new and revised accounting standards, interpretations or amendments effective during the year which have a material impact on the Group's accounting policies or disclosures.

#### Accounting standards, interpretations and amendments in issue not yet effective

IFRS 9 *Financial Instruments* is effective for annual reporting periods beginning on or after 1 January 2018. The standard comprises three phases: phase one, *Classification and Measurement*; phase two, *Impairment Methodology*; and phase three, *Hedge Accounting*. Phases one and two are not expected to have a material impact on the Group's financial statements. The impact of phase three has not been determined.

NZ IFRS 15 *Revenue from Contracts with Customers* is effective for annual reporting periods beginning on or after 1 January 2018. The impact this standard will have on the Group's financial statements has not been determined.

NZ IFRS 16 *Leases* is effective for annual reporting periods beginning on or after 1 January 2019. The new standard eliminates the distinction between operating and finance leases for lessees and will result in lessees bringing most leases onto their balance sheets. The impact this standard will have on the Group's financial statements has not been determined.

All other standards, interpretations and amendments approved but not yet effective in the current year are either not applicable to the Group or are not expected to have a material impact on the Group's financial statements and, therefore, have not been discussed.



### 3. Segment reporting

For management purposes, the Group is currently organised into four segments as follows:

Segment	Activity
Customer experience	Supply of energy (electricity, gas and LPG) and related services to end-user customers.
Energy management	Generation and trading of electricity and related products. The segment includes electricity sales to the wholesale electricity market, derivatives entered into to fix the price of electricity, and wholesale gas and coal sales.
Oil and gas	Exploration, development, production and sale of gas, LPG and light oil.
Corporate	Head office functions including new generation investigation and development, fuel management, information systems, human resources, finance, corporate relations, property management, legal and corporate governance. Corporate revenue is made up of property rental and miscellaneous income.

The segments are based on the different products and services offered by the Group. No operating segments have been aggregated.

Year ended 30 June 2016	Customer experience \$ million	Energy management \$ million	Oil and gas \$ million	Corporate \$ million	Inter-segment items \$ million	Total \$ million
<b>Operating revenue</b>						
Electricity revenue	1,199.2	975.3	-	-	(497.8)	1,676.7
Gas revenue	153.0	136.4	53.9	-	(100.9)	242.4
Petroleum revenue	-	-	53.8	-	-	53.8
Other revenue	10.2	26.9	-	1.3	-	38.4
	1,362.4	1,138.6	107.7	1.3	(598.7)	2,011.3
<b>Operating expenses</b>						
Electricity purchase, transmission and distribution	(996.1)	(412.6)	-	-	497.8	(910.9)
Gas purchase, transmission and distribution	(123.5)	(177.5)	-	-	49.0	(252.0)
Petroleum production, marketing and distribution	-	-	(23.0)	-	-	(23.0)
Fuel consumed	-	(248.2)	-	-	51.9	(196.3)
Employee benefits	(29.1)	(31.7)	(0.1)	(20.9)	-	(81.8)
Other operating expenses	(111.0)	(74.5)	(4.2)	(22.3)	-	(212.0)
<b>Earnings before net finance expense, income tax, depreciation, depletion, amortisation, impairment, fair value changes and other gains and losses</b>	102.7	194.1	80.4	(41.9)	-	335.3
Depreciation, depletion and amortisation	(3.1)	(81.8)	(30.7)	(11.9)	-	(127.5)
Revaluation of generation assets	-	138.0	-	-	-	138.0
Change in fair value of financial instruments	-	(18.0)	(3.3)	(5.3)	-	(26.6)
Other gains (losses)	(0.2)	(0.4)	(0.4)	(2.0)	-	(3.0)
<b>Profit (loss) before net finance expense and income tax</b>	99.4	231.9	46.0	(61.1)	-	316.2
Finance revenue	0.1	-	0.2	1.7	-	2.0
Finance expense	(0.3)	(3.1)	(3.0)	(58.8)	-	(65.2)
<b>Profit (loss) before income tax</b>	99.2	228.8	43.2	(118.2)	-	253.0
<b>Other segment information</b>						
Capital expenditure	5.3	14.4	8.9	11.2	-	39.7

### 3. Segment reporting (continued)

Year ended 30 June 2015

	Customer experience \$ million	Energy management \$ million	Oil and gas \$ million	Corporate \$ million	Inter-segment items \$ million	Total \$ million
<b>Operating revenue</b>						
Electricity revenue	1,180.3	1,037.9	-	-	(487.8)	1,730.4
Gas revenue	149.1	188.3	59.3	-	(113.8)	282.9
Petroleum revenue	-	-	64.7	-	-	64.7
Other revenue	9.0	9.1	0.4	1.1	-	19.6
	1,338.4	1,235.3	124.4	1.1	(601.6)	2,097.6
<b>Operating expenses</b>						
Electricity purchase, transmission and distribution	(978.6)	(462.9)	-	-	487.8	(953.7)
Gas purchase, transmission and distribution	(125.0)	(229.0)	-	-	56.9	(297.1)
Petroleum production, marketing and distribution	-	-	(26.1)	-	-	(26.1)
Fuel consumed	-	(244.3)	-	-	56.9	(187.4)
Employee benefits	(25.5)	(28.4)	-	(26.7)	-	(80.6)
Other operating expenses	(122.1)	(69.6)	(4.8)	(11.4)	-	(207.9)
<b>Earnings before net finance expense, income tax, depreciation, depletion, amortisation, impairment, fair value changes and other gains and losses</b>						
	87.2	201.1	93.5	(37.0)	-	344.8
Depreciation, depletion and amortisation	(3.0)	(85.4)	(55.3)	(12.0)	-	(155.7)
Impairment of non-current assets	-	(13.1)	-	(0.9)	-	(14.0)
Change in fair value of financial instruments	-	29.4	4.7	(2.0)	-	32.1
Other gains (losses)	-	(0.2)	1.1	(1.1)	-	(0.2)
<b>Profit (loss) before net finance expense and income tax</b>						
	84.2	131.8	44.0	(53.0)	-	207.0
Finance revenue	0.1	-	0.2	1.0	-	1.3
Finance expense	(0.3)	(3.3)	(2.9)	(61.5)	-	(68.0)
<b>Profit (loss) before income tax</b>						
	84.0	128.5	41.3	(113.5)	-	140.3
<b>Other segment information</b>						
Capital expenditure	4.3	29.2	4.0	6.1	-	43.6

#### Inter-segment revenue

Sales between segments is based on transfer prices developed in the context of long-term contracts. Inter-segment gas revenue includes the Group's share of Kupe gas sales to Energy Management and gas on-sold from Energy Management to Customer Experience.

#### Geographic information

All business segments operate within New Zealand.

#### Major customer information

The Group has no individual customers that account for 10 per cent or more of the Group's external revenue (2015: none).

#### 4. Other revenue and operating expenses

	Note	2016 \$ million	2015 \$ million
<i>Other revenue includes:</i>			
Emission unit revenue from trading		21.0	3.8
Other revenue		17.4	15.8
		<b>38.4</b>	19.6
<i>Operating expenses include:</i>			
<i>Auditor's remuneration:</i>			
Audit of financial statements			
– Review fees for interim financial statements (Deloitte)		0.1	0.1
– Audit fees for annual financial statements (Deloitte)		0.5	0.4
Directors' fees		0.8	0.8
Bad debts		8.2	7.2
Employee benefits expense – defined contributions		2.8	2.8
Rental expenses on operating leases		8.3	8.0
Onerous contracts		2.0	(3.2)
Reversal of inventory spares write-down	14	(6.9)	(0.3)
Emission unit expenses from trading		15.5	2.9
Other employee benefits and operating expenses		262.5	269.8
		<b>293.8</b>	288.5
Employee benefits		81.8	80.6
Other operating expenses		212.0	207.9
		<b>293.8</b>	288.5

In addition to the services disclosed above, Deloitte completed the following work during the year: a fraud review and assisted with integrated reporting and trustee reporting (2015: trustee reporting). Total fees relating to the other services was \$0.036 million (2015: \$0.035 million).

#### 5. Depreciation, depletion and amortisation

	Note	2016 \$ million	2015 \$ million
Depreciation of property, plant and equipment	15	85.4	88.6
Depreciation and depletion of oil and gas assets	16	30.7	55.3
Amortisation of intangibles (excluding amortisation of deferred customer acquisition costs)	17	11.4	11.8
		<b>127.5</b>	155.7

#### 6. Change in fair value of financial instruments

	Note	2016 \$ million	2015 \$ million
Change in fair value of derivatives – gain (loss)	24	(3.9)	33.3
Fair value interest rate risk adjustment on borrowings – gain (loss)		(22.7)	(1.2)
		<b>(26.6)</b>	32.1

The change in the fair value of derivatives for the year mainly relates to the movement in the fair value of Cross-Currency Interest Rate Swaps ("CCIRS") (\$22.0 million gain) offset by the movement in the fair value of electricity swaps and options (\$17.7 million loss). The movement in the fair value of the CCIRS relates to movements in interest and foreign exchange rates between 30 June 2015 and balance date. The movement in the fair value of the CCIRS was offset by the change in the fair value interest rate risk adjustment on the United States Private Placement ("USPP") (\$23.2 million loss). The net impact on net profit of the CCIRS and USPP was \$1.2 million loss. The movement in the fair value of electricity swaps and options primarily reflects movements in the electricity price path between either the date the contract was entered into, if it is a new contract in the current year, or 30 June 2015 and balance date.

## 7. Finance expense

	Note	2016 \$ million	2015 \$ million
Interest on borrowings (excluding capital bonds)		46.0	49.1
Interest on capital bonds		12.4	12.4
Total interest on borrowings		58.4	61.5
Other interest and finance charges		0.7	0.6
Time value of money adjustments on provisions	23	6.1	6.2
		65.2	68.3
Capitalised finance expenses	15	-	(0.3)
		65.2	68.0
Weighted average capitalisation rate		6.2%	6.4%

Interest on borrowings, bank and facility fees and transaction costs are recognised in profit or loss over the period of the borrowings using the effective interest rate method, unless such costs relate to funding capital work in progress. Time value of money adjustments on provisions is recognised in profit or loss up to the point the provision is used or released.

Finance expense on capital work in progress (qualifying assets) is capitalised during the construction period. The capitalisation rate used to determine the amount of finance expense to be capitalised is based on the weighted average finance expenses incurred by the Group.

## 8. Income tax

	2016 \$ million	2015 \$ million
Current tax		
– Current year	41.8	37.6
– Under (over) provided in prior periods	(2.1)	(1.1)
– Powerhouse depreciation determinations		
– Thermal	(2.3)	-
– Hydroelectric	-	(1.1)
– Tekapo Canal remediation project – settlement	-	(18.5)
Deferred tax		
– Current year	28.6	2.5
– Under (over) provided in prior periods	5.4	0.3
– Powerhouse depreciation determinations		
– Thermal	(2.6)	-
– Hydroelectric	-	(2.7)
– Tekapo Canal remediation project – settlement	-	18.5
<b>Income tax expense</b>	<b>68.8</b>	<b>35.5</b>
Current tax	37.4	16.9
Deferred tax	31.4	18.6
	68.8	35.5

### Reconciliation of income tax expense on pre-tax accounting profit to income tax expense

Profit before income tax	253.0	140.3
Income tax at 28%	70.8	39.3
Tax effect of adjustments:		
– Under (over) provided in prior periods	3.3	(0.8)
– Powerhouse depreciation determinations		
– Thermal	(4.9)	-
– Hydroelectric	-	(3.8)
– Non-deductible expenditure and other adjustments	(0.4)	0.8
	68.8	35.5

## 8. Income tax (continued)

Income tax is recognised in profit or loss unless it relates to other comprehensive income.

Current tax is the expected tax payable on taxable income for the year, using tax rates enacted or substantively enacted at the end of the reporting period, together with any unpaid tax or adjustment to tax payable in respect of previous years.

Deferred tax liability	Property, plant and equipment \$ million	Oil and gas assets \$ million	Provisions \$ million	Finance lease liabilities \$ million	Other \$ million	Total \$ million
<b>Balance as at 1 July 2014</b>	356.5	80.5	(34.0)	(4.3)	(14.5)	384.2
Amount recognised in profit or loss	17.5	(10.1)	(1.8)	0.8	12.2	18.6
Amount recognised in other comprehensive income	-	-	-	-	(5.6)	(5.6)
<b>Balance as at 30 June 2015</b>	374.0	70.4	(35.8)	(3.5)	(7.9)	397.2
Amount recognised in profit or loss	39.9	(4.1)	(0.2)	0.8	(5.0)	31.4
Amount recognised in other comprehensive income	65.1	-	-	-	(9.4)	55.7
<b>Balance as at 30 June 2016</b>	<b>479.0</b>	<b>66.3</b>	<b>(36.0)</b>	<b>(2.7)</b>	<b>(22.3)</b>	<b>484.3</b>

Deferred tax is calculated using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amounts of assets and liabilities, using tax rates enacted or substantively enacted at the end of the reporting period.

### Powerhouse depreciation determinations

Tax depreciation deductions were disallowed for buildings with estimated useful lives of 50 years or more from 1 July 2011. As a result, adjustments to deferred tax liabilities totalling \$12.4 million were made in the 2010 and 2011 financial years relating to generation powerhouse assets, offices and leasehold improvements.

On 25 March 2015, the Inland Revenue Department issued a Depreciation Determination for Hydroelectric Powerhouses which allows the Group to claim an annual depreciation deduction of two per cent on hydroelectric powerhouses; this applied retrospectively from the 2012 income year. As a result, a \$3.8 million adjustment was made to tax expense in the 2015 financial year, the majority of which related to reversing the 2010 and 2011 adjustments made when the change in tax depreciation on buildings was substantively enacted.

On 23 February 2016, the Inland Revenue Department issued a Depreciation Determination for Geothermal and Thermal Powerhouses which applied retrospectively from the 2012 income year. During 2016, agreement was reached with Inland Revenue on the apportionment of thermal powerhouses as depreciable plant foundations. As a result, a \$4.9 million adjustment has been made to tax expense in the current year, the majority of which related to reversing the 2010 and 2011 adjustments made when the change in tax depreciation on buildings was substantively enacted.

### Tekapo Canal Remediation Project

During 2015, a resolution was reached with Inland Revenue on the tax treatment of costs associated with the Tekapo Canal Remediation Project. The impact of the resolution resulted in an increase in current tax receivable and deferred tax liability of \$18.5 million as at 30 June 2015.

## 9. Earnings per share

	2016	2015
Numerator		
<b>Net profit for the year attributable to shareholders (\$ million)</b>	<b>184.2</b>	104.8
Denominator		
Weighted average number of ordinary shares (million units)	<b>1,000.0</b>	1,000.0
Less weighted average number of Treasury shares (million units)	<b>(0.5)</b>	(0.5)
<b>Weighted average number of ordinary shares for basic and diluted earnings per share calculation (million units)</b>	<b>999.5</b>	999.5
<b>Basic and diluted earnings per share (cents)</b>	<b>18.43</b>	10.49

## 10. Dividends

	2016			2015		
	Imputation	\$ million	Cents per share	Imputation	\$ million	Cents per share
<b>Dividends paid during the year</b>						
Previous year's final dividend	Fully imputed	<b>80.0</b>	8.00	Fully imputed	<b>66.0</b>	6.60
Current year's interim dividend	80 per cent	<b>81.9</b>	8.19	Fully imputed	<b>79.9</b>	8.00
		<b>161.9</b>	16.19		<b>145.9</b>	14.60
<b>Dividends declared subsequent to balance date</b>						
Final dividend	80 per cent	<b>82.0</b>	8.20	Fully imputed	<b>80.0</b>	8.00

### Imputation credits

There are no imputation credits available for use as at 30 June 2016 (2015: \$0.1 million), as the imputation account has a debit balance as of that date. The Parent will fund the deficiency in its imputation credit account as is required by 31 March 2017.

## 11. Share capital

Share capital of \$539.7 million is made up of 1,000 million ordinary authorised, issued and fully paid shares (\$540.6 million) offset by 0.5 million (\$0.9 million) Treasury shares, giving a net share capital of 999.5 million shares (\$539.7 million). There has been no change in share capital during the year (2015: no change).

## 12. Share-based payments

### Long-term incentive plan

During the 2014 financial year, the Group implemented a long-term incentive (LTI) plan for senior executives and a Trust was established to administer the plan (refer to note 18). The Trust acquired shares in the Parent; these shares were recorded as Treasury shares in the Group (refer to note 11). Under the plan, senior executives purchase shares at market value, funded by interest-free loans from the Parent. The shares are held on trust by the Trustee of the LTI plan until the end of the vesting period. If the shares vest, each executive is entitled to a cash amount which, after deduction for tax, is equal to the outstanding loan balance on day one for the shares which have vested. That cash amount must be applied towards repayment of their loan balance and the corresponding shares are released by the Trustee back to the executive.

Vesting of shares is dependent on continued employment through the vesting period and on the Group achieving a positive total shareholder return over the period and the Group's performance relative to the benchmark peer group. If the Group's total shareholder return performance over the vesting period exceeds the 50th percentile total shareholder return of the benchmark peer group, 50 per cent of the shares will vest; 100 per cent of an executive's shares will vest upon meeting the performance of the 75th percentile of the benchmark peer group, with vesting on a straight-line basis between these two points. In the event that the total shareholder return is negative over the period or is less than the 50th percentile of the benchmark peer group or if the participant ceases to be employed by the Group other than for qualifying reasons, no shares will vest and the shares will be forfeited to the Trustee without compensation, and the relevant executive will receive no benefits under the plan (unless the Board exercises its discretion to allow some or all of the shares to vest). The benchmark peer group comprises a selected number of companies listed on the NZX 50.

The plan represents the grant of in-substance nil-price options to executives. The cost of the LTI is measured by reference to the fair value at grant date. The fair value of the options granted under the plan are estimated as at the date each grant is approved by the Board using an option pricing model that takes into account the terms and conditions upon which the options were granted. The estimated fair value of the in-substance nil-price options at grant date was \$0.6 million. In accordance with the rules of the plan, the model simulates the Group's total shareholder return and compares it against the peer group over the vesting period.

The cost of the LTI is recognised, together with a corresponding increase to the share-based payments reserve within equity, over the period in which the performance and/or service conditions are fulfilled. The total amount to be expensed is based on the Group's best estimate of the number of equity instruments that will ultimately vest taking into consideration the likelihood that service conditions will be met multiplied by the initial fair value of each option.

During the year, the Group granted 311,025 in-substance nil-price options to senior executives (2015: 30,812), and 322,790 were forfeited due to performance targets not being met (2015: none). The net expense for the year was negative \$0.005 million (2015: \$0.150 million).

### Employee Share Scheme

During the 2015 financial year, the Group implemented an Employee Share Scheme ('ESS'). The ESS allows Genesis Energy employees to purchase Genesis Energy shares and, subject to certain conditions, receive award shares at no additional cost. Each year, each eligible employee can choose an annual amount (from a minimum of \$250 to a maximum of \$5,000) they wish to invest from their after-tax pay. The annual amount is divided by the number of after-tax payments an employee will receive in the year and is then deducted from their monthly/fortnightly pay. The deduction is used to purchase shares at market value on a monthly basis. If the eligible employee remains employed by Genesis Energy for the applicable qualification period (three years), they will receive one free share (award share) for every two purchased shares acquired in the first scheme year of the qualification period which the eligible employee continues to hold at the end of the qualification period.

If an employee leaves Genesis Energy, they receive all the shares already purchased with their pay deductions; however, in most circumstances, if an employee leaves within the three-year qualification period, they will not be entitled to receive any award shares. The equity-settled, share-based payment expense is recognised over the three-year vesting period and is equivalent to the fair value of the award shares provided to the employee, calculated as at the grant date. The amount recognised as an expense takes into account an expectation of the number of employees who will leave during the three-year vesting period and will therefore forfeit their shares. At each balance date, the Group revises its estimates of the employees who have left or are expected to leave during the three-year period; the expense is adjusted to reflect the actual number of employees not completing or expected to complete the service condition. A corresponding entry is recognised in equity as a share-based payment reserve. The estimated fair value of the in-substance nil-price options at grant date was \$0.8 million. During the year the Group expensed \$0.204 million in relation to the scheme (2015: \$0.080 million).

### 13. Receivables and prepayments

	2016 \$ million	2015 \$ million
Trade receivables	93.6	99.4
Accrued revenue	77.1	81.3
Allowance for doubtful receivables	(6.2)	(6.4)
Deferred customer account credits	7.0	-
	<b>171.5</b>	174.3
Emission units receivable	1.6	1.1
Other receivables	8.6	1.8
Prepayments	11.3	11.4
<b>Total</b>	<b>193.0</b>	188.6
Current	<b>188.8</b>	187.7
Non-current	<b>4.2</b>	0.9
<b>Total</b>	<b>193.0</b>	188.6

Revenue is measured at the fair value of the consideration received or receivable net of prompt-payment discounts. Revenue is recognised when the significant risks and rewards of ownership have passed or when the service has been rendered to the customer.

Trade receivables and accrued revenue are initially recognised at fair value and are subsequently measured at amortised cost less any allowance for doubtful receivables. Trade receivables and accrued revenue which are known to be uncollectable are written off. An allowance for doubtful receivables is established when there is objective evidence that the Group will not be able to collect amounts due. The allowance for doubtful receivables is the difference between the carrying value and the estimated recoverable amount.

Account credits given to customers as incentives are included in the measurement of revenue and are spread over the length of the average customer tenure where there is evidence that the return from the customer over the amortisation period is positive.

Emission units receivable from the sale of gas, LPG and oil are accounted for in the period in which the sale is recognised.

### 14. Inventories

	2016 \$ million	2015 \$ million
Fuel	46.9	81.6
Petroleum products	0.5	0.4
Consumables and spare parts	27.0	20.1
Emission units held for trading	4.9	2.3
<b>Total</b>	<b>79.3</b>	104.4
Current	<b>79.3</b>	80.0
Non-current	-	24.4
<b>Total</b>	<b>79.3</b>	104.4

Fuel, petroleum, consumables and spare parts are recognised at the lower of cost and net realisable value. Cost is determined using the weighted average cost basis which includes expenditure incurred in bringing the inventories to their present location and condition, including shipping and handling. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs necessary to make the sale. Fuel inventories mainly consist of coal used in electricity production. The amount of fuel inventories (excluding natural gas) expensed during the year was \$51.9 million (2015: \$75.0 million).

Petroleum products consist of LPG and light crude oil held for resale, produced from the Kupe production facility. The amount of petroleum products expensed during the year was \$17.5 million (2015: \$28.5 million).

Consumables and spare parts are held to service or repair generating assets. Prior to 30 June 2016, consumables and spare parts relating to Huntly units 1–4 were written down when incurred as the fair value of these units was nil. The fair value of Huntly units 1–4 was positive at 30 June 2016 (refer to note 15). The net realisable value of Huntly units 1–4 spares at 30 June 2016 was more than cost; as a result the spares have been written up to cost as at 30 June 2016. This has resulted in a \$6.9 million increase in the carrying value of consumables and spare parts. Consumables and spare parts relating to Huntly unit 6 continue to be written down as incurred as the fair value of this unit is nil.

Emission units held for trading purposes are initially measured at cost and are subsequently remeasured to their fair value. Changes in the fair value are recognised immediately in profit or loss within other gains (losses).

## 15. Property, plant and equipment

	Note	Generation assets \$ million	Buildings and improvements \$ million	Other property, plant and equipment \$ million	Capital work in progress \$ million	Total \$ million
<b>Carrying value at 1 July 2014</b>		2,689.9	1.6	30.7	36.6	2,758.8
Additions		0.1	-	-	39.7	39.8
Capitalised finance expenses	7	-	-	-	0.3	0.3
Change in rehabilitation and contractual arrangement assets		-	-	-	1.8	1.8
Transfer to (from) capital work in progress		26.5	0.1	7.3	(33.9)	-
Transfer between asset categories		(0.7)	-	0.5	0.2	-
Transfer to intangible assets	17	-	-	-	(9.4)	(9.4)
Transfer to assets held for sale		(3.1)	-	-	-	(3.1)
Disposals		(3.0)	-	(0.1)	-	(3.1)
Impairment		-	-	-	(14.0)	(14.0)
Depreciation expense	5	(81.7)	(0.1)	(6.8)	-	(88.6)
<b>Carrying value at 30 June 2015</b>		2,628.0	1.6	31.6	21.3	2,682.5
Additions		-	-	-	30.9	30.9
Revaluation gains		370.6	-	-	-	370.6
Change in rehabilitation and contractual arrangement assets		-	-	-	2.0	2.0
Transfer to (from) capital work in progress		5.1	0.1	3.7	(8.9)	-
Transfer between asset categories		-	-	0.6	(0.6)	-
Transfer to intangible assets	17	-	-	0.6	(10.1)	(9.5)
Disposals		(1.8)	-	(1.3)	-	(3.1)
Depreciation expense	5	(78.4)	(0.1)	(6.9)	-	(85.4)
<b>Carrying value at 30 June 2016</b>		<b>2,923.5</b>	<b>1.6</b>	<b>28.3</b>	<b>34.6</b>	<b>2,988.0</b>
<b>Summary of cost and accumulated depreciation and impairment</b>						
Cost		90.0	2.2	107.0	24.9	224.1
Fair value		2,702.0	-	-	-	2,702.0
Accumulated depreciation and impairment		(164.0)	(0.6)	(75.4)	(3.6)	(243.6)
<b>Carrying value at 30 June 2015</b>		2,628.0	1.6	31.6	21.3	2,682.5
Cost		-	2.2	111.0	34.6	147.8
Fair value		2,923.5	-	-	-	2,923.5
Accumulated depreciation and impairment		-	(0.6)	(82.7)	-	(83.3)
<b>Carrying value at 30 June 2016</b>		<b>2,923.5</b>	<b>1.6</b>	<b>28.3</b>	<b>34.6</b>	<b>2,988.0</b>

### Generation assets

Generation assets include land, buildings, and plant and equipment associated with generation assets. Generation assets are recognised in the balance sheet at their revalued amounts, being the fair value at the date of their revaluation, less any subsequent accumulated depreciation and impairment losses. The underlying assumptions used in the revaluation are reviewed annually and revaluations are performed with sufficient regularity, not exceeding five yearly, to ensure the carrying amount does not differ materially from that which would be determined using fair values at the balance date.

Any increase in the revaluation of individual generation assets is recognised in other comprehensive income, unless it reverses a revaluation decrease for the same asset previously recognised in profit or loss, in which case it is recognised in profit or loss to the extent of the decrease previously recognised in profit or loss. A decrease in carrying amount arising on the revaluation of individual generation assets is recognised in profit or loss to the extent that it exceeds the balance, if any, held in the asset revaluation reserve relating to a previous revaluation of that asset. Any accumulated depreciation at the date of the revaluation is eliminated against the gross carrying value of the asset so that the gross carrying amount after revaluation equals the revalued amount.

Subsequent additions to generation assets are recognised at cost. Cost includes the consideration given to acquire the asset plus any other costs incurred in bringing the asset to the location and condition necessary for its intended use including major inspection costs, resource consent and relationship agreement costs. The cost of assets constructed includes the cost of all materials and direct labour used in construction, resource consent costs, finance expenses and an appropriate proportion of applicable variable and fixed overheads.



## 15. Property, plant and equipment (continued)

Total generation assets were revalued at 30 June 2016 to \$2,923.5 million resulting in a net increase on revaluation of \$370.6 million.

The revaluation increase associated with Huntly units 1–4 and a portion of the revaluation increase for the Tekapo Power Scheme were recognised in profit or loss as they reversed previous revaluation losses recognised in 2009 and 2011 respectively. The total increase on revaluation recognised in profit or loss was \$138.0 million. The remainder of the revaluation increase of \$232.6 million was recognised in the revaluation reserve. The increase in fair value was principally driven by higher forecasted wholesale prices and generation volumes, a lower weighted average cost of capital used to discount future cash flows and positive cash flows from Huntly units 1–4 arising from the extension of their decommissioning date.

Fair value of generation assets is determined using a discounted cash flow model. The valuation was based on the present value of the estimated future cash flows of the assets. The valuation was prepared by Management and was independently reviewed by PricewaterhouseCoopers ('PwC'), who have the appropriate qualifications and experience in valuing generation assets. The valuation was calculated by generating scheme except for the Huntly site where it was calculated by type of unit (units 1 to 4, unit 5 and unit 6).

Valuation of generation assets requires significant judgement and therefore there is a range of reasonably possible assumptions that could be used in estimating the fair value of these assets.

The wholesale electricity price path is the key driver of changes in the valuation of generation assets. Changes in the wholesale electricity price path have a direct impact on generation volumes and operating costs. The wholesale electricity price path is based on an internally generated forecasted price path which is influenced by changes in electricity demand, hydrology and new generation build. A material change in any one of these factors could result in a material change to the price path and, therefore, the fair value of generation assets. These factors are reviewed for reasonableness by senior management personnel who are responsible for the price path used by the business. The price path assumes national demand growth based on the latest available industry information and Genesis Energy's view of growth within various sectors of the economy. Forecast hydrology is based on 83 years of historical hydrological inflow data and new generation build assumptions are based on public announcements made by market participants and an assessment on the wholesale electricity prices required to support new generation build. The price path also assumes the on-going operation of New Zealand Aluminium Smelters Limited at Tiwai Point.

Other key assumptions in the valuation include: the current regulatory environment (including the New Zealand Emission Trading Scheme) being maintained, projected operational and capital expenditure, generation capacity and estimates of the lives of the assets.

The significant unobservable inputs in the valuation model were:

Significant unobservable inputs	Method of determination	Sensitivity range	Impact on fair value of generation assets	Interrelationships between unobservable inputs
Wholesale electricity price path	In-house modelling of the wholesale electricity market cross-checked against publicly available price paths. The wholesale electricity price paths used to value generation assets range from \$65 per MWh to \$111 per MWh over the period from July 2016 to June 2026.	Plus/(minus) 10%	\$555 million to (\$555 million)	Hydrological inflows affect generation volumes as well as wholesale electricity prices.
Generation volumes	In-house modelling of the wholesale electricity market. The generation volumes used in the valuation ranged between 5,215 GWh and 7,452 GWh per annum.	Plus/(minus) 10%	\$555 million to (\$555 million)	Wholesale electricity prices affects the amount of generation.
Discount rate	Pre-tax equivalent discount rate of 10.8 per cent.	Plus/(minus) 1%	\$373 million to (\$300 million)	Discount rate is independent of wholesale electricity prices and generation volumes.

Generation assets carried at historical cost	2016 \$ million	2015 \$ million
The table below presents the carrying value of generation assets as if they were recognised on the historical cost basis:		
Cost	2,676.6	2,675.0
Accumulated depreciation and impairment	(969.3)	(1,035.0)
<b>Carrying value at 30 June</b>	<b>1,707.3</b>	1,640.0

## 15. Property, plant and equipment (continued)

### Impairment

Impairment in the 2015 financial year related to capital expenditure on Huntly units 1–4 and 6 and associated structures, and rehabilitation of the Huntly ash ponds associated with Huntly units 1–4. Refer to note 3 for disclosure of impairment by segment. Expenditure on Huntly units 1–4 is no longer immediately impaired when incurred as the fair value of the units is positive at 30 June 2016. Expenditure associated with Huntly unit 6 continues to be immediately impaired when incurred as the fair value of this unit is nil.

### All other categories of property, plant and equipment

All other categories of property, plant and equipment, with the exception of land and capital work in progress, are recognised at cost less accumulated depreciation and any accumulated impairment losses. Land and capital work in progress are not depreciated.

### Depreciation

For generation assets carried at fair value, their fair value, less any estimated residual value, is charged to profit or loss on a straight-line basis over their estimated remaining useful lives. Where a generation asset's remaining useful life changes, the depreciation charge is adjusted prospectively. The estimated remaining useful lives of generation assets used in the depreciation calculation was up to 80 years.

For all other property, plant and equipment carried at cost, their cost, less any estimated residual value, is charged to profit or loss on a straight-line basis over their estimated useful lives. The estimated useful lives of different classes of property, plant and equipment are as follows:

	Estimated useful lives
Buildings and improvements	10 to 50 years
Other plant and equipment	3 to 15 years

The estimated useful lives of assets are reviewed annually. An asset's carrying amount is written down immediately to its recoverable amount if the carrying amount is greater than its estimated recoverable amount.

The gain or loss on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sale proceeds and the carrying amount of the asset. The gain or loss is recognised in profit or loss. Any balance attributable to the disposed asset in the asset revaluation reserve is transferred to retained earnings.

## 16. Oil and gas assets

	Note	Exploration and evaluation expenditure \$ million	Oil and gas producing assets \$ million	Other oil and gas assets \$ million	Capital work in progress \$ million	Total \$ million
<b>Carrying value at 1 July 2014</b>		1.5	324.5	14.6	1.5	342.1
Additions		0.7	2.3	–	1.2	4.2
Transfer to (from) capital work in progress		–	–	0.1	(0.1)	–
Change in rehabilitation asset		–	1.4	–	–	1.4
Depreciation and depletion expense	5	–	(54.7)	(0.6)	–	(55.3)
<b>Carrying value at 30 June 2015</b>		2.2	273.5	14.1	2.6	292.4
Additions		1.6	1.2	–	6.1	8.9
Transfer to (from) capital work in progress		–	4.8	0.2	(5.0)	–
Change in rehabilitation asset		–	(3.1)	–	–	(3.1)
Depreciation and depletion expense	5	–	(29.9)	(0.8)	–	(30.7)
<b>Carrying value at 30 June 2016</b>		<b>3.8</b>	<b>246.5</b>	<b>13.5</b>	<b>3.7</b>	<b>267.5</b>
<b>Summary of cost and accumulated depreciation, depletion and impairment</b>						
Cost		20.7	553.7	18.5	2.6	595.5
Accumulated depreciation, depletion and impairment		(18.5)	(280.2)	(4.4)	–	(303.1)
<b>Carrying value at 30 June 2015</b>		2.2	273.5	14.1	2.6	292.4
Cost		22.3	556.6	18.7	3.7	601.3
Accumulated depreciation, depletion and impairment		(18.5)	(310.1)	(5.2)	–	(333.8)
<b>Carrying value at 30 June 2016</b>		<b>3.8</b>	<b>246.5</b>	<b>13.5</b>	<b>3.7</b>	<b>267.5</b>

## 16. Oil and gas assets (continued)

### Exploration and evaluation expenditure

All exploration and evaluation costs, including directly attributable overheads, general permit activity and geological and geophysical costs are expensed as incurred except for the costs of drilling exploration wells and the costs of acquiring new interests. The costs of drilling exploration wells are initially capitalised pending the determination of the success of the well. Costs are expensed immediately where the well does not result in a successful discovery. Costs incurred before the Group has obtained the legal rights to explore an area are expensed as incurred.

Exploration and evaluation expenditure assets are not amortised; instead, they are assessed annually for indicators of impairment. Any impairment is recognised in profit or loss. Once commercial approval has been obtained for the development of a project, the accumulated expenditure in relation to the project is transferred to oil and gas producing assets.

### Oil and gas producing assets

Oil and gas producing assets include costs associated with the production station transferred from development expenditure, mining licences and major inspection costs. Depletion of oil and gas producing assets excluding major inspection costs is calculated on a unit of production basis using the proven remaining reserves (1P) disclosed below. Major inspection costs are charged to profit or loss on a straight-line basis over the period up to the next major inspection. Major inspections occur every two to three years depending on the nature of the work undertaken.

Proven reserves (1P) are the estimated quantities of oil and gas which geological and engineering data demonstrates with reasonable certainty to be recoverable in future years from known reservoirs, under existing economic and operating conditions. Proven reserves (1P) are defined as those which have a 90 per cent likelihood of being delivered. The proven oil and gas reserves used to deplete the oil and gas producing assets is reviewed annually. Because the geology of the Kupe oil and gas field subsurface cannot be examined directly, an indirect technique known as volumetrics has been used to estimate the size and recoverability of the reserve. Reserve estimates contain uncertainty and these are reviewed annually. There are high levels of uncertainty in terms of accessibility of reserves through sealing faults and pressure support. Proven reserve estimates have a 90 per cent likelihood of being delivered. A reduction of 10 per cent in these reserves would impact depletion charges going forward by up to \$3.3 million per annum at current production rates.

During the 2015 financial year, the Joint Venture operator initiated a detailed review of Kupe's field reserves. Gaffney Cline who has appropriate qualifications and experience in calculating reserves was engaged by the Group to calculate Kupe's remaining reserves using the information provided by the Joint Venture operator. Total proven reserves (1P) of the Kupe oil and gas field increased by 136.2 petajoule equivalents ('PJe') as a result of the review. Unit of production depletion rates were adjusted for the change in reserves prospectively from 1 July 2015, in line with the Group's accounting policy. This resulted in a \$22.6 million decrease in depletion expense for the year.

The table below presents the remaining Kupe oil and gas field reserves in PJe of which the Group has a 31 per cent interest.

	Proven reserves (1P)		Proven and probable reserves (2P)	
	2016 PJe	2015 PJe	2016 PJe	2015 PJe
<b>Remaining field reserves at 1 July</b>	<b>188.2</b>	227.4	<b>302.4</b>	341.6
Production	<b>(35.9)</b>	(39.2)	<b>(35.9)</b>	(39.2)
Change in reserve estimate	<b>136.2</b>	-	<b>121.4</b>	-
<b>Remaining field reserves at 30 June</b>	<b>288.5</b>	188.2	<b>387.9</b>	302.4
Developed	<b>195.3</b>	152.9	<b>238.2</b>	176.0
Undeveloped	<b>93.2</b>	35.3	<b>149.7</b>	126.4
<b>Total remaining field reserves at 30 June</b>	<b>288.5</b>	188.2	<b>387.9</b>	302.4

Further investment will be required to access the undeveloped field reserves disclosed above.

The table below presents the remaining Kupe oil and gas field reserves by product type which the Group has a 31 per cent interest.

	Proven reserves (1P)		Proven and probable reserves (2P)	
	2016	2015	2016	2015
Gas in PJe	<b>202.9</b>	135.8	<b>279.0</b>	210.6
LPG in kilotonnes	<b>840.0</b>	581.9	<b>1,154.0</b>	902.1
Light oil in megabarrels	<b>8.2</b>	5.3	<b>9.6</b>	8.8

### Other oil and gas assets

Other oil and gas assets include land, buildings, storage facilities, sales pipeline, motor vehicles and the ongoing costs of continuing to develop reserves for production. The cost of other oil and gas assets, less any estimated residual value, is charged to profit or loss on a straight-line basis over their estimated useful lives. The estimated useful lives of other oil and gas assets are as follows:

	Estimated useful lives
Buildings	50 years
Storage facilities	25 years
Sales pipeline	25 years
Motor vehicles	5 years

## 17. Intangible assets

	Note	Goodwill \$ million	Computer software \$ million	Emission units held for own use \$ million	Naming rights \$ million	Deferred customer acquisition costs \$ million	Total \$ million
<b>Carrying value at 1 July 2014</b>		102.6	19.6	6.7	3.2	-	132.1
Additions		-	-	8.8	0.5	-	9.3
Transfer from property, plant and equipment	15	-	9.4	-	-	-	9.4
Disposed of or surrendered		-	(0.5)	(6.8)	-	-	(7.3)
Amortisation expense	5	-	(10.2)	-	(1.6)	-	(11.8)
<b>Carrying value at 30 June 2015</b>		102.6	18.3	8.7	2.1	-	131.7
Additions		-	-	8.6	3.4	4.8	16.8
Transfer from property, plant and equipment	15	-	9.5	-	-	-	9.5
Disposed of or surrendered		-	(0.5)	(6.6)	(0.1)	-	(7.2)
Amortisation expense	5	-	(9.9)	-	(1.5)	-	(11.4)
Amortisation expense included in other operating expenditure		-	-	-	-	(0.9)	(0.9)
<b>Carrying value at 30 June 2016</b>		<b>102.6</b>	<b>17.4</b>	<b>10.7</b>	<b>3.9</b>	<b>3.9</b>	<b>138.5</b>
<b>Summary of cost and accumulated amortisation and impairment</b>							
Cost		102.6	130.9	8.7	11.1	-	253.3
Accumulated amortisation and impairment		-	(112.6)	-	(9.0)	-	(121.6)
<b>Carrying value at 30 June 2015</b>		102.6	18.3	8.7	2.1	-	131.7
Current		-	-	4.3	-	-	4.3
Non-current		102.6	18.3	4.4	2.1	-	127.4
<b>Carrying value at 30 June 2015</b>		102.6	18.3	8.7	2.1	-	131.7
Cost		102.6	141.3	10.7	14.4	4.8	273.8
Accumulated amortisation and impairment		-	(123.9)	-	(10.5)	(0.9)	(135.3)
<b>Carrying value at 30 June 2016</b>		<b>102.6</b>	<b>17.4</b>	<b>10.7</b>	<b>3.9</b>	<b>3.9</b>	<b>138.5</b>
Current		-	-	4.8	-	-	4.8
Non-current		102.6	17.4	5.9	3.9	3.9	133.7
<b>Carrying value at 30 June 2016</b>		<b>102.6</b>	<b>17.4</b>	<b>10.7</b>	<b>3.9</b>	<b>3.9</b>	<b>138.5</b>

### Goodwill

Goodwill represents the excess of the cost of a business combination over the fair value of the Group's share of the net identifiable assets, liabilities and contingent liabilities of the acquired subsidiary/associate at the date of acquisition. Goodwill on the acquisition of subsidiaries is included in intangible assets. Goodwill on the acquisition of associates is included in the investment in associates. Goodwill is assessed as having an indefinite useful life and is not amortised but is subject to impairment testing annually or whenever there are indications of impairment.

For the purpose of impairment testing, goodwill has been allocated to the Customer Experience cash-generating unit ('CGU').

The impairment test is based on an estimated discounted cash flow analysis (value in use). Estimated future cash flow projections are based on the Group's three-year business plan for the Customer Experience business unit. Cash flows beyond the three-year business plan are extrapolated using a 1.0 percent year-on-year growth rate (2015: 1.0 per cent). The estimated future cash flow projections are discounted using a pre-tax equivalent discount rate of 10.8 per cent (2015: 11.0 per cent to 12.2 per cent). Any reasonably possible change in key assumptions on which the recoverable amount is based is not expected to cause the carrying value of the Customer Experience goodwill to exceed its recoverable amount.

Key assumptions in the value-in-use calculation were:

Assumptions	Method of determination
Customer numbers and customer churn	Review of actual customer numbers and historical data regarding movements in customer numbers (the historical analysis is considered against expected market trends and competition for customers)
Gross margin	Review of actual gross margins and consideration of expected market movements and impacts
Cost to serve	Review of actual costs to serve and consideration of expected future costs

## 17. Intangible assets (continued)

### Computer software

Items of computer software are assets with finite lives. These assets are recognised at cost less accumulated amortisation and impairment losses. Amortisation is charged to profit or loss on a straight-line basis over the estimated useful life of the asset from the date it is available for use. The estimated useful life is between one and four years.

### Emission units held for own use

Emission units held for own use are initially recognised at fair value. Fair value is cost in the case of purchased units or the initial market value in the case of government-granted units. Emission units held for own use to settle the Group's emission obligation are not revalued subsequent to initial recognition. They are assessed as having indefinite useful lives and are not amortised but are subject to annual impairment testing or whenever there are indicators of impairment.

### Naming rights

Naming rights are assets with finite lives. These assets are recognised at cost less accumulated amortisation and impairment losses. Amortisation is charged to profit or loss on a straight-line basis over the estimated useful life of the asset from the date it is available for use. The useful life is based on the contract period which ranges between one and five years.

### Deferred customer acquisition costs

Customer acquisition costs which are directly attributable to securing a particular customer contract, and meet the definition of an intangible asset, are capitalised and amortised over the average customer tenure (30 months). Amortisation of the customer acquisition costs is included within operating expenditure.

## 18. Investments in subsidiaries

Name of entity	Principal activity	Place of incorporation and operation	Interest held	
			2016 %	2015 %
Genesis Power Investments Limited	Holding company	New Zealand	100	100
Kupe Holdings Limited	Joint venture holding company	New Zealand	100	100
GP No. 2 Limited	Joint venture holding company	New Zealand	100	100
GP No. 5 Limited	Joint venture holding company	New Zealand	100	100
Genesis Energy Insurance Pte Limited	Captive insurance company	Singapore	100	100
Genesis Energy Limited Executive Long-term Incentive Plan Trust	Trust	New Zealand	-	-

All subsidiaries have 30 June balance dates.

## 19. Joint operations

The Group has a 31.0 per cent interest in the Kupe production facility and Petroleum Mining Permit 38146 held by the Kupe Joint Venture (2015: 31.0 per cent). The principal activity of the Kupe Joint Venture is petroleum production and sales. The Joint Venture is unincorporated and operates in New Zealand. The Group is considered to share joint control based on the contractual arrangements between the Group and other joint operators that state unanimous decision-making is required for relevant activities which most significantly impact the returns of the joint operation.

The Joint Venture is classified as a joint operation under NZ IFRS 11. The operating results of the Kupe Joint Venture are included in the Oil and Gas segment in note 3 and the Group's share of capital expenditure commitments relating to joint operations is disclosed in note 27.

## 20. Related-party transactions

### Majority shareholder and entities controlled by and related to the majority shareholder

The majority shareholder of the Parent is the Crown. The Parent and Group transact with Crown-controlled and related entities independently and on an arm's-length basis for the purchase of coal and use of coal-handling facilities, emission activities including emission unit purchases and sales, royalties, scientific consultancy services, electricity transmission, postal services and energy-related products (including electricity derivatives). All transactions with Crown-controlled and related entities are based on commercial terms and conditions, and relevant market drivers.

The Group has two significant transactions with Meridian Energy, a Crown-controlled entity, being: a 150MW contract to provide dry-year cover for four years from 1 January 2015 and a 50MW contract to supply electricity to the Huntly node from 1 January 2017 to 31 December 2018.

Dividends paid to the Crown during the year were \$112.0 million (2015: \$106.3 million). There were no other individually significant transactions with the Crown and Crown-controlled and related entities during the year (2015: nil).

Other transactions with Crown-controlled and related entities, which are collectively but not individually significant, relate to the purchase of coal, the sale of gas and electricity derivatives. All of the coal acquired by the Group during the year was supplied by Crown-controlled and related entities under coal supply agreements which were exited in October 2015 (2015: 100.0 per cent). Approximately 6.7 per cent (2015: 13.7 per cent) of the gas sales were made to Crown-controlled and related entities under gas sales agreements which expired in December 2015. Approximately 89.9 per cent of the value of electricity derivative assets and approximately 63.2 per cent of the value of electricity derivative liabilities held by the Group at year-end are held with Crown-controlled and related entities (2015: 79.5 per cent and 15.4 per cent, respectively). The contracts expire at various times; the latest expiry date is December 2025.

## 20. Related-party transactions (continued)

### Key management personnel compensation

The key management personnel of the Group consists of the Directors and the Executive Management team. Key management personnel compensation is as follows:

	Note	2016 \$ million	2015 \$ million
Short-term benefits		6.6	6.8
Post-employment benefits		0.2	0.2
Termination benefits		–	0.3
Share-based payments	12	–	0.1
<b>Total key management personnel compensation</b>		<b>6.8</b>	<b>7.4</b>

### Other transactions with key management personnel or entities related to them

Key management personnel and their families may purchase gas and electricity from the Group on an arm's-length basis and may purchase shares in the Company. Key management personnel also participate in the LTI plan discussed in note 12. The total number of shares held by key management personnel (excluding LTI shares) as at 30 June 2016 was 573,225 (2015: 784,188). During the year, dividends paid to key management personnel and their families was \$102,101 (2015: \$99,558). No other transactions took place between key management personnel and the Group (2015: nil). As at 30 June 2016, the balance payable to key management personnel was nil (2015: nil).

## 21. Payables and accruals

	2016 \$ million	2015 \$ million
Trade payables and accruals	159.3	150.2
Employee benefits	5.1	5.9
Emission obligations	3.2	2.9
<b>Total</b>	<b>167.6</b>	<b>159.0</b>
Current	166.8	158.3
Non-current	0.8	0.7
<b>Total</b>	<b>167.6</b>	<b>159.0</b>

Trade payables and accruals are recognised when the Group becomes obligated to make future payments resulting from the purchase of goods or services, and are subsequently carried at amortised cost.

A liability for employee benefits (wages and salaries, annual and long-service leave, and employee incentives) is recognised when it is probable that settlement will be required and the amount is capable of being measured reliably. Provisions made in respect of employee benefits are measured using the remuneration rate expected to apply at the time of settlement.

Emission obligations are recognised as a liability when the Group incurs the emission obligation. Emission units payable to third parties are recognised at the average cost of emission units on hand up to the amount of emission units on hand at the recognition date. Where the emission obligation exceeds the level of units on hand, the excess obligation over the units on hand is measured at the contract price where forward contracts exist or the market price for any obligation not covered by units on hand or forward contracts.

## 22. Borrowings

	2016 \$ million	2015 \$ million
Revolving credit and money market	50.1	101.0
Wholesale term notes	319.7	320.1
Retail term notes	100.2	107.1
Capital bonds	202.6	202.6
USPP	239.6	227.4
<b>Total</b>	<b>912.2</b>	<b>958.2</b>
Current	136.2	117.8
Non-current	776.0	840.4
<b>Total</b>	<b>912.2</b>	<b>958.2</b>

Borrowings are initially recognised at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortised cost. Borrowings designated in a hedge relationship are carried at amortised cost adjusted for the change in the fair value of the hedged risk. Any difference between the proceeds (net of transaction costs) and the redemption amount is recognised in profit or loss over the period of the borrowings using the effective interest method.

## 22. Borrowings (continued)

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 balance date.

	2016 \$ million	2015 \$ million
<b>Revolving credit and money market</b>		
Revolving credit drawn down	50.0	100.0
Accrued interest	0.1	1.0
<b>Total revolving credit and money market</b>	<b>50.1</b>	<b>101.0</b>
<b>Revolving credit</b>		
Expiring 2018	175.0	75.0
Expiring 2019	-	75.0
Expiring 2020	100.0	225.0
Expiring 2021	150.0	-
Expiring 2022	-	50.0
Expiring 2023	75.0	-
<b>Total available revolving credit facility</b>	<b>500.0</b>	<b>425.0</b>
Revolving credit drawn down (excluding accrued interest)	50.0	100.0
<b>Total undrawn revolving credit facility</b>	<b>450.0</b>	<b>325.0</b>
<b>Wholesale term notes</b>		
Expiring 2017	125.0	125.0
Expiring 2020	120.0	120.0
Expiring 2023	70.0	70.0
Fair value interest rate risk adjustment	0.5	1.0
Accrued interest	4.6	4.5
Capitalised issue costs	(0.4)	(0.4)
<b>Total wholesale term notes</b>	<b>319.7</b>	<b>320.1</b>
<b>Retail term notes</b>		
Expiring 2016	-	105.0
Expiring 2022	100.0	-
Accrued interest	1.2	2.4
Capitalised issue costs	(1.0)	(0.3)
<b>Total retail term notes</b>	<b>100.2</b>	<b>107.1</b>
<b>Capital bonds</b>		
Expiring 2042	200.0	200.0
Accrued interest	2.6	2.6
<b>Total capital bonds</b>	<b>202.6</b>	<b>202.6</b>

The Group may redeem all or some of the capital bonds on a reset date or on any quarterly interest payment date after the first reset date, which is 16 July 2018. On the first reset date and every five years thereafter, the interest rate will reset to be the sum of the five-year swap rate on the relevant reset date plus a margin of 2.4 per cent. Redemptions on a reset date are at par; redemptions on a quarterly interest payment date must be at the greater of par or market value.

	2016 \$ million	2015 \$ million
<b>USPP</b>		
Expiring 2026	70.1	73.8
Expiring 2027	140.3	147.5
Fair value interest rate risk adjustment	27.2	4.0
Accrued interest	2.8	3.0
Capitalised issue costs	(0.8)	(0.9)
<b>Total USPP</b>	<b>239.6</b>	<b>227.4</b>

## 22. Borrowings (continued)

During the 2015 financial year, the Group entered into a firm commitment for the issue of \$150.0 million United States dollar-denominated unsecured notes to United States-based institutional investors. A Note Purchase Agreement ('NPA') was signed on 25 November 2014. CCIRS have been used to manage foreign exchange and interest rate risks on the notes (refer to note 24 for further information on CCIRS). The USPP is measured at amortised cost adjusted for the change in fair value associated with the hedged risks in accordance with the Group's accounting policy. While the New Zealand dollar amount required to repay the USPP in 2026 and 2027 is fixed as a result of the CCIRS, the USPP is required to be translated to New Zealand dollars at the spot rate at the reporting date, in accordance with NZ IFRS. Any increase/decrease in the carrying value of the USPP as a result of this translation is offset by the movement in the fair value of the CCIRS disclosed in note 24.

### Security

All of the Group's borrowings are unsecured. The Group borrows under a negative pledge arrangement, which does not permit the Group to grant any security interest over its assets, unless it is an exception permitted within the negative pledge.

## 23. Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The amount recognised as the provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

### Rehabilitation and restoration

The rehabilitation and restoration provision relates to the Meremere generation site, the Huntly ash ponds and the Kupe production facility. These sites require remediation as a result of past and present operations. Different methods and techniques can be used to remediate the sites. The provision represents the present value of the Group's best estimate of future expenditure to be incurred based on the Group's assessment of the most appropriate methods to remediate the sites at balance date. Key assumptions include: an estimate of when the rehabilitation and restoration is likely to take place, the possible remediation alternatives available, the expected expenditures attached to each alternative and the foreign currency exchange rate at balance date.

There is no financial provision for the remediation of the Huntly generation site because the Company has the right to lease the site in perpetuity. There is no fixed or planned termination date for the Huntly lease, and the site remains a key electricity generation site for the Company. The lease of the site is independent to decisions around the retirement of Huntly units 1-4 which are planned to be retired by 31 December 2022. There may be costs and recoveries associated with retiring Huntly units 1-4, but these cannot be reliably estimated at this time.

The key assumption that could have a material impact on the Meremere generation site rehabilitation estimate relates to the extent of rehabilitation required at the end of the lease. The extent of rehabilitation depends on the effectiveness of the historical rehabilitation work and the rehabilitation obligations under the lease. The current assumption is that the current remediation work with some further tidy-up at the end of the lease in 2017 will be sufficient. If future monitoring indicates that the clay caps need further remediation work, the provision would need to increase by up to \$2.0 million. The site is monitored regularly and the rehabilitation plan amended as necessary.

The key assumption that could have a material impact on the Huntly ash ponds rehabilitation estimate relates to the extent of rehabilitation work required. The current assumption is that all the ash would be removed from the ponds but, if some of the ash were capped in situ, the provision could decrease by \$9.0 million. The rehabilitation work on the ash ponds is estimated to be completed within the next seven years.

The key assumptions that could have a material impact on the Kupe production facility rehabilitation estimate relates to foreign exchange rates, scrap-steel prices, labour rates, concrete removal costs, offshore supply vessel and jack-up rig rates, and associated mobilisation and demobilisation costs. The majority of costs are based in United States dollars and, therefore, are sensitive to fluctuations in foreign exchange rates. Given the equipment required to complete the rehabilitation comes from overseas, the mobilisation and demobilisation costs can fluctuate significantly depending on the volume of other work the contractor has at the time the rehabilitation is required to be completed. If the foreign exchange rate were to decrease by 10 per cent and if the transportation costs for the mobilisation and demobilisation were unable to be shared with other entities, the provision would increase by \$18.1 million. Also affecting the provision are regulations around the removal of the subsea pipeline. Currently, there are no regulations around this and, as such, the provision assumes the subsea pipeline will be flushed and left in situ. The rehabilitation is estimated to be completed in approximately 13 years.

### Contractual arrangements

The contractual arrangements provision relates to relationship and sponsorship agreements with various parties. The provision represents the present value of the best estimate of cash flows required to settle the Group's obligations under the agreements. The timing of the outflows is expected to occur over the next 23 years.

### Other provisions

Other provisions represent the onerous contract provision associated with changes to contractual arrangements and other minor provisions. The onerous contracts provision relates to onerous lease agreements associated with coal importation. The provision is based on the cash flows associated with the contracts. The timing of the outflows is expected to occur over the next four years.



### 23. Provisions (continued)

	Note	Rehabilitation and restoration \$ million	Contractual arrangements \$ million	Other provisions \$ million	Total \$ million
<b>Balance at 1 July 2014</b>		69.6	54.4	16.5	140.5
Provisions made during the year		5.4	0.7	3.9	10.0
Provisions reversed during the year		–	(0.5)	(10.0)	(10.5)
Provisions used during the year		(1.7)	(4.2)	(4.3)	(10.2)
Time value of money adjustment	7	3.4	2.4	0.4	6.2
<b>Balance at 30 June 2015</b>		76.7	52.8	6.5	136.0
Provisions made during the year		0.8	5.7	2.0	8.5
Provisions reversed during the year		(3.2)	(0.3)	(0.1)	(3.6)
Provisions used during the year		(2.3)	(4.4)	(1.8)	(8.5)
Time value of money adjustment	7	3.7	2.2	0.2	6.1
<b>Balance at 30 June 2016</b>		<b>75.7</b>	<b>56.0</b>	<b>6.8</b>	<b>138.5</b>
Current		2.4	8.5	1.4	12.3
Non-current		74.3	44.3	5.1	123.7
<b>As at 30 June 2015</b>		76.7	52.8	6.5	136.0
Current		<b>5.0</b>	<b>8.1</b>	<b>2.2</b>	<b>15.3</b>
Non-current		<b>70.7</b>	<b>47.9</b>	<b>4.6</b>	<b>123.2</b>
<b>As at 30 June 2016</b>		<b>75.7</b>	<b>56.0</b>	<b>6.8</b>	<b>138.5</b>

### 24. Derivatives

The Group's activities expose it to a variety of financial risks: market risk (including price risk, currency risk and interest rate risk), credit risk and liquidity risk. The Group uses the following derivatives to hedge its financial risk exposures:

- Interest rate swaps
- Foreign exchange swaps and options
- Electricity swaps and options
- Oil swaps
- CCIRS
- Forward sale-and-purchase agreements of emission units held for trading
- LPG swaps.

The Group also enters into electricity derivatives with wholesale electricity market participants which allows them to hedge wholesale electricity market exposures.

During the 2015 financial year, the Group entered into CCIRS to swap the United States dollar principal and fixed coupon obligation for the USPP disclosed in note 22.

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to 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.

For the purpose of hedge accounting, hedges are classified as:

- cash flow hedges where the Group hedges the exposure to variability in cash flows that is attributable either to a particular risk associated with a recognised asset or liability or to a highly probable forecast transaction; or
- fair value hedges where the Group hedges the exposure to changes in fair value of a recognised asset or liability.

The Group documents, at the inception of the transaction, the relationship between the hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions have been and will continue to be highly effective in offsetting changes in fair values or cash flows of hedged items.

Forward sale-and-purchase agreements in relation to emission units held for trading do not meet the 'own use' exemption and, therefore, meet the definition of a derivative. These contracts are initially recognised at fair value on the date the contract is entered into and are subsequently remeasured to their fair value. Changes in the fair value are recognised immediately in profit or loss.

## 24. Derivatives (continued)

### Derivatives designated in a cash flow hedge relationship

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

Amounts accumulated in other comprehensive income are reclassified to profit or loss in the period when the hedged item will affect the profit or loss. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset (for example, inventory) or liability, the gains and losses previously deferred in the cash flow hedge reserve are reclassified from the cash flow hedge reserve and included in the initial measurement of the cost of the asset or liability.

When a hedging instrument expires or is sold, terminated or exercised, or when a hedge no longer meets the criteria for hedge accounting, the cumulative gain or loss at that time remains in the cash flow hedge reserve and is reclassified to profit or loss when the transaction occurs. If the forecast transaction is no longer expected to occur, the cumulative gain or loss recognised in the cash flow hedge reserve is reclassified immediately to profit or loss.

The margin and basis component of the CCIRS is designated as a cash flow hedge of the margin and basis component of the USPP notes. The interest rate risk associated with interest on New Zealand dollar borrowings is hedged using interest rate swaps. Foreign currency risk associated with future foreign currency cash flows is hedged using forward exchange derivatives. Electricity and oil derivatives are used to manage price risk associated with spot market exposures.

### Derivatives designated in a fair value hedge relationship

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in profit or loss, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

The USPP and \$25.0 million of the wholesale term notes are designated in fair value hedge relationships. CCIRS are used to swap the United States-dollar principal and fixed coupon obligations related to the notes to New Zealand dollar floating rate exposure. Interest rate swaps are used to convert the fixed coupons on wholesale term notes to floating rates.

### Derivatives that do not qualify for hedge accounting

Changes in the fair value of any derivatives that do not qualify for hedge accounting are recognised immediately in profit or loss.

<b>Net carrying value of derivatives</b>	<b>2016 \$ million</b>	<b>2015 \$ million</b>
<i>Derivatives designated in a cash flow hedge relationship</i>		
Foreign exchange swaps	3.3	(10.3)
Interest rate swaps	(32.0)	(16.7)
Electricity swaps	(28.3)	(2.7)
Oil swaps	3.9	10.6
CCIRS	12.1	24.3
<i>Derivatives designated in a fair value hedge relationship</i>		
Interest rate swaps	0.5	1.0
CCIRS	23.3	1.4
<i>Derivatives not designated as hedges</i>		
Interest rate swaps	(4.6)	-
Electricity swaps and options	10.4	28.1
Forward sale-and-purchase agreements of emission units held for trading (Forward 'S&P' agreements)	-	0.2
LPG swaps	(0.1)	-
<b>Total</b>	<b>(11.5)</b>	<b>35.9</b>
<b>Carrying value of derivatives by balance sheet classification</b>		
Current assets	19.9	34.2
Non-current assets	53.0	53.9
Current liabilities	(27.6)	(21.5)
Non-current liabilities	(56.8)	(30.7)
<b>Total</b>	<b>(11.5)</b>	<b>35.9</b>

Derivatives that are settled within 12 months are treated as current.

## 24. Derivatives (continued)

Change in carrying value of derivatives	Note	Other* \$ million	CCIRS \$ million	Oil swaps \$ million	Interest rate swaps \$ million	Foreign exchange swaps and options \$ million	Electricity swaps and options \$ million	Total \$ million
<b>Balance as at 1 July 2014</b>		-	-	(4.4)	(1.9)	4.7	(6.2)	(7.8)
Total change recognised in electricity revenue		-	-	-	-	-	24.9	24.9
- Net change in derivatives not designated as hedges		0.2	-	-	-	(1.6)	27.6	26.2
- Net change in fair value hedges		-	1.4	-	(0.4)	-	-	1.0
- Ineffective gain (loss) on cash flow hedges		-	(0.2)	5.1	(0.4)	0.1	1.5	6.1
<b>Total change recognised in the change in fair value of financial instruments</b>	6	0.2	1.2	5.1	(0.8)	(1.5)	29.1	33.3
Gain (loss) recognised in other comprehensive income		-	24.5	19.2	(15.4)	(15.9)	8.8	21.2
Settlements		-	-	(9.3)	2.4	2.2	(7.4)	(12.1)
Sales (option fees)		-	-	-	-	-	(23.8)	(23.8)
Purchases (option fees)		-	-	-	-	0.2	-	0.2
<b>Balance as at 30 June 2015</b>		0.2	25.7	10.6	(15.7)	(10.3)	25.4	35.9
Total change recognised in electricity revenue		-	-	-	-	-	23.3	23.3
- Net change in derivatives not designated as hedges		(0.3)	-	-	(0.1)	-	(17.9)	(18.3)
- Net change in fair value hedges		-	21.9	-	(0.5)	-	-	21.4
- Ineffective gain (loss) on cash flow hedges		-	0.1	(3.1)	(4.1)	(0.1)	0.2	(7.0)
<b>Total change recognised in the change in fair value of financial instruments</b>	6	(0.3)	22.0	(3.1)	(4.7)	(0.1)	(17.7)	(3.9)
Gain (loss) recognised in other comprehensive income		-	(3.7)	18.0	(27.9)	6.9	(10.9)	(17.6)
Settlements		-	(8.6)	(21.6)	12.2	6.8	(15.0)	(26.2)
Sales (option fees)		-	-	-	-	-	(23.0)	(23.0)
<b>Balance as at 30 June 2016</b>		(0.1)	35.4	3.9	(36.1)	3.3	(17.9)	(11.5)

\*Other includes Forward 'S&P' agreements and LPG swaps

Reconciliation of movements in the cash flow hedge reserve	CCIRS \$ million	Oil swaps \$ million	Interest rate swaps \$ million	Foreign exchange swaps \$ million	Electricity swaps \$ million	Total \$ million
<b>Balance as at 1 July 2014</b>	-	(2.0)	(2.4)	2.0	(2.7)	(5.1)
Total reclassified from the cash flow hedge reserve to profit or loss	(30.6)	(9.2)	2.4	3.4	(7.5)	(41.5)
Total reclassified from the cash flow hedge reserve to the cost of assets	-	-	-	0.2	-	0.2
Effective gain (loss) on cash flow hedges recognised directly in the cash flow hedge reserve	24.5	19.2	(15.4)	(15.9)	8.8	21.2
<b>Total change in cash flow hedge reserve</b>	(6.1)	10.0	(13.0)	(12.3)	1.3	(20.1)
Income tax on change in cash flow hedge reserve	1.7	(2.8)	3.6	3.5	(0.4)	5.6
<b>Balance as at 30 June 2015</b>	(4.4)	5.2	(11.8)	(6.8)	(1.8)	(19.6)
Total reclassified from the cash flow hedge reserve to profit or loss	2.4	(21.6)	12.3	5.9	(15.0)	(16.0)
Effective gain (loss) on cash flow hedges recognised directly in the cash flow hedge reserve	(3.7)	18.0	(27.9)	6.9	(10.9)	(17.6)
<b>Total change in cash flow hedge reserve</b>	(1.3)	(3.6)	(15.6)	12.8	(25.9)	(33.6)
Income tax on change in cash flow hedge reserve	0.4	1.0	4.4	(3.6)	7.2	9.4
<b>Balance as at 30 June 2016</b>	(5.3)	2.6	(23.0)	2.4	(20.5)	(43.8)

The gain (loss) on interest rate swaps and CCIRS is recognised in finance expenses, the gain (loss) on foreign exchange swaps and options is recognised in other operating expenses and gas revenue, the gain (loss) on electricity swaps and options is recognised in electricity revenue in the profit or loss and the gain (loss) on oil swaps is recognised in petroleum revenue.

## 25. Financial instruments and financial risk management

### Financial instruments

For financial reporting purposes, the Group designates its financial instruments into the following categories:

#### Loans and receivables

- Cash and cash equivalents
- Receivables

#### Financial instruments in a hedge relationship

- Foreign exchange swaps
- Interest rate swaps
- Electricity swaps
- Oil swaps
- CCIRS

#### Financial instruments held for trading (derivatives not in a hedge relationship)

- Interest rate swaps
- Electricity swaps and options
- Forward sale-and-purchase agreements of emission units held for trading
- LPG swaps

#### Financial liabilities measured at amortised cost

- Payables
- Borrowings

### Risk management

The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise financial risk to the Group. The Board of Directors (the 'Board') has established policies which provide an overall risk management framework, as well as policies covering specific areas, such as electricity and oil price risk, foreign exchange risk, interest rate risk, credit risk, use of derivatives and the investment of excess liquidity. Interest rate, foreign exchange and oil price exposures are managed by the central Treasury function ('Treasury') and electricity exposures are managed by the portfolio management function, with oversight by the risk management function ('Risk'). Treasury and Risk identify, evaluate and hedge financial risks in close cooperation with the Group's operating units. Compliance with policies and exposure limits is monitored by Risk and independently reviewed by the Group's internal auditor.

#### Price risk

The Group is exposed to movements in the spot price of electricity arising through the sale and purchase of electricity to and from the market. The Group is also exposed to movements in the spot price of light crude oil arising from sales of its share of oil from the Kupe production facility. The Group has limited exposure to changes in the sale price for gas and LPG as most of the volume is forward sold.

#### Electricity sales and purchases

The Group manages price risk in relation to electricity sales and purchases by entering into electricity swaps and options. Electricity swaps and options are either traded on the ASX or negotiated bilaterally with other energy companies and major customers. Electricity options are entered into as needs are identified and as counterparties seek to hedge their electricity purchase exposure. At balance date, the Group had electricity option contracts giving counterparties the right to exercise call options and electricity cap contracts.

The aggregate notional face value of the outstanding electricity swaps and options at balance date was \$1,419.4 million (2015: \$1,482.5 million).

#### Light crude oil sales

The Group manages price risk in respect of oil sales by entering into price swap contracts which provide a fixed price for future oil sales. The Group's Treasury policy sets minimum and maximum control limits ranging from between 50 per cent and 90 per cent for the first 12 months to between 25 per cent and 75 per cent for months 13 to 24.

The aggregate notional value of the outstanding oil swaps at balance date was 29.0 million United States dollars (2015: 37.8 million United States dollars).

The value of electricity and oil swaps are sensitive to changes in forward prices, and oil swaps are also sensitive to movements in foreign exchange rates. The table below summarises the impact an increase/decrease in these forward pricing assumptions would have on the Group's post-tax profit or loss for the year and on the Group's cash flow hedge reserve using year end exposures. The sensitivity analysis is based on the assumption that the relevant market prices (future electricity and oil price paths) had increased/decreased by 10 per cent with all other variables held constant. A positive number represents an increase in profit or the cash flow hedge reserve.

There have been no changes in the methods and assumptions used in the sensitivity calculations from the previous year.

## 25. Financial instruments and financial risk management (continued)

	2016 \$ million	2015 \$ million
<b>Electricity swaps and options</b>		
Post-tax impact on profit or loss		
+10%	(16.8)	(5.8)
-10%	11.9	3.8
Post-tax impact on cash flow hedge reserve (equity)		
+10%	(6.8)	(4.9)
-10%	6.9	4.9
<b>Oil swaps</b>		
Post-tax impact on profit or loss		
+10%	(0.1)	(0.5)
-10%	0.1	0.5
Post-tax impact on cash flow hedge reserve (equity)		
+10%	(2.2)	(2.7)
-10%	2.2	2.7

### Foreign currency risk

The Group is exposed to foreign currency risk as a result of capital and operational transactions and borrowings denominated in a currency other than the Group's functional currency (including the purchase of capital equipment and maintenance and the sale of gas and petroleum). The currencies giving rise to this risk are primarily the United States dollar and Japanese yen.

The Group uses foreign exchange swaps and options to manage foreign exchange risk on capital and operational transactions. All significant capital project commitments and all capital purchase orders where exposure and currency levels are confirmed are hedged. All sales, operational commitments and purchase orders denominated in foreign currency over the equivalent of \$500,000 New Zealand dollars are also hedged in accordance with the Group's Treasury policy. For ongoing operating commitments, the equivalent of at least the next 12 months' exposure must be hedged. For the currency exposure arising from the sale of oil and gas, the policy sets minimum and maximum control limits ranging between 50 per cent and 90 per cent for the first 12 months to between 25 per cent and 75 per cent for months 13 to 24.

The Group uses CCIRS to manage foreign exchange risk on overseas borrowings. All interest and principal repayments are hedged. The combination of the foreign-denominated debt and the CCIRS results in a net exposure to New Zealand floating interest rates and a fixed New Zealand-denominated principal repayment. The New Zealand floating interest rate risk is managed using the process described in the interest rate risk section below.

The following table details the foreign exchange swaps and options outstanding at balance date. A positive number represents a buy contract and a negative number represents a sell contract.

Currency of contract	Foreign amount		Face value		Fair value	
	2016 million	2015 million	2016 \$ million	2015 \$ million	2016 \$ million	2015 \$ million
<b>Foreign exchange swaps</b>						
United States dollar	(38.3)	(60.0)	(57.2)	(80.1)	2.7	(9.9)
Japanese yen	895.1	1,183.5	11.7	15.3	0.6	(0.4)
<b>CCIRS</b>						
United States dollar	150.0	150.0	193.2	193.2	35.4	25.7
<b>Total foreign exchange swaps and options</b>			<b>147.7</b>	<b>128.4</b>	<b>38.7</b>	<b>15.4</b>

The values of foreign exchange swaps and options and CCIRS are sensitive to changes in the forward prices of currencies. Foreign currency borrowings are fully hedged against movements in foreign currencies. Any movements in the value of borrowings, or in the interest payable due to a movement in the exchange rate, are offset by any equal and opposite movements in the value and cash flows applicable to the hedge.

The table below summarises the impact an increase/decrease in foreign exchange rates would have on the Group's post-tax profit or loss for the year and on the Group's cash flow hedge reserve based on year end exposures. The sensitivity analysis is based on the assumption that the New Zealand dollar had weakened/strengthened by 10 per cent against the currencies with which the Group has foreign currency risk, with all other variables held constant. A positive number represents an increase in profit or the cash flow hedge reserve.

There have been no changes in the methods and assumptions used in the sensitivity calculations from the previous year.

## 25. Financial instruments and financial risk management (continued)

Currency of contract	% change in rate	2016 \$ million	2015 \$ million
<b>Post-tax impact on cash flow hedge reserve (equity)</b>			
United States dollar	+10%	3.5	5.8
	-10%	(4.3)	(7.1)
Japanese yen	+10%	(0.8)	(0.9)
	-10%	1.0	1.1
<b>Total foreign exchange swaps and options</b>	+10%	2.7	4.9
<b>Total foreign exchange swaps and options</b>	-10%	(3.3)	(6.0)

### Interest rate risk

The Group is exposed to interest rate risk because the Parent borrows funds at both fixed and floating interest rates. The Group uses interest rate swaps to manage interest rate risk. The Group's policy sets maximum and minimum control limits for fixed interest rate exposure which range from between 50 per cent and 100 per cent of projected debt with an age profile of less than one year to a maximum of 50 per cent for projected debt with an age profile of greater than five years and a maximum of 20 per cent for projected debt with an age profile of greater than 10 years. The Group's exposures to interest rates on financial liabilities is disclosed in the liquidity risk section of this note.

The following table details the notional principal amounts and the remaining terms of interest rate swaps outstanding at balance date:

	Average contracted fixed interest rates		Notional principal amount		Fair value	
	2016 %	2015 %	2016 \$ million	2015 \$ million	2016 \$ million	2015 \$ million
Not later than one year	5.08	3.67	100.0	50.0	0.2	(1.2)
Later than one year and not later than two years	-	5.08	-	100.0	-	(2.9)
Later than two years and not later than five years	5.14	5.23	110.0	90.0	(10.0)	(3.7)
Later than five years	4.89	5.06	220.0	265.0	(26.2)	(7.9)
	5.00	4.96	430.0	505.0	(36.0)	(15.7)

The values of interest rate swaps are sensitive to changes in forward interest rates. The table below summarises the impact an increase/decrease in interest rates would have on the Group's post-tax profit or loss for the year and on the Group's cash flow hedge reserve. The sensitivity analysis is based on the assumption that interest rates had been 100 basis points higher/lower with all other variables held constant based on year end exposures. A positive number represents an increase in profit or the cash flow hedge reserve.

There have been no changes in the methods and assumptions used in the sensitivity calculations from the previous year.

	2016 \$ million	2015 \$ million
Post-tax impact on profit		
+1%	0.5	(0.6)
-1%	(0.5)	0.8
Post-tax impact on cash flow hedge reserve (equity)		
+1%	10.5	11.1
-1%	(11.3)	(12.1)

### Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations, resulting in financial loss to the Group. The Group is exposed to credit risk in the normal course of business arising from trade receivables and with banks and financial institutions where short-term deposits are held. The Group is also exposed to credit risk arising from derivative counterparties defaulting on their contractual obligations.

The Group is a producer and retailer of electricity and gas. In terms of wholesale sales to the national grid, credit risk is significantly reduced as the Group purchases from the grid for its retail customer base with credit risk being limited to the net position on settlement. In addition, market security requirements in place ensure that there is no significant credit risk for any one participant. Market participants are required to provide letters of credit to the market clearing agent (NZX Limited), which would be called upon should any market participant default.

Credit risk exposure arising from the supply of electricity and gas to the retail market is mitigated due to the Group's large customer base and, in respect of its larger customers, the diverse range of industries they represent throughout New Zealand. The Group has adopted a policy of only dealing with creditworthy trade counterparties and obtaining collateral, where appropriate, as a means of mitigating the risk of financial loss from defaults. The Group also minimises its exposure to credit risk in this area through the adoption of counterparty credit limits, and active credit-management practices such as monitoring the size and nature of exposures and mitigating the risk deemed to be above acceptable levels.

## 25. Financial instruments and financial risk management (continued)

A bond is held as collateral from any post-paid electricity customer whose credit profile does not meet the standard set by the Group. The bond is managed in accordance with the terms and conditions outlined in the supply agreement with individual customers. The bond is returned to the customer at cessation of supply. The value of collateral held at balance date was \$1.0 million (2015: \$3.6 million). The carrying value of the bond is considered to approximate its fair value.

Derivative counterparties and cash transactions are limited to high-credit-quality financial institutions and other organisations. The Group's exposure and the credit ratings of its counterparties are continuously monitored, and the aggregate value of transactions concluded is spread amongst approved counterparties. The Group has no significant concentration of credit risk with any one financial institution.

The carrying amounts of financial assets recognised in the balance sheet best represent the Group's maximum exposure to credit risk at the reporting date.

### Liquidity risk

The Group's liquidity risk arises from its ability to attract cost-effective funding; this is largely driven by its credit standing (Standard & Poor's = BBB+). Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the spreading of debt maturities.

Liquidity risk is monitored by continuously forecasting cash flows and matching the maturity profiles of financial assets and liabilities.

The table below details the Group's liquidity analysis for its financial liabilities and derivatives. The table has been drawn up based on the undiscounted cash inflows (outflows) for all financial liabilities and derivatives. The amounts in the table are the undiscounted contractual cash flows. Where the amount payable or receivable is not fixed, the amount disclosed has been determined by reference to the internally generated forward price curves existing at balance date. As the amounts included in the tables are contractual undiscounted cash flows, these amounts will not reconcile to the amounts disclosed in the balance sheet.

As at 30 June 2016	Weighted average effective interest rate %	Less than 1 year \$ million	1 to 2 years \$ million	2 to 5 years \$ million	More than 5 years \$ million	Total contractual cash flows \$ million
<b>Non-derivative financial liabilities</b>						
Trade and other payables	<b>Non-bearing</b>	<b>(164.4)</b>	–	–	–	<b>(164.4)</b>
Revolving credit and money market	5.2	(2.6)	(2.6)	(57.1)	–	(62.3)
Wholesale term notes	6.7	(143.1)	(12.5)	(147.7)	(78.1)	(381.4)
Retail term notes	4.3	(4.1)	(4.1)	(12.4)	(104.1)	(124.7)
Capital bonds	6.2	(12.4)	(12.4)	(37.1)	(450.7)	(512.6)
USPP	4.2	(7.7)	(7.7)	(23.2)	(253.3)	(291.9)
		<b>(334.3)</b>	<b>(39.3)</b>	<b>(277.5)</b>	<b>(886.2)</b>	<b>(1,537.3)</b>
<b>Derivative assets (liabilities)</b>						
<b>Net-settled derivatives</b>						
Interest rate swaps (cash flow hedges)		(3.7)	(4.5)	(18.3)	(9.4)	(35.9)
Interest rate swaps (not designated as hedges)		(1.4)	(1.2)	(2.4)	(0.1)	(5.1)
Interest rate swaps (fair value hedges)		1.1	–	–	–	1.1
Electricity swaps (cash flow hedges)		(17.4)	(7.9)	(4.8)	0.8	(29.3)
Electricity swaps and options (not designated as hedges)		10.0	9.4	6.3	(6.9)	18.8
Oil swaps (cash flow hedges)		2.4	1.6	(0.2)	–	3.8
LPG swaps		(0.1)	–	–	–	(0.1)
<b>Gross-settled derivatives</b>						
Foreign exchange swaps (cash flow hedges)						
– Inflows		2.7	1.7	0.6	–	5.0
– Outflows		(0.9)	(0.1)	–	–	(1.0)
CCIRS						
– Inflows		7.7	7.7	23.2	253.3	291.9
– Outflows		(7.7)	(7.5)	(23.6)	(242.3)	(281.1)
		<b>(7.3)</b>	<b>(0.8)</b>	<b>(19.2)</b>	<b>(4.6)</b>	<b>(31.9)</b>

The foreign exchange swaps cash flows above include \$0.2 million inflow in the less-than-one-year category in relation to capital projects which would not be recognised in profit or loss.

## 25. Financial instruments and financial risk management (continued)

As at 30 June 2015	Weighted average effective interest rate %	Less than 1 year \$ million	1 to 2 years \$ million	2 to 5 years \$ million	More than 5 years \$ million	Total contractual cash flows \$ million
<b>Non-derivative financial liabilities</b>						
Trade and other payables	Non-bearing	(156.1)	-	-	-	(156.1)
Revolving credit and money market	5.6	(5.7)	(5.6)	(105.8)	-	(117.1)
Wholesale term notes	6.8	(21.4)	(143.3)	(156.1)	(82.2)	(403.0)
Retail term notes	8.0	(113.0)	-	-	-	(113.0)
Capital bonds	6.2	(12.4)	(12.4)	(37.1)	(463.1)	(525.0)
USPP	5.4	(8.1)	(8.1)	(24.4)	(274.7)	(315.3)
		(316.7)	(169.4)	(323.4)	(820.0)	(1,629.5)
<b>Derivative assets (liabilities)</b>						
<b>Net-settled derivatives</b>						
Interest rate swaps (cash flow hedges)		(1.5)	(4.1)	(11.2)	(2.1)	(18.9)
Interest rate swaps (fair value hedges)		0.6	1.0	-	-	1.6
Electricity swaps (cash flow hedges)		2.5	(2.2)	(2.3)	(1.2)	(3.2)
Electricity swaps and options (not designated as hedges)		11.5	7.5	11.6	-	30.6
Oil swaps (cash flow hedges)		10.1	0.3	-	-	10.4
Forward sale-and-purchase agreements of emission units held for trading		0.2	-	-	-	0.2
<b>Gross-settled derivatives</b>						
Foreign exchange swaps (cash flow hedges)						
- Inflows		0.1	-	-	-	0.1
- Outflows		(7.3)	(2.1)	(0.1)	-	(9.5)
CCIRS						
- Inflows		8.1	8.1	24.4	274.6	315.2
- Outflows		(9.5)	(9.2)	(30.8)	(269.3)	(318.8)
		14.8	(0.7)	(8.4)	2.0	7.7

The foreign exchange swaps cash flows above include no inflow in the less-than-one-year category in relation to capital projects which would not be recognised in profit or loss.

### Capital risk management

The Group manages its capital in a prudent manner to ensure that each entity in the Group will be able to continue as a going concern while maximising the return to shareholders through the appropriate balance of debt and equity. This is achieved by ensuring that the level and timing of its capital investment programmes, equity raisings and dividend distributions are consistent with the Group's capital structure strategy. This strategy remains unchanged from previous years. The capital structure of the Group consists of debt, which includes the borrowings disclosed in note 22, cash and cash equivalents and equity attributable to the shareholders of the Parent, comprising issued capital, reserves and retained earnings as disclosed in the balance sheet.

Under the Group's debt funding facilities, the Group has given undertakings that the ratio of debt to equity will not exceed a prescribed level and the interest cover will not be below a prescribed level. For the purpose of these undertakings, the capital bonds and related interest costs are treated as 50 per cent equity. The covenants are monitored on a regular basis to ensure they are complied with. There were no breaches in covenants during the year (2015: nil).

## 26. Fair value

### Fair value hierarchy

The Group's assets and liabilities measured at fair value are categorised into one of three levels as follows:

**Level one** – the fair value is determined using unadjusted quoted prices from an active market for identical assets and liabilities. A market is regarded as active if quoted prices are readily and regularly available from an exchange, a dealer, a broker, an industry group, a pricing service or a regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's-length basis.

**Level two** – the fair value is derived from inputs other than quoted prices included within level one that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices). Financial instruments in this level include interest rate swaps, foreign exchange swaps, oil swaps and electricity derivatives which are valued using observable electricity price paths.

**Level three** – the fair value is derived from inputs that are not based on observable market data. Financial instruments included in this level include electricity derivatives which are valued using internally generated electricity price paths.

The Group's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the date of the event or change in circumstances that caused the transfer. There were no transfers between levels one, two and three during the year (2015: nil).



## 26. Fair value (continued)

### Level two items carried at fair value

Recurring fair value measurements	2016 \$ million	2015 \$ million
<b>Level two</b>		
<i>Derivatives</i>		
Interest rate swaps	(36.1)	(15.7)
Foreign exchange swaps	3.3	(10.3)
Oil swaps	3.9	10.6
Electricity swaps (cash flow hedges)	(0.1)	-
Electricity swaps and options (not designated as hedges)	(1.8)	(2.3)
CCIRS	35.4	25.7
Forward sale-and-purchase agreements of emission units held for trading	-	0.2
LPG swaps	(0.1)	-
	<b>4.5</b>	8.2
<i>Inventory</i>		
Emission units held for trading	4.9	2.3

### Valuation of level two items carried at fair value

The fair values of level two derivatives and emission units held for trading carried at fair value are determined using discounted cash flow models. The key inputs in the valuation models were:

Item	Valuation input
Interest rate swaps	Forward interest rate price curve
Foreign exchange swaps	Forward foreign exchange rate curves
Oil swaps	Forward oil price and foreign exchange rate curves
Electricity swaps and options	ASX forward price curve
CCIRS	Forward interest rate price curve and foreign exchange rate curves
Forward sale-and-purchase agreements of emission units held for trading	OM Financial forward curve
Emission units held for trading	OM Financial forward curve
LPG swaps	Forward propane price and foreign exchange rate curves

### Level three items carried at fair value

Recurring fair value measurement	Note	2016 \$ million	2015 \$ million
<b>Level three</b>			
<i>Derivatives</i>			
Electricity swaps (cash flow hedges)		(28.2)	(2.7)
Electricity swaps and options (not designated as hedges)		12.2	30.4
		<b>(16.0)</b>	27.7
<i>Property, plant and equipment</i>			
Generation assets	15	2,923.5	2,628.0

### Valuation of level three items carried at fair value

#### Valuation processes of the Group

The Group's finance department includes a team who perform the valuations of level three fair values for generation assets and derivatives. This team reports directly to the Chief Financial Officer. Discussions of valuation processes and results are held between the Chief Financial Officer and the valuation team at least six monthly for generation assets, and monthly for derivatives. As part of these discussions, the team presents analysis to explain the reasons for changes in fair value measurements. The Chief Financial Officer reports key changes to inputs to the Board in the monthly finance report and any changes to the valuation methodology are reported to the Audit and Risk Committee through update papers when any changes are anticipated or have been made due to changes in the business.

## 26. Fair value (continued)

### Valuation of electricity swaps and options

The valuation of electricity swaps and options in level three is based on a discounted cash flow model over the life of the agreement. The key assumptions in the model are: the callable volumes, strike price and option fees outlined in the agreement, the internally generated forecasted electricity price path ('price path'), 'day one' gains and losses, emission credits and the discount rate. The options are deemed to be called when the internally generated price path is higher than the strike prices after taking into account obligations relating to the specific terms of each contract. No calling is required for the swaps and there are no option fees.

The selection of variables used within the price path requires significant judgement and, therefore, there is a range of reasonable assumptions that could be used in estimating the price path. The key unobservable inputs driving potential changes to the price path are changes in electricity demand, hydrology and new generation build. A material change in any one of these factors could result in a material change to the price path and, therefore, the fair value of electricity swaps and options within level three. These factors are reviewed for reasonableness by senior management personnel who are responsible for the price path used by the business. The price path assumes national demand growth based on the latest available industry information and Genesis Energy's view of growth within various sectors of the economy. Forecast hydrology is based on 83 years of historical hydrological inflow data and new generation build assumptions are based on public announcements made by market participants and an assessment on the wholesale electricity prices required to support new generation build. The price path also assumes the on-going operation of New Zealand Aluminium Smelters Limited at Tiwai Point.

The key unobservable inputs, range of assumptions and third-party inputs combine to determine the wholesale electricity price path. The wholesale electricity price paths used to value level three electricity swaps and options ranged from \$65 per MWh to \$109 per MWh over the period from July 2016 to 31 December 2025 (2015: \$69 per MWh to \$115 per MWh over the period from July 2015 to 31 December 2025). The discount rate used in the model ranged from 1.6 per cent to 8.3 per cent (2015: 2.9 per cent to 8.9 per cent) and the emission credit price used ranged between \$18.00 and \$25.00 (2015: \$7.50 and \$25.00).

If the price path increased by 10 per cent while holding the discount rate consistent, this would result in the carrying value of the electricity derivatives decreasing to \$50.7 million liability (2015: \$12.1 million asset). If the price path decreased by 10 per cent while holding the discount rate constant, the carrying value would increase to \$12.7 million asset (2015: \$40.7 million asset).

### Reconciliation of level three electricity swaps and options

	2016 \$ million	2015 \$ million
<b>Balance as at 1 July</b>	<b>27.7</b>	(6.7)
Total gain (loss)		
– Electricity revenue	<b>23.3</b>	24.9
– Change in fair value of financial instruments	<b>(18.0)</b>	32.0
<b>Total gain (loss) in profit or loss</b>	<b>5.3</b>	56.9
Total gain (loss) recognised in other comprehensive income	<b>(16.7)</b>	4.6
Settlements (gain) loss	<b>(8.9)</b>	(3.1)
Sales	<b>(23.4)</b>	(24.0)
<b>Balance as at 30 June</b>	<b>(16.0)</b>	27.7

The change in fair value of financial instruments disclosed above includes an unrealised loss of \$18.1 million (2015: \$31.5 million gain) on level three derivatives held at balance date.

### Valuation of generation assets

Refer to note 15 for the valuation and reconciliation of movements in generation assets.

### Deferred 'day one' gains (losses)

There is a presumption that when derivative contracts are entered into on an arm's length basis, and no payment is received or paid on day one, the fair value at inception would be nil. The contract price of non-exchange traded electricity derivative contracts are agreed on a bilateral basis, the pricing for which may differ from the prevailing derived market price for a variety of reasons. In these circumstances, an adjustment is made to bring the initial fair value of the contract to zero at inception. The adjustment is called a 'day one' gain (loss) and is deferred and amortised, based on expected call volumes over the term of the contract. The 'day one' adjustment below is included in the level three electricity swaps and options carrying value at balance date.

The following table details the movements and amounts of deferred 'day one' gains (losses) included in the fair value of level three electricity swaps and options held at balance date:

	2016 \$ million	2015 \$ million
<b>Balance as at 1 July</b>	<b>17.1</b>	12.9
Deferred 'day one' gains (losses) on new derivatives	<b>63.6</b>	15.0
Deferred 'day one' gains (losses) realised during the year	<b>(8.0)</b>	(10.8)
<b>Balance as at 30 June</b>	<b>72.7</b>	17.1

## 26. Fair value (continued)

### Items disclosed at fair value

	Carrying value		Fair value	
	2016 \$ million	2015 \$ million	2016 \$ million	2015 \$ million
<b>Level one</b>				
Retail term notes	(100.2)	(107.1)	(103.2)	(110.2)
Capital bonds	(202.6)	(202.6)	(206.2)	(204.9)
<b>Level two</b>				
Wholesale term notes	(319.7)	(320.1)	(344.3)	(341.1)
USPP	(239.6)	(227.4)	(235.0)	(224.4)

The carrying value of all other financial assets and liabilities in the balance sheet approximates their fair values.

### Valuation of wholesale term notes

The valuation of wholesale term notes is based on estimated discounted cash flow analyses using applicable market yield curves adjusted for the Group's credit rating. Market yield curves at balance date used in the valuation ranged from 3.0 per cent to 3.9 per cent (2015: 3.7 per cent to 5.1 per cent).

### Valuation of USPP

The valuation of USPP is based on estimated discounted cash flow analyses using applicable United States market yield curves adjusted for the Group's credit rating. The credit-adjusted market yield curve at balance date used in the valuation was 2.5 per cent (2015: 3.6 per cent).

## 27. Commitments

### Capital commitments

	2016 \$ million	2015 \$ million
Not later than one year	1.3	1.2
Later than one year but not later than five years	-	4.3
<b>Total capital commitments</b>	<b>1.3</b>	<b>5.5</b>

The capital commitments disclosed above include no amounts relating to Kupe Joint Venture (2015: \$1.1 million).

### Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. When assets are leased under a finance lease, the present value of the minimum lease payments is recognised as either a payable or a receivable in the balance sheet. Repayments are allocated between the capital and interest over the term of the lease in order to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the lease term. Receipts from operating leases are recognised in profit or loss on a straight-line basis over the lease term.

### Operating lease commitments

#### Where the Group is lessee

The Group leases building accommodation for its offices and land for its generation sites under operating lease arrangements. The Group also leases vehicles and certain office equipment. These leases are of a rental nature and are on normal commercial terms and conditions. These leases have varying lease periods of up to 20 years. In some cases, renewal rights exist with market review clauses. The Group does not have any options to purchase the leased assets at the expiry of the lease period.

	2016 \$ million	2015 \$ million
Not later than one year	8.4	8.4
Later than one year but not later than five years	23.9	17.0
Later than five years	31.9	13.6
<b>Total operating lease commitments</b>	<b>64.2</b>	<b>39.0</b>

Lease commitments are disclosed exclusive of GST.

## **28. Contingent assets and liabilities**

The Group had contingent assets and liabilities at 30 June 2016 in respect of:

### **Land claims, law suits and other claims**

The Parent acquired interests in land and leases from Electricity Corporation of New Zealand Limited ('ECNZ') on 1 April 1999. These interests in land and leases may be subject to claims to the Waitangi Tribunal and may be resumed by the Crown. The Parent would expect to negotiate with the new Maori owners for occupancy and usage rights of any sites resumed by the Crown. Certain claims have been brought to or are pending against the Parent, ECNZ and the Crown under the Treaty of Waitangi Act 1975. Some of these claims may affect land and leases purchased by the Parent or its subsidiaries from ECNZ. In the event that land is resumed by the Crown, the resumption would be affected by the Crown under the Public Works Act 1981 and compensation would be payable to the Parent.

The Board of Directors cannot reasonably estimate the adverse effect (if any) on the Parent if any of the foregoing claims are ultimately resolved against it, or any contingent or currently unknown costs or liabilities crystallise. There can be no assurances that these claims will not have a material adverse effect on the Group's business, financial condition or results of operations.

There are no other known material contingent assets or liabilities (2015: Inland Revenue Department draft Provisional Depreciation Determination for Geothermal and Thermal Powerhouses).

## **29. Events occurring after balance date**

Subsequent to balance date, the Parent declared a final dividend of \$82.0 million (8.2 cents per share).

There have been no other significant events subsequent to balance date.

# Deloitte.

## Independent Auditor's Report

### TO THE SHAREHOLDERS OF GENESIS ENERGY LIMITED REPORT ON THE AUDIT OF THE GROUP FINANCIAL STATEMENTS

#### Auditor General

The Auditor-General is the auditor of Genesis Energy Limited and its subsidiaries. The Auditor-General has appointed me, Andrew Dick, using the staff and resources of Deloitte, to carry out the audit of the financial statements of the Group, consisting of Genesis Energy Limited and its subsidiaries (collectively referred to as 'the Group'), on her behalf.

#### Opinion

We have audited the consolidated financial statements of the Group, which comprise the consolidated balance sheet as at 30 June 2016, and the consolidated comprehensive income statement, statement of changes in equity and cash flow statement for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements, on pages 2 to 36, present fairly, in all material respects, the consolidated financial position of the Group as at 30 June 2016, and its consolidated financial performance and cash flows for the year then ended in accordance with New Zealand Equivalents to International Financial Reporting Standards (NZ IFRS) and International Financial Reporting Standards (IFRS).

#### Basis for Opinion

We conducted our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the International Standards on Auditing (New Zealand) (ISAs (NZ)). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

We are independent of the Group in accordance with the Auditor-General's Statement on Professional and Ethical Standard 1 (Revised) *Code of Ethics for Assurance Practitioners* (AG PES 1 (Revised)) which incorporates Professional and Ethical Standard 1 (Revised) *Code of Ethics for Assurance Practitioners* issued by the New Zealand Auditing and Assurance Standards Board, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In addition to the audit we have carried out assignments in the areas of trustee reporting, scrutineer's notice, review of the interim report and other assurance and non-assurance services which are compatible with those independence requirements. These services have not impaired our independence as auditor of the Group.

In addition to these assignments, principals and employees of our firm deal with the Group on normal terms within the ordinary course of trading activities of the Group. Other than the audit and these assignments and trading activities, we have no relationship with, or interests in the Group.

#### Audit Materiality

We consider materiality primarily in terms of the magnitude of misstatement in the financial statements of the Group that in our judgement would make it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced (the "quantitative" materiality). In addition, we also assess whether other matters that come to our attention during the audit would in our judgement change or influence the decisions of such a person (the "qualitative" materiality). We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined the quantitative materiality for the Group financial statements as a whole to be \$10 million. This was determined with reference to a number of factors. \$10 million represents 4.0 per cent of profit before tax, 0.5 per cent of total equity and 0.5 per cent of revenue.

#### Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

#### KEY AUDIT MATTER

##### Valuation of Generation Assets

Generation assets were revalued at 30 June 2016 as set out in note 15 of the consolidated financial statements to \$2,923.5 million.

The fair value of generation assets is estimated using an internally generated discounted cash flow model which is prepared by management and independently reviewed by an external party. The significant inputs used to calculate the fair value of the generation assets are the wholesale electricity price path, generation volumes, and the discount rate. The wholesale electricity price path is estimated by Genesis Energy as described in note 15 of the consolidated financial statements.

The model used to estimate the wholesale electricity price path is complex and includes a number of significant assumptions. The estimate of the wholesale electricity price path is the most significant input in estimating the fair values determined for the generation assets and affects the estimated generation volumes which are also used in the fair value calculation.

#### HOW OUR AUDIT ADDRESSED THE KEY AUDIT MATTERS

Our audit procedures included assessing the key inputs to the model used to estimate the fair value of the generation assets. Our procedures which included the use of our internal valuation experts were primarily focused on evaluating the process undertaken by Genesis Energy in forecasting the wholesale electricity price path and assessing whether the forecast was consistent with internal and external data.

We assessed the professional competence of the Genesis Energy valuers involved in the modelling of the electricity price path and valuation of the generation assets.

We also compared budgeted performance information from prior periods to historical data to assess the accuracy of the forecasting process.

We have assessed the competence, independence and objectivity of the external party undertaking the review.

## KEY AUDIT MATTER

### Valuation of Generation Assets (continued)

Changes to the forecast of the wholesale electricity price path could significantly change the estimated fair value of the generation assets. The treatment of the gains on revaluation estimated by Genesis Energy for specific assets are described in note 15 of the consolidated financial statements.

We included the valuation of generation assets as a key audit matter due to the level of judgement required in forecasting the wholesale electricity price path.

## HOW OUR AUDIT ADDRESSED THE KEY AUDIT MATTERS

We have compared the forecast wholesale electricity price path with externally derived data. We also evaluated the assumptions used in forecasting the electricity price path to determine whether they were consistent with assumptions used across the business, including management budgets and valuations of other assets including certain electricity derivatives.

We performed sensitivity analysis on the key assumptions applied in determining the fair value of the generation assets and considered the adequacy of the Group's disclosures.

We have found the assumptions and resulting valuation to be reasonable.

### Valuation of Electricity Derivatives and Cross Currency Interest Rate Swaps

The Group's activities expose it to electricity and gas market price, oil price, currency and interest rate risk which are managed using derivative financial instruments. At 30 June 2016 derivative assets totalled \$72.9 million and derivative liabilities were \$84.4 million as set out in note 24 of the consolidated financial statements.

The valuations of the oil swaps, interest rate swaps, foreign exchange swaps and options, and some electricity derivatives which are prepared by Genesis Energy valuers are based primarily on observable inputs and are measured using standard valuation techniques.

Cross-currency interest rate swaps and certain electricity swaps and options are also valued using primarily observable inputs but require more complex valuation models. Additionally, some electricity swaps and options are valued using the wholesale electricity price path forecast by Genesis Energy valuers. As explained in the 'Valuation of Generation Assets' section above, the wholesale electricity price path forecast requires significant judgement.

We have included the valuation of electricity derivatives and cross currency interest rate swaps as a key audit matter due to the complexity associated with their valuation and the judgement involved in evaluating the inputs to the electricity derivative valuation models.

We tested the design and operating effectiveness of key controls related to the recording and valuation of electricity derivative transactions.

We challenged key assumptions applied by management and agreed underlying data to the contract terms on a sample basis. We have independently recalculated the fair value of a sample of electricity derivatives.

Our internal valuation experts have evaluated the appropriateness of the methodology applied in valuation models for the electricity derivatives.

We also performed audit work on the wholesale electricity price path as explained above under the section entitled 'Valuation of Generation Assets'.

Our internal valuation experts have independently recalculated the value of a sample of cross-currency interest rate swaps using specialist treasury management software.

We have found the assumptions and resulting valuations to be reasonable.

### Kupe Reserves Estimate

The Group has a 31 per cent interest in the Kupe Joint Venture. At 30 June 2016 oil and gas assets held by the Group totalled \$267.5 million as set out in note 16 of the consolidated financial statements.

The estimation of the oil and gas reserves has a pervasive impact on the financial statements through depletion as the oil and gas is extracted and on impairment considerations.

The rate of depletion of oil and gas assets is based on the quantity of oil and gas extracted during the period compared to the proven reserves to which the assets relate. Proven reserves are the estimated quantities of oil and gas which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs, under existing economic and operating conditions.

Estimating the proven reserves that are used to consider impairment and to calculate depletion requires significant expertise and judgement as oil and gas reserves cannot be directly examined.

Proven reserves are estimated based on an indirect technique and estimates can change over time as explained in note 16 of the consolidated financial statements.

Proven reserves were reviewed during the year ended 30 June 2016. This was performed by Genesis Energy's external specialist based on information provided by the Kupe Joint Venture Operator. The method is detailed in note 16 of the consolidated financial statements.

We have included the estimate of Kupe reserves as a key audit matter due to the judgement in estimating the quantities of oil and gas in the reservoirs and the impact that these estimates have on the depletion expense, the carrying value of the oil and gas assets and on impairment considerations.

We evaluated the process undertaken by Genesis Energy's external specialist based on information provided by the Kupe Joint Venture Operator to estimate the proven reserves and the process undertaken by Genesis Energy to assess indicators of impairment and to calculate the annual depletion of oil and gas assets.

We have evaluated the professional competence of the external specialist who performed the assessment and reviewed the assumptions that the specialist used in estimating the proven reserves to ensure they were consistent with our understanding.

We have considered the final oil and gas reserves estimation report prepared by Genesis Energy's external specialist in light of our understanding of the business.

We obtained confirmation of the quantities of oil and gas extracted during the period from the component auditor of the Kupe Joint Venture and reviewed Genesis Energy's calculation of the depletion rate for the oil and gas assets.

We consider that the reserve estimate is reasonable for use in the calculation of depletion expense and for performing impairment testing on the oil and gas assets.

### Information Other than the Consolidated Financial Statements

The Directors are responsible for the other information. The other information comprises the information in the Annual Report that accompanies the consolidated financial statements and our auditor's report thereon. The Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. When we read the other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to the directors.

#### Directors' Responsibilities for the Consolidated Financial Statements

The Directors are responsible on behalf of the entity for the preparation and fair presentation of the consolidated financial statements in accordance with NZ IFRS and IFRS, and for such internal control as the Directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

The Directors are also responsible for the publication of the consolidated financial statements, whether in printed or electronic form.

In preparing the consolidated financial statements, the Directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

#### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Our responsibility arises from section 15 of the Public Audit Act 2001. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- > Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- > Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- > Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- > Conclude on the appropriateness of the use of the going concern basis of accounting by the Directors and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- > Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- > Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.
- > We did not examine every transaction, nor do we guarantee complete accuracy of the financial statements. Also, we did not evaluate the security and controls over the electronic publication of the financial statements.
- > We communicate with the Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.
- > We also provide the Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.
- > From the matters communicated with the Directors, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Andrew Dick.



On behalf of the Auditor-General  
Auckland, New Zealand

23 August 2016