

NORSK HYDRO A S A  
Form 20-F  
March 18, 2005

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**FORM 20-F**

- REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**

**OR**

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For The Fiscal Year Ended 31 December 2004**

**OR**

- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**

**Commission file number: 1-9159**

**NORSK HYDRO ASA**

**(Exact name of Registrant as specified in its charter)**

**Kingdom of Norway**

**(Jurisdiction of incorporation or organization)**

**Drammensveien 264, Vækerø**

**N-0240 OSLO**

**Norway**

**(Address of principal executive offices)**

Securities registered or to be registered pursuant to Section 12(b) of the Act:

**Title of each class**

**Name of each exchange on which registered**

American Depositary Shares  
Ordinary Shares, par value NOK 18.30 per share

New York Stock Exchange  
New York Stock Exchange\*

\* Not for trading, but only in connection with the registration of the American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.

Securities registered or to be registered pursuant to Section 12(g) of the Act: None

Edgar Filing: NORSK HYDRO A S A - Form 20-F

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: Ordinary Shares, par value NOK 18.30 per share.

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

250,839,230 Ordinary Shares, par value NOK 18.30 per share

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark which financial statement item the registrant has elected to follow.

Item 17  Item 18

---

## TABLE OF CONTENTS

<b>ITEM</b>	<b>PAGE</b>
Exchange Rate Information	4
<b>PART I</b>	
Item 1. Identity of Directors, Senior Management and Advisers	5
Item 2. Offer Statistics and Expected Timetable	5
Item 3. Key Information	5
A. Selected Consolidated Financial Data	5
B. Capitalization and Indebtedness	9
C. Reasons for the Offer and Use of Proceeds	9
D. Risk Factors	9
Item 4. Information on the Company	16
A. History and Development of the Company	16
B. Business Overview	17
C. Organizational Structure	79
D. Property, Plants and Equipment	79
Item 5. Operating and Financial Review and Prospects	80
Item 6. Directors, Senior Managers and Employees	113
A. Directors, Corporate Assembly and Corporate Management Board	113
B. Compensation	117
C. Board Practices	119
D. Employees	123
E. Share Ownership	123
Item 7. Major Shareholders and Related Party Transactions	125
A. Major Shareholders	125
B. Related Party Transactions	126
C. Interests of Experts and Counsel	127
Item 8. Financial Information	127
A. Consolidated Financial Statements and Other Financial Information	127
B. Significant Changes	130
Item 9. The Offer and Listing	131
A. Offer and Listing Details	131
B. Plan of Distribution	132
C. Markets	132
D. Selling Shareholders	132
E. Dilution	132
F. Expenses of the Issue	132



<b>ITEM</b>	<b>PAGE</b>
Item 10. Additional Information	132
A. Share Capital	132
B. Articles of Association	132
C. Material Contracts	145
D. Exchange Controls	145
E. Taxation	145
F. Dividends and Paying Agents	150
G. Statement by Experts	150
H. Documents on Display	150
I. Subsidiary Information	150
 Item 11. Quantitative and Qualitative Disclosures About Market Risk	 151
 Item 12. Description of Securities Other Than Equity Securities	 151
 <b>PART II</b>  	
Item 13. Defaults, Dividend Arrearages and Delinquencies	152
Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds	152
Item 15. Controls and Procedures; CEO and CFO Certifications	152
Item 16A. Audit Committee Financial Expert	152
Item 16B. Code of Ethics	152
Item 16C. Principal Accountant Fees and Services	153
Item 16D. Exemption from the Listing Standards for Audit Committees	154
Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers	154
 <b>PART III</b>  	
Item 17. Financial Statements	155
Item 18. Financial Statements	155
Item 19. Financial Statements and Exhibits	155

In the following discussion, references to Hydro or the Company are to Norsk Hydro ASA or Norsk Hydro ASA and its consolidated subsidiaries, as the context requires. References to the **Group** are to Norsk Hydro ASA and its consolidated subsidiaries. References to the **Kingdom** are to the Kingdom of Norway. The glossary found immediately after the signature page of this annual report provides the definitions of certain other terms used throughout this annual report. In addition, the definitions of oil and gas terms, including terms defined in applicable regulations and Industry Guide 2 ( Disclosure of Oil and Gas Operations ) of the U.S. Securities and Exchange Commission (the **SEC** ), can be found in Item 4.B. of this annual report at the end of the business description for the Exploration and Development sub-segment of Hydro Oil and Energy.

### EXCHANGE RATE INFORMATION

The Company publishes its consolidated financial statements in Norwegian kroner ( **NOK** ). In this annual report, references to US dollar, US dollars, USD US\$ or \$ are to United States dollars. The following tables set forth, for the periods indicated, certain information concerning the exchange rate of Norwegian kroner for USD 1.00, based on the noon buying rate in the City of New York for cable transfers in foreign currencies as certified for customs purposes by the Federal Reserve Bank of New York (the **Noon Buying Rate** ):

Calendar Year Period	Average Noon Buying Rate <sup>(1)</sup>	
2004	6.72	
	Noon Buying Rate	
Calendar Monthly Period	High	Low
September 2004	6.95	6.73
October 2004	6.77	6.39
November 2004	6.44	6.09
December 2004	6.22	6.06
January 2005	6.36	6.10
February 2005	6.56	6.20

<sup>(1)</sup> The average of the Noon Buying Rates on the last business day of each calendar month during the year indicated.

The Noon Buying Rate on 14 March 2005 was NOK 6.12 = \$1.00.

Fluctuations in the exchange rate between the Norwegian kroner and the US dollar will affect the US dollar equivalent of the Norwegian kroner price of the Company's ordinary shares on the Oslo Stock Exchange and, as a result, are likely to affect the market price of the Company's ordinary shares represented by American depositary shares ( **ADSs** ) in the United States. Such fluctuations could also affect the US dollar amounts received by holders of ADSs on conversion of cash dividends, paid by the Company in Norwegian kroner, on the ordinary shares represented by the ADSs. See Item 3.A. Selected Consolidated Financial Data and Item 10.B. Articles of Association Description of American Depositary Receipts Dividends and Other Distributions.

## PART I

### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 1 if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Securities Exchange Act of 1934, as amended (the **Exchange Act** ).

### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 2 if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

### ITEM 3. KEY INFORMATION

#### ITEM 3.A. SELECTED CONSOLIDATED FINANCIAL DATA

The following financial information with respect to the five years ended 31 December 2004, 2003, 2002, 2001 and 2000 has been derived from Hydro's audited consolidated financial statements prepared in accordance with United States generally accepted accounting principles ( **US GAAP** ). The financial information for the three years ended 31 December 2004, 2003 and 2002 should be read in conjunction with and is qualified in its entirety by reference to the consolidated financial statements and notes included in the Company's annual report to shareholders for the year ended 31 December 2004 (the **Consolidated Financial Statements** ), included in Exhibit 10 to this annual report on Form 20-F.

The Company's agri business was transferred to Yara International ASA on 24 March 2004 in a demerger transaction. Results, assets and liabilities of the transferred operations relating to periods prior to demerger are reported respectively under **Income from discontinued operations** , **Assets of discontinued operations** and **Liabilities of discontinued operations** .



**Income Statement Data<sup>(1) (2)</sup>****Year ended 31 December**

	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<b>(in NOK million, except per share data)</b>				
Operating revenues <sup>(3) (4)</sup>	155,425	133,761	134,093	116,147	120,698
Operating costs and expenses excluding depreciation, impairment and restructuring charges <sup>(4)</sup>	106,702	98,189	103,707	85,562	82,918
Depreciation, depletion and amortization	16,898	13,947	12,729	10,693	10,895
Restructuring charges <sup>(5)</sup>	(22)		(10)	921	
Operating income	31,847	21,625	17,667	18,971	26,885
Financial and other income (expense), net <sup>(6)</sup>	1,960	657	1,226	3,306	4,940
Interest expense and foreign exchange gain (loss)	(1,027)	(1,136)	633	(3,530)	(3,771)
Income from continuing operations before taxes and minority interest	32,780	21,146	19,526	18,747	28,054
Provision for taxes	(21,197)	(12,922)	(12,452)	(12,945)	(15,583)
Minority interest	(106)	151	26	92	(37)
Income from continuing operations before cumulative effect of change in accounting principle	11,477	8,375	7,100	5,894	12,434
Income from discontinued operations	1,083	2,312	1,665	1,998	1,546
Income before cumulative effect of change in accounting principle	12,560	10,687	8,765	7,892	13,981
Cumulative effect of change in accounting principle		281			
Net income (loss)	12,560	10,968	8,765	7,892	13,981
Earnings (loss) per share:					
Basic and diluted earnings per share from continuing operations before cumulative effect of change in accounting principle	45.10	32.50	27.50	22.80	47.50
Basic and diluted earnings per share from discontinued operations	4.20	9.00	6.50	7.70	5.90

Basic and diluted earnings per share before cumulative effect of change in accounting principle	49.40	41.50	34.00	30.50	53.40
Basic and diluted earnings per share	49.40	42.60	34.00	30.50	53.40
Avg. number of outstanding ordinary shares	254,411,433	257,528,511	257,799,411	258,434,202	261,620,982
Cash dividends paid per share during period:					
NOK per share <sup>(7)</sup>	11.00	10.50	10.00	9.50	8.00
Converted into USD per share <sup>(7)</sup>	1.64	1.56	1.24	1.05	0.90

- 
- (1) See Note 2 to the Consolidated Financial Statements for a discussion of significant business acquisitions and dispositions during the three-year period ended 31 December 2004.
- (2) Effective 1 January 2004, Hydro adopted FASB Interpretation 46 Consolidation of Variable Interest Entities (FIN 46R) which clarifies the application of Accounting Research Bulletin No. 51, Consolidated Financial Statements, relating to certain entities in which equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support (variable interest entities or VIEs). Hydro has identified one pre-existing arrangements that meets the requirements of FIN 46R to be classified as a VIE. Hydro has equity interest in Slovalco, an aluminium smelter in Slovakia. Hydro has consolidated Slovalco in accordance with the new requirements effective 1 January 2004. See Note 1 to the Consolidated Financial Statements for more information regarding the consolidation of Slovalco.
- (3) Effective 1 January 2003, Hydro adopted EITF 02-3 Recognition and Reporting of Gains and Losses on Energy Contracts. This standard requires only energy contracts that meet the definition of a derivative according to SFAS 133 Accounting for Derivative Instruments and Hedging Activities and are held for trading be recorded in the balance sheet at fair value. Other energy contracts are recorded at the lower of historical cost and fair market value. This change applies to contracts entered into before 25 October 2002. For contracts entered after 25 October 2002, the regulation applied from initial recognition.
- (4) Prior years amounts have been reclassified to reflect the implementation of EITF 02-3 and EITF 03-11, which require realized and unrealized gains and losses on all derivative instruments be presented on a net basis in the income statement. Previously, gains and losses on energy derivative contracts were reported according to EITF 98-10 and were presented on a gross basis in the income statement.
- (5) See Note 6 to the Consolidated Financial Statements for more information regarding restructuring charges.
- (6) Equity in net income of non-consolidated investees is included under Financial and other income (expense), net.
- (7) Cash dividends paid during the period represent payments of dividends with respect to the previous year. Amounts paid in Norwegian kroner have been converted at prevailing exchange rates on the date of such payments.

**Balance Sheet Data<sup>(1)</sup>**

	<b>As of 31 December</b>				
	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<b>(in NOK million)</b>				
Cash, cash equivalents and other liquid assets	25,336	16,426	8,158	28,683	23,637
Total assets	200,243	218,629	207,211	197,922	196,354
Short-term debt	4,353	6,485	8,819	9,685	10,379
Long-term debt	19,487	28,403	30,728	37,608	39,851
Deferred tax liabilities	29,899	33,323	36,818	30,648	30,664
Ordinary shares and additional paid-in capital	15,206	20,403	20,420	20,402	20,391
Total shareholders equity	85,890	88,080	75,867	74,793	71,227

---

<sup>(1)</sup> See Note 2 to the Consolidated Financial Statements for a discussion of significant business acquisitions and dispositions during the three-year period ended 31 December 2004.

### Segment Data

The following table indicates the Group's operating revenues, sales to unaffiliated customers and operating income (after eliminating inter-segment sales) by business segment for each of the three fiscal years in the period ended 31 December 2004.

Year ended 31 December Business Segment <sup>(1)</sup>	Operating Revenues			Sales to Unaffiliated Customers			Operating Income/(Loss) Before Financial and Other		
	2004	2003	2002	2004	2003	2002	2004	2003	2002
	Exploration and Production <sup>(2)</sup>	48,962	37,904	32,970	13,519	12,099	10,136	28,363	18,500
Energy and Oil Marketing <sup>(2)</sup>	60,788	49,370	45,915	54,629	44,308	41,929	2,650	2,668	2,784
Eliminations <sup>(3)</sup>	(37,032)	(27,315)	(23,040)	(1,643)	(1,576)	(965)	131	(25)	26
Hydro Oil and Energy	72,718	59,959	55,845	66,505	54,831	51,100	31,144	21,143	15,947
Metals	49,159	39,923	39,646	33,048	26,509	26,025	830	2,293	1,690
Rolled Products	20,373	18,377	14,790	18,814	17,825	14,135	626	132	(295)
Extrusion and Automotive	27,600	24,529	24,245	27,563	24,472	24,186	277	98	14
Other and Eliminations <sup>(4)</sup>	(17,458)	(13,677)	(13,630)	51	190	162	72	(67)	289
Hydro Aluminium	79,674	69,152	65,051	79,476	68,996	64,508	1,805	2,456	1,698
Other Activities <sup>(5)</sup>	12,869	13,759	21,557	9,665	10,013	17,859	312	(404)	48
Corporate and Eliminations <sup>(6)</sup>	(9,836)	(9,109)	(8,360)	(221)	(79)	626	(1,414)	(1,570)	(26)
<b>Total</b>	<b>155,425</b>	<b>133,761</b>	<b>134,093</b>	<b>155,425</b>	<b>133,761</b>	<b>134,093</b>	<b>31,847</b>	<b>21,625</b>	<b>17,667</b>

(1) See Note 2 to the Consolidated Financial Statements for a discussion of significant business acquisitions and dispositions during the three-year period ended 31 December 2004.

(2) As of 1 January 2003, Hydro's gas transportation activities are reported as part of Energy and Oil Marketing. Prior periods have been reclassified for comparative purposes.

(3) Eliminations - Oil and Energy includes elimination of unrealized gain on gas contracts in the amount of NOK 144 million.

(4) Other and Eliminations includes unrealized gains and losses related to London Metals Exchange (LME) contracts with a gain of NOK 175 million in 2004, a loss of NOK 49 million in 2003, and a gain of NOK 266 million in 2002.

(5) Other Activities consist of Polymers, BioMar AS (previously Treka AS), Flexible Packaging (sold in April 2003), the industrial insurance company, Industriforsikring, and Hydro Business Partner.

- (6) Corporate and Eliminations includes the elimination of the unrealized gain/loss on power contracts between Energy and other units in Hydro with a loss of NOK 235 million in 2004, a loss of NOK 141 million in 2003 and a loss of NOK 588 million in 2002. In addition, NOK 13 million, NOK 21 million and NOK 26 million is eliminated within Oil and Energy in 2004, 2003, and 2002 respectively. Corporate and Eliminations operating income (loss) includes a net periodic pension cost of NOK 1,001 million for 2004, NOK 1,111 million for 2003, and NOK 314 million for 2002.

### **ITEM 3.B. CAPITALIZATION AND INDEBTEDNESS**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 3.B. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

### **ITEM 3.C. REASONS FOR THE OFFER AND USE OF PROCEEDS**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 3.C. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

### **ITEM 3.D. RISK FACTORS**

In order to utilize the "safe harbor" provisions of the United States Private Securities Litigation Reform Act of 1995, Hydro is providing the following cautionary statement:

This annual report contains (and oral communications made by or on behalf of Hydro may contain) forecasts, projections, estimates, statements of management's plans, objectives and strategies for Hydro, such as planned expansions, investments or other projects, targeted production volumes, capacities or rates, start-up costs, cost reductions, profit objectives, and various expectations about future developments in Hydro's markets (particularly prices, supply and demand, and competition), results of operations, margins, risk management and so forth. These forward-looking statements are based on a number of assumptions and forecasts, including world economic growth and other economic indicators (including rates of inflation and industrial production), trends in Hydro's key markets, and global oil and gas, and aluminium supply and demand conditions. By their nature, forward-looking statements involve risk and uncertainty and various factors could cause Hydro's actual results to differ materially from those projected in a forward-looking statement or affect the extent to which a particular projection is realized. The following paragraphs address important factors that may cause actual results or developments to differ materially from those expressed or implied by the forward-looking statements.

#### **Risks Relating to Hydro's Oil and Energy Business**

*Hydro Oil and Energy's future performance depends on the ability to find or gain access to additional oil and gas reserves that are economically recoverable.*

The majority of Hydro Oil and Energy's proved reserves (92 percent as of 31 December 2004) are located on the Norwegian Continental Shelf (the "NCS"). The southern part of the NCS (the location of the most easily accessible and exploitable fields offshore Norway) is a maturing resource province from which reserve additions have been low in recent years. Norway's oil production has been declining for the last two years. See the discussion in Item 4.B.

Business Overview Hydro Oil and Energy Exploration and Production Oil Industry Trends Reduced Exploration Results Worldwide and Maturing Areas in the Developed World the NCS

Unless Hydro Oil and Energy conducts successful exploration and development activities or acquires properties containing proved reserves, or both, its proved reserves will decline as reserves are produced. Because of limited access to major new exploration provinces, and increased price expectations, the bidding for available properties and prospects has intensified. In addition, Hydro Oil and Energy may not succeed in exploiting competencies and skills developed on the NCS in more remote areas. Hydro Oil and Energy's future production is dependent upon its success in finding or acquiring, and developing, additional reserves.



***Hydro Oil and Energy's development projects and operations involve many uncertainties and operating risks that can prevent Hydro from realizing profits and can cause substantial losses.***

As fields on the NCS mature and demonstrate a decline in production, Hydro Oil and Energy is seeking to get more production from NCS fields in which it already has an interest and increasingly developing smaller satellite fields. Other Hydro Oil and Energy development projects are in remote locations with limited operational histories and, consequently, the success of these projects is less predictable. In addition, some of Hydro Oil and Energy's development projects are located in deep-water or other hostile environments, such as areas on the NCS, the US Gulf of Mexico and Angola, or produced from challenging reservoirs. Planning and development of the Ormen Lange field, for example, has been described as one of the most challenging assignments any oil company has tackled, not just in Norway but in a global context, given the combination of deep-water, harsh weather conditions, freezing water temperatures and the need to transport gas for processing over long distances and a very uneven seabed.

The production of oil and natural gas is vulnerable to weather conditions, operator error or other incidents, which can result in oil spills, gas leakages, equipment failure, unplanned maintenance stops, loss of well control or other occurrences disrupting the production and potentially causing harm to the environment.

As a result, Hydro Oil and Energy may face increased challenges maintaining targeted levels of production and production growth in future years. This could negatively affect Hydro's results of operations and financial condition.

***A substantial or extended decline in oil or natural gas prices would have a material adverse effect on Hydro Oil and Energy's business.***

Historically, prices for oil and natural gas have fluctuated widely in response to changes in many factors, including:

oil companies' spending on exploration and production activities;

global and regional economic and political developments in resource-producing regions, particularly in the Middle East;

changes in the supply of and demand for oil and natural gas; and

the ability of the members of the Organization of the Petroleum Exporting Countries ( **OPEC** ) to agree on and maintain oil price and production controls.

Notwithstanding current high oil prices, it is impossible to predict future oil and natural gas price movements. Declines in oil and natural gas prices will reduce Hydro Oil and Energy's financial results. Based on Hydro's analysis of indicative price and currency sensitivities included in this annual report (see Item 5. Operating and Financial Review and Prospects Risk Management ), a USD 1 decline in oil prices will reduce Hydro Oil and Energy's pre-tax income and after-tax income by approximately NOK 1,150 million and NOK 310 million, respectively.

***Hydro Oil and Energy is exposed to foreign currency exchange rate fluctuations.***

Oil prices are denominated in US dollars while operating results are reported in Norwegian kroner. Accordingly, operating results will, in general, decline when the Norwegian kroner strengthens against the U.S. dollar. Based on Hydro's analysis of indicative price and currency sensitivities included in this annual report (see Item 5. Operating and Financial Review and Prospects Risk Management ), a strengthening of the Norwegian kroner against the US dollar of NOK 1 per US\$1.00 will reduce Hydro Oil and Energy's pre-tax income and after-tax income by approximately NOK 7,250 million and NOK 1,960 million, respectively.





***Hydro Oil and Energy's oil and gas reserves are only estimates and may prove inaccurate.***

There are numerous uncertainties inherent in estimating quantities of proved reserves and their values, including many factors beyond the control of the producer. The reserve data included in this annual report represent only Hydro's estimates; the estimates of other companies with interests in the same oil and gas field or fields may differ and the magnitude of the differences may be substantial. This reflects the degree to which reservoir engineering is a subjective and inexact process, requiring the estimate of underground accumulations of oil and natural gas that cannot be measured in an exact manner. Evaluating properties for their recoverable reserves of oil and natural gas entails the assessment of geological, engineering and production data, some or all of which may prove to be unreliable. Accordingly, reserve estimates may be subject to downward or upward adjustment. See the discussion in Item 5.

Operating and Financial Review and Prospects Hydro's Critical Accounting Policies Proved Oil and Gas Reserves. Actual production, revenues and expenditures with respect to Hydro Oil and Energy's reserves will likely vary from estimates, and those variances may be material. Any downward adjustment in Hydro Oil and Energy's reserve data could lead to lower future production, which would negatively affect Hydro's results of operations and financial condition.

***Hydro may be subject to the imposition of sanctions by the U.S. government in connection with its activities in Iran and/or Libya.***

Hydro Oil and Energy is engaged in certain activities in Iran and has an interest in oil and gas exploration licenses in Libya, where exploratory and appraisal wells are in the process of being drilled and limited production has commenced. In August 1996, the United States adopted the Iran and Libya Sanctions Act of 1996 (the **Sanctions Act**) with the objective of denying Iran and Libya the ability to support acts of international terrorism and fund the development and acquisition of weapons of mass destruction. The Sanctions Act provides that the President of the United States is to impose two or more sanctions against any person, regardless of nationality, if the President determines that the person, with actual knowledge, made an investment of US\$ 20 million or more in any 12-month period in Iran or Libya that directly and significantly contributed to the enhancement of Iran's or Libya's ability to develop its petroleum resources.

In April 2004, the Bush administration announced the termination of application of the Sanctions Act with respect to Libya, though it is unclear whether the waiver has retroactive effect. The Sanctions Act continues in force with respect to Iran. Hydro presently has no assets under development or in production in Iran, suggesting that there may be minimal risk of application of the Sanctions Act with respect to Hydro's existing activities in Iran. However, no sanctions have ever been imposed against any person or entity under the Sanctions Act. This makes it difficult for Hydro to predict the political and other policy considerations that would prompt the U.S. government to apply the Sanctions Act. Should the U.S. government determine that a violation of the Sanctions Act exists or has occurred, the Sanctions Act provides for sanctions that include a ban on the issuance of a license to export goods or technology to a sanctioned person, the prohibition of loans or extensions of credit by U.S. financial institutions to a sanctioned person, and restrictions on imports into the United States from a sanctioned person.

***Hydro Oil and Energy's expansion of business in emerging and transitioning markets presents a higher degree of financial, political, economic and business risk***

Hydro Oil and Energy is exposed to general financial, political, economic and business risks in connection with its international exploration, development and production activities, with the degree of risk being generally higher in emerging and transitioning markets such as Angola and Russia.

For example, the government of Angola is in the process of enacting a new foreign exchange law to supersede the current regime that Hydro and other foreign oil companies are operating under. The proposed law would require

foreign oil companies to remit their revenues back to Angola to be held in local accounts for extended periods until approvals could be obtained to use them outside Angola. Oil companies and other interested parties strongly objected this initial proposal. The Angolan government

is in process of revising the proposed law. This process is expected to be finalized during the second quarter of 2005 for implementation before the end of the year. Depending on the outcome of this process, a new law could have material adverse effects on Hydro's current and future operations in Angola.

In Russia, Western oil companies continue to assess the impact of the Russian government's recent actions relating to what had been Russia's second-largest oil concern, Yukos.

## **Risks Relating to Hydro Aluminium's Business**

### ***Hydro Aluminium's results of operations are affected by fluctuations in LME prices***

The aluminium industry is highly cyclical. Virtually all aluminium end-use markets, including the building, transportation and packaging industries, are also cyclical. In addition, there is uncertainty concerning developments in supply and demand, in particular, regarding the overall economic developments in China as well as potential further restructuring within the aluminium industry as a whole.

Price developments within the London Metal Exchange (LME), which represents the main reference price for the industry, reflects the cyclical and uncertainties discussed above. For more information, see Item 4.B Hydro Aluminium Long Term Market Developments.

Fluctuations in prevailing aluminium prices, could negatively affect the financial results of Hydro Aluminium's business areas. Based on Hydro's analysis of indicative price and currency sensitivities included in this annual report (see Item 5. Operating and Financial Review and Prospects Risk Management), a USD 100 decline in the LME price per tonne will reduce Hydro Aluminium's pre-tax income and after-tax income by approximately NOK 800 million and NOK 560 million, respectively.

Hydro's extensive use of derivatives in managing its aluminium price exposure may result in additional volatility of its financial results from period to period.

### ***Hydro Aluminium is exposed to foreign exchange rate fluctuations.***

Because Hydro Aluminium's smelters are located predominately in Norway and Germany, a substantial portion of fixed costs are denominated in NOK and Euro. The weakening US dollar has resulted in a decline in the competitive position of Hydro Aluminium's smelter system. In addition, Hydro Aluminium's downstream operations are negatively impacted by the increasing euro compared to US based competitors.

### ***Hydro Aluminium's operations are dependent on substantial amounts of energy and, as a result, its profitability may decline if energy costs rise or if energy supplies are interrupted.***

Hydro Aluminium's operations consume large volumes of energy, mainly electricity, in producing primary aluminium. Most of Hydro Aluminium's smelters in Norway, Canada and Australia have electricity supply contracts with terms ranging from approximately 10 to 15 years. The electricity supply contracts for Hydro Aluminium's German smelters, scheduled to expire at the end of 2005, will need to be extended or alternative supply arrangements made. Hydro Aluminium may not be able to renew or replace these contracts on comparable terms following the expiry of these contracts. As a result of increasing energy costs, as well as weakened competitiveness due to the strengthened Euro compared to the US dollar, Hydro has written down the value of the German smelter system by approximately NOK 2.3 billion. See the discussion in Item 4.B. Business Overview Hydro Aluminium Hydro Aluminium's Operating Sub-Segments Metals Raw Materials Energy.



Hydro Aluminium is particularly exposed to energy tax regimes in Norway and Germany because of its substantial electricity consumption in these countries. If electricity costs rise as a result of market or other factors such as new taxes, or if electricity supplies or supply arrangements are disrupted, Hydro Aluminium's operating results could decline. For further information see Item 4.B. Business Overview Hydro Aluminium Government Regulation.

***Hydro Aluminium is subject to a broad range of environmental laws and regulations in the jurisdictions in which it operates.***

Hydro Aluminium is subject to a broad range of environmental laws and regulations in each of the jurisdictions in which it operates. See Item 4.B. Business Overview Hydro Aluminium Environmental Matters. These laws and regulations, as interpreted by relevant agencies and courts, impose increasingly stringent environmental protection standards regarding, among other things, air emissions, the storage, treatment and discharge of waste waters, the use and handling of hazardous or toxic materials, waste disposal practices, and the remediation of environmental contamination. The costs of complying with these laws and regulations, including participation in assessments and remediation of sites, could be significant. In addition, these laws and regulations create the risk of substantial environmental liabilities, including liabilities associated with divested assets and past activities.

***Hydro Aluminium's expansion of business in emerging and transitioning markets presents a higher degree of financial, political, economic and business risks.***

Hydro Aluminium is increasing its business operations in emerging and transitioning markets. Such markets present a higher degree of risk than more developed markets. In addition to the business risks inherent in developing and servicing new markets, economic conditions may be more volatile, legal systems less developed and predictable and the possibility of various types of adverse governmental action more pronounced.

***Hydro Aluminium is exposed to the non performance of its contracts partners***

Hydro Aluminium enters into various contracts to secure the price and availability of raw material and products for its manufacturing and remelt operations. These activities contain the risk that one or more counter parties will default on their obligations to Hydro resulting in direct financial losses, unexpected increased market exposure or higher operating costs. Poor or deteriorating economic conditions on a global, regional or industry sector level increase the risk of counter party default.

***Hydro Aluminium could be adversely affected by disruptions of its operations.***

Many of Hydro Aluminium's customers are, to varying degrees, dependent on planned deliveries from Hydro Aluminium's plants located in various parts of the world. Breakdown of equipment or other events leading to production interruptions in Hydro Aluminium's plants could lead to financial losses. Interruption in the energy supply to a smelter for more than six to eight hours could lead to the metal solidifying in the pots (see Item 4.B. Business Overview Hydro Aluminium Overview of the Aluminium Industry Aluminium Smelting ), which would result in Hydro Aluminium incurring significant costs to restore the smelter to normal operations. Reduced production, itself, could result in reduced income. Further, customers may have to reschedule their own production due to Hydro Aluminium's missed deliveries, which may result in customers pursuing financial claims against Hydro Aluminium. For example, Hydro Aluminium supplies many of the automotive manufacturers in the world and, in a number of cases, is a sole supplier for special products. The automotive industry is particularly dependent on regular, on-time supplies. The consequences of not meeting scheduled deliveries or quality standards might be costly. Hydro Aluminium may incur costs to correct any of such problems, in addition to facing claims from customers. Further, Hydro Aluminium's reputation among actual and potential customers may be harmed, potentially resulting in a loss of business. While Hydro Aluminium maintains insurance policies covering, among other things, physical damage,

business interruptions, product liability and transportation, these policies may not cover all of Hydro Aluminium's losses.

***Hydro Aluminium could be subject to unusual or significant litigation arising out of alleged defects in products***

Hydro Aluminium is a leading supplier of extrusion based application within crash management (ie. bumper beams) in Europe and has crash management operations in the United States. Hydro Aluminium could be subject to class action suits in the event of failure of such systems or be subject to claims or litigation relating to recall campaigns by automobile manufactures deemed necessary as a result of defects within such systems.

**Risks Relating to Hydro s Shares**

***Preferential rights may not be available to U.S. holders of Hydro s shares.***

Under Norwegian law, prior to Hydro s issuance of any new shares against consideration in cash, Hydro must offer holders of its then-outstanding shares preferential rights to subscribe and pay for a sufficient number of shares to maintain their existing ownership percentages, unless these rights are waived at a general meeting of Hydro s shareholders. These preferential rights are generally transferable during the subscription period for the related offering and may be quoted on the Oslo Stock Exchange (the **OSE** ).

U.S. holders of Hydro s shares may not be able to receive, trade or exercise preferential rights for new shares unless a registration statement under the U.S. Securities Act of 1933, as amended (the **Securities Act** ) is effective with respect to such rights or an exemption from the registration requirements of the Securities Act is available. If U.S. holders of Hydro s shares are not able to receive, trade or exercise preferential rights granted in respect of their shares in any rights offering by Hydro, then they may not receive the economic benefit of such rights. In addition, their proportional ownership interests in Hydro will be diluted.

***Holders of Hydro s shares that are registered in a nominee account may not be able to exercise voting rights as readily as shareholders whose shares are registered in their own names with the VPS.***

Beneficial owners of Hydro s shares that are registered in a nominee account (e.g., through brokers, dealers or other third parties) may not be able to vote such shares unless their ownership is re-registered in their names with the Norwegian Central Securities Depository, Verdipapirsentralen (the **VPS** ), prior to Hydro general meetings. Hydro cannot guarantee that beneficial owners of its shares will receive the notice for a general meeting in time to instruct their nominees to either effect a re-registration of their shares or otherwise vote their shares in the manner desired by such beneficial owners. See the discussion in Item 10.B Articles of Association Description of Ordinary Shares Voting Rights.

***It may be difficult for investors based in the United States to enforce civil liabilities predicated on U.S. securities laws against Hydro, its Norwegian affiliates, or Hydro s directors and executive officers.***

Hydro is organized under the laws of the Kingdom of Norway. All of Hydro s directors and executive officers reside outside the United States. Further, a significant portion of Hydro s assets, and those of its directors and executive officers, are located in Norway and other Western European countries. As a result, it may be difficult for investors in the United States to effect service of process within the United States upon Hydro or its directors and executive officers or to enforce against Hydro or its directors and executive officers judgments obtained in U.S. courts predicated on the civil liability



provisions of U.S. federal securities laws. Although U.S. investors may bring actions against Hydro, its Norwegian affiliates or any of its directors or executive officers resident in Norway, Norwegian courts are unlikely to apply U.S. law when deciding such cases. Accordingly, there is doubt as to the enforceability, in original actions in Norwegian courts, of liabilities predicated solely on U.S. federal securities laws. Furthermore, judgments of U.S. courts are not enforceable in Norway.

## **ITEM 4. INFORMATION ON THE COMPANY**

### **ITEM 4.A. HISTORY AND DEVELOPMENT OF THE COMPANY**

#### **Historical Overview**

Norsk Hydro ASA was organized under Norwegian law as a public company in 1905 to utilize Norway's large hydroelectric energy resources for the industrial production of nitrogen fertilizers. In the years since, energy, in the form of hydroelectric power, natural gas and petroleum, has been the basis for Hydro's growth and the common link among its core business activities.

Following the end of the Second World War, Hydro expanded into a number of new businesses. In 1951, Hydro began to produce magnesium metal and polyvinyl chloride at Porsgrunn, Norway. In 1967, Hydro opened an aluminium reduction plant and semi-fabricating facilities at Karmøy, Norway, and built the Røldal-Suldal hydroelectric power project to provide energy to the Karmøy facilities.

In 1965 and 1967, Hydro commenced production of ammonia at two large ammonia plants in Norway, one of which made use of naphtha and the other, heavy fuel oil, as feedstocks (i.e., sources of hydrogen) in the ammonia production process. Hydro had previously depended on the electrolysis of water to provide the hydrogen needed to produce ammonia used in nitrogen-based fertilizers. The discovery of natural gas in the Netherlands and on the continental shelf off England in the North Sea created a new and competing source of feedstock for ammonia in Europe. Consequently, Hydro began to take steps to ensure that it could continue to compete with other European producers of ammonia that were obtaining access to these relatively inexpensive natural gas supplies. As a result, Hydro began to investigate various opportunities to participate in oil and gas production. In 1965, Hydro obtained concessions from the Norwegian State to explore for petroleum on the NCS.

Hydro and its partners discovered oil and gas in the Ekofisk field in 1969 and in the Frigg field in 1971. Exploration of these discoveries ensured Hydro a source of feedstock for its fertilizer plants and also brought Hydro into the petroleum refining and marketing business. In 1975, Hydro began oil refining operations at Mongstad, Norway.

Norway's natural gas liquids resources and Hydro's experience in the chemical process industry served as the foundation for its investments in the petrochemicals industry in Norway, and in 1978, Hydro commenced production of ethylene and vinyl chloride monomer.

In the 1980s, Hydro acquired a number of businesses, both in Norway and in other areas. Hydro's expansion of its fertilizer operations resulted in Hydro becoming one of the leading suppliers of fertilizer in Europe. Hydro also entered a new era as an oil company, becoming operator of the Oseberg offshore oil field. Hydro also developed or tested new technologies for deep-water oil and gas production and horizontal drilling, which Hydro subsequently put to commercial use in developing the Troll oil project. In 1986-87, Hydro acquired the Norwegian State-owned aluminium company, Årdal og Sunndal Verk, and several European aluminium extrusion plants from Alcan and Alcoa, thus establishing Hydro Aluminium as a major business within Hydro and an important player in the European aluminium industry.

In recent years, each of Hydro's Oil and Energy and Aluminium businesses has grown as a result of substantial investments, including several acquisitions. In 1999, Hydro acquired Saga Petroleum a.s, a Norwegian-based oil company, merging Saga's operations into Hydro Oil and Energy. In 2002, Hydro acquired interests in eight oil and gas

licenses on the NCS from the Norwegian State. This acquisition increased Hydro's interests in the Oseberg, Tune and Grane fields, where Hydro is the operator. Hydro paid NOK 3.45 billion (US\$415 million) for the license interests which expire between 2015 and 2032. In March 2002, Hydro acquired all the outstanding shares of VAW for a total purchase price, including indirect acquisition costs, of euro 1,911 million (NOK 14.8 billion; US\$1.7 billion).

Earlier in that same year, Hydro acquired the French building systems supplier, Technal. A significant portion of the expansion of these two core business areas has been financed through the sale of non-core businesses.

In March of 2004, Hydro completed the demerger of its Agri business transferring all assets, rights, liabilities and obligations primarily relating to the Agri business to Yara International ASA.

Today, Hydro is a Fortune 500 energy and aluminium supplier operating in more than 40 countries. Hydro's other activities include: its petrochemicals business; a 68.8 percent interest in BioMar Holding AS (formerly Treka AS), whose activities consist of fish feed operations; the Company's service and support operations including Hydro Business Partner, Hydro IS Partner and Hydro Production Partner; and Industriforsikring a.s, a captive insurance company.

## General Information

As a public limited company organized under Norwegian law, the Company is subject to the provisions of the Norwegian act relating to public limited liability companies (i.e., the Norwegian Public Limited Companies Act). See the disclosure under Item 10.B. Articles of Association Description of Ordinary Shares for a more complete discussion of certain provisions of the Norwegian Public Limited Companies Act.

The Company's principal executive offices are located at Drammensveien 264, Vækerø, N-0240 Oslo, Norway; telephone number: 47-22-53-81-00. The Company's registered agent in the United States is Trygve Faksvåg, whose address is c/o Norsk Hydro Americas, Inc., 100 North Tampa Street, Suite 3300, Tampa, Florida 33802; telephone number: (813) 222-5700. Hydro's internet site is [www.hydro.com](http://www.hydro.com). The information on Hydro's website is not incorporated by reference to this annual report on Form 20F and should not be considered part of this report.

## ITEM 4. B. BUSINESS OVERVIEW

### HYDRO OIL AND ENERGY

Hydro Oil and Energy consists of two sub-segments, Exploration and Production and Energy and Oil Marketing.

**Exploration and Production** consists of Hydro's oil and gas exploration activities, field development activities and the operation of production and oil transportation facilities.

**Energy and Oil Marketing** consists of Hydro's commercial operations in the oil, natural gas and power sectors, the operation of Hydro's power stations, management of Hydro's interest in the gas transportation system on the Norwegian Continental Shelf as well as Hydro's seaborne transportation of crude oil, natural gas liquids and other petroleum products and the marketing and sales of refined petroleum products (e.g., gasoline, diesel and heating oil).

Definitions of oil and gas terms used throughout the business description of the Oil and Energy segment are provided at the end of the Exploration and Production business description. These terms have the meanings indicated unless the context indicates otherwise.

### EXPLORATION AND PRODUCTION

#### Introduction and Overview

Exploration and Production's business activities encompass oil and gas exploration, field development and the operation of production and oil transportation facilities.

Hydro has a significant position on the Norwegian Continental Shelf (NCS), where it is the third-largest producer of equity (i.e., owned) oil and natural gas. In 2004, approximately 90 percent of Hydro's average daily production of 572,000 barrels of oil equivalents ( boe ) was from the NCS. As an operator of 11 producing fields on the NCS with a total production in 2004 of approximately 979,000 boe per day ( boed ), Hydro is a relatively large operator of oil and gas fields, in particular, offshore fields.

Internationally, Hydro's main producing fields are in Canada and Angola. Hydro also has producing fields in Russia and Libya. In addition to these countries, Hydro is involved in exploration activities in other countries, including the United States (Gulf of Mexico) and Iran.

Hydro has a history of delivering strong production growth. From 1998 to 2004, Hydro has more than doubled its total equity production of oil and gas.

### **Oil Industry Trends**

The main trends in the oil industry affecting Hydro's Exploration and Production activities are described below. Trends affecting the energy market are described under the Energy business description.

#### ***High Crude Oil Price Levels***

Spot Brent prices have increased from about USD 20 per barrel to roughly USD 40 per barrel during the latest three years. Most of the price increase has occurred since the summer of 2003. Spot Brent averaged USD 38.2 per barrel in 2004, almost USD 10 per barrel higher than the 2003 average at USD 28.8 per barrel. There are primarily two main factors underlying the significant price increase over the last 18 months.

First, there has been a tremendous growth in oil demand in particular in China and also in North America as a result of substantial economic growth. According to the International Energy Agency (IEA), Chinese demand grew by 850,000 barrels per day in 2004 while demand in North America grew by 550,000 barrels per day. Most of the increase in demand related to light oil products such as gasoline and other distillates. However, growth in global refining capacity has not kept pace with the growth in demand, resulting in high margins for light oil products and a corresponding oversupply of heavy products. This, in turn, created large incentives for refiners to purchase light sweet crude oils like Brent and West Texas Intermediate (WTI). OPEC reacted by increasing production, however, the additional OPEC crude oil was not of the quality refiners were demanding. Second, there has been increasing political unrest in key oil producing countries, in particular, Iraq and Saudi Arabia. Acts of terror and sabotage in these countries have escalated throughout 2004.

OPEC aims to function as a stabilizing force in the market. Its long-term price target has been considered to be USD 25 per barrel. However, many analysts believe that the cartel will raise its price target in 2005 to above USD 30 per barrel. Increasing finding and development costs outside OPEC and few indications of declines in consumption resulting from oil prices over USD 30 per barrel are factors underlying a higher target price for OPEC. Analysts believe that a higher target price may increase exploration activity outside OPEC, as more projects become economical to develop. However, notwithstanding an increase in target price, crude oil prices could continue to reflect cyclical periods of high and low prices from the interplay between market forces and actions taken by OPEC.

#### ***Exploration activity changing expenditure trends***

The IHS Energy's 2004 report on world petroleum trends shows that while total expenditures increased from 1994 to 2003, exploration expenditures as a proportion of total exploration and development expenditures has decreased from 26.8 percent in 1998 to 18.7 percent in 2003. However, there is a time-lagged correlation between higher oil

prices and exploration activity, which indicates that there could be an upturn in strategic exploration investment.

### ***Reduced Exploration Results Worldwide***

Based on preliminary data from IHS Energy, worldwide oil and gas exploration activity during 2004 resulted in significantly smaller discoveries and lower amounts of hydrocarbons discovered compared to the previous two years. Based on the top two hundred discoveries world wide, average discovery sizes dropped significantly from 2003/2002 to 2004.

It is becoming increasingly difficult to replace oil production by new discoveries. As a result, advances in reservoir management technology to increase recovery are becoming more important. Fewer major discoveries has also increased the focus on developing viable solutions for exploiting smaller oil fields.

### ***Deepwater Dominates Major Finds***

Advances in deep water technology have opened up new areas for exploration and development. According to IHS Energy data, the trend observed in 2003 of the dominance of deep-water discoveries continued in 2004. During the year, 12 of the 20 largest discoveries originated from deep-water explorations. Areas with significant discoveries were India, Brazil, Angola, Egypt, Vietnam, Mauritania, as well as parts of West Africa. Overall exploration results offshore Canada, Norway and the UK continued to be disappointing.

### ***Maturing Areas in the Developed World the NCS***

The NCS, where 92 percent of Hydro's proven reserves are located, is maturing. Norway's oil production continued to decline in 2004, with total oil production reduced by about 1.6 percent compared to 2003. Oil production from new development is not keeping pace with production declines from maturing fields.

Increasing gas production offset to some extent the negative trends in oil production. In 2004 approximately 78 billion cubic metres of gas were sold from the NCS, an increase of more than 7 percent compared to 2003. Combined with increased condensate and natural gas liquids (NGL) production, total petroleum production for 2004 resulted in a marginal increase of 0.5 percent compared to 2003.

The increased price assumptions mentioned above are believed to have a positive impact on Hydro's investment opportunities in Norway and internationally over time. A permanent increase in NCS exploration and development activity will, however, be dependent on more than just high prices. Two major factors that will also affect long-term activity on the NCS are whether the Norwegian authorities will allow increased access to attractive acreage and whether the Norwegian tax system will be revised to increase the international competitiveness of the petroleum industry in Norway.

As part of the Revised National Budget, passed in June 2004, the Norwegian government made certain changes to the Petroleum Tax Act, which will be put forward in the budget for 2005. These changes are described more in detail under the caption Taxation of Oil and Gas Production. Hydro believes that the changes are moderately positive.

### **Strategy and Competitive Position**

Hydro's goal is to position itself as one of the most profitable players in the upstream oil and gas business by exploiting its core competencies, underlying all elements of the value chain including exploration, design, execution and operations. In addition, Hydro is determined to maintain a strong commercial attitude in all its endeavors to create value. To achieve its goals, Hydro intends to focus its exploration and production activities on:





delivering strong production growth through 2008 based on Hydro's existing portfolio in well-defined, profitable projects;

building the basis for future, long-term production through three avenues for growth:

Existing portfolio

Exploration

Acquisitions; and

improving the profitability of existing assets.

### ***Delivering Strong Production Growth***

Growth is important for business performance but also for the development of an organization's capabilities. Hydro has a history of delivering strong production growth. From 1998 to 2004, Hydro more than doubled its total equity production of oil and gas. The increase included organic growth on the NCS, start-up of production from Hydro's international activities, and the acquisition in 1999 of Saga Petroleum. In addition, during 2002, Hydro acquired increased ownership interests on the NCS from the Norwegian State in the Hydro-operated fields Oseberg, Tune and Grane.

Total oil and gas production in 2004 was 572,000 boed, representing an increase of almost 8 percent over the prior year. This increase reflected the first full year of production from the Grane field and the Fram field, both of which came on-stream in the fall of 2003, as well as the start-up of new fields in 2004, when Skirne came on-stream in May and Kvitebjørn started producing in the end of September. The positive effects of these developments were partly offset due to the Snorre, Vigdis and Terra Nova shutdowns caused by oil- and gas leakages and the declining production from maturing fields.

Hydro had previously announced a targeted average compound annual growth rate for production of 8 percent for the 2001-2007 period. Hydro has extended this target to 2008, and expects that this production growth will be achieved within its existing portfolio based on producing fields, fields under development and fields planned for development. More than 60 percent of the production in 2008 is expected to come from currently booked proved reserves. Hydro has targeted an average daily production of 575,000 boe for 2005, of which approximately 85 percent is expected to come from currently booked proved reserves. For further information regarding currently booked proved reserves, see the table of proved reserves included in Note 27 to the Consolidated Financial Statements. See, also, the description of fields underlying the growth projections within the disclosure under Item 4B Business Overview Hydro Oil and Energy Exploration and Development Development within this annual report.

In 2004, approximately 10 percent of Hydro's total oil and gas production came from outside the NCS, mainly Canada and Angola. Total international oil production was approximately 58,000 boed.

### ***Building the Basis for Future Production***

In 2004, Hydro evolved its strategy for upstream growth in each geographical area it operates in based on the following key elements:

the optimal development and exploitation of **existing assets** to secure a solid foundation for new opportunities.

improved working processes support **exploration** as a source of longer-term growth. Hydro has decided to increase the level of exploration in 2005 and plans to operate and participate in approximately 30 exploration and appraisal wells during the year.

acquiring **proven resources** where Hydro's core competencies and expertise, including advanced drilling techniques, flow-assurance, reservoir management and execution of complex and technologically challenging projects, can add value to assets traded in the marketplace. The current high oil price level creates both opportunities for and challenges to future production growth. In general, Hydro believes that new opportunities will arise relating to existing assets and for exploration activities. In addition, although increasingly more expensive, the acquisition of technical resources still provides attractive potential through the application of Hydro's distinct capabilities, and in 2004, the Company has entered into deals and evaluated several other opportunities.

As a consequence of the high crude oil levels, Hydro has decided to increase the price assumptions used for oil and gas investment decisions to 25 USD/boe for Brent Blend equivalent quality for oil-related investments. Similar adjustments have been made for gas-related investments. However, all investment decisions will be evaluated for robustness using 20 USD/boe for Brent Blend equivalent. Investment proposals failing to meet this test will be subject to a more in-depth risk assessment prior to investment decisions. Hydro believes that the changed price assumptions will result in new business opportunities that were previously deemed uneconomic.

Hydro's international expansion has been based on alliances with regional producers and international partners with a focus mainly on oil prospects. Hydro is also pursuing exploration and production opportunities in gas prospects within close proximity for piped transportation to the European market (see also Energy and Oil Marketing Strategy and Competitive Position - Enhancing the Value of Hydro's Natural Gas Portfolio ).

Hydro's strategy for international expansion has been to concentrate its efforts in areas with sufficient potential to create economic scale. Hydro's technological competence, including the application of leading-edge reservoir and development solutions developed through its experience as an operator of oil and gas producing fields in the harsh Norwegian offshore environment, has provided a solid basis for Hydro's international expansion.

Over time Hydro has been working to increase its local geological knowledge in focused areas. The combination of expertise in all parts of the value chain gained on the NCS with an understanding of complex local geological, political and other business factors is proving valuable in Hydro's increased focus on internationalization of its oil and gas business.

### ***Improving the Profitability of Existing Assets***

Hydro continues to pursue cost improvements in its exploration and production activities. As fields on the NCS mature and demonstrate a decline in production, high priority will be given to reducing costs and implementing measures to increase production on existing fields, including development of satellite fields that may be time critical with respect to utilizing existing infrastructure. Hydro's objective is to maintain and improve its status as an efficient operator.

Hydro has announced a targeted production cost<sup>1</sup> in 2005 of NOK 24/boe. Hydro's actual cost was NOK 20.7 in 2004. The difference between actual and target results from expected cost for gas injection into the Grane field. Hydro plans to continue its efforts to drive down costs on operated facilities despite the underlying maturing nature of the portfolio.

### ***Strong Position on the NCS***

The NCS has been the most important area for Hydro's oil and energy business, and this is expected to continue to be the case for the foreseeable future. The following reflects Hydro's view regarding potential opportunities on the NCS:

---

- <sup>1</sup> Production cost is comprised of the cost of operating fields, including CO<sub>2</sub> emission tax, insurance, gas purchased for injection, and lease costs for production installations, but excluding transportation and processing tariffs, operation costs for transportation systems and depreciation.

Many of Hydro's oilfields on the NCS contain large amounts of gas. As a result, Hydro's current portfolio on the NCS will become increasingly linked to gas. These gas resources are highly profitable because most of the necessary infrastructure is in place and flexible export opportunities exist.

There are significant unexploited hydrocarbons in most of Hydro's operated fields. Hydro believes that such hydrocarbons could be exploited depending on the implementation of new technological solutions combined with an aggressive focus on cost-efficiency.

Infrastructure-led exploration has resulted in several minor discoveries that could be developed close to or tied into existing facilities. Hydro is continuously seeking optimal development solutions for these resources.

There is a potential for further infrastructure-led exploration. Existing infrastructure with spare liquid capacity is a key driver for exploration in maturing areas of the NCS. Hydro plans to drill 4-5 wells per year within its core areas to optimize the resource utilization in the vicinity of its operated facilities. Active infrastructure-led exploration is also a key factor in maintaining production cost per barrel at a profitable level and extending the life of the infrastructure in the tail-end production phase.

In recent years frontier exploration in Norway has yielded disappointing results. Licenses awarded in the 17th and 18th rounds, however, in addition to the re-opening for exploration of the Barents Sea, have provided acreage with interesting high-risk/high-reward prospects for Hydro. Hydro plans to drill between 5 to 10 wells on this acreage in the coming years. In December 2003, the Norwegian government decided to allow further petroleum activities within areas already open for exploration in the southern part of the Barents Sea with some exceptions. The Norwegian government also intends to reevaluate the re-opening of Nordland VI as part of an integrated management plan for the Barents Sea, which is expected to be finalized in the spring of 2006.

In total, Hydro has a sizeable and balanced exploration portfolio on the NCS comprising acreage extending from the southernmost Farsund Basin to the Barents Sea, both near infrastructure and in frontier areas. In 2004, Hydro's strong position on the NCS was reflected through awards of high equities and operatorships in all prioritized blocks made available in both the 18<sup>th</sup> Concession Round and the Awards in Predefined Areas.

Hydro is the third-largest producer on the NCS, trailing Petoro (the Norwegian State oil and gas holding company) and the majority State-controlled Statoil. In 2004, approximately 90 percent of Hydro's average daily equity production of 572,000 boe came from the NCS.

As of 31 December 2004, Hydro had interests in 104 licenses on the NCS, of which it was operator of 54 licenses. In total, the licenses cover a gross offshore area of around 38,710 square kilometers (km) in the North Sea, the Norwegian Sea and the Barents Sea. The corresponding net offshore area (Hydro's share) is around 13,790 square km. Hydro also has interests in four exploration areas with a total of 9 optional licenses on the NCS, of which it is operator of one area. Each of the optional licenses may turn into a license under normal conditions if the partners commit to an exploration well following seismic evaluations. These four exploration areas cover an additional gross area of more than 14,000 square km and a net area of about 4,480 square km.

Hydro is the operator of 11 producing oil and gas fields on the NCS: Oseberg, Oseberg Øst (East), Oseberg Sør (South), Brage, Tune, Njord, Troll Oil (Troll B and C), Heimdal, Vale, Grane and Fram Vest. Hydro is also the operator of the development phase of the large Ormen Lange gas field, for which the Plan for Development and Operation ( PDO ) was approved by the authorities in April 2004. Hydro also submitted a PDO for the Vilje field on the NCS in 2004, which is planned to be developed as a subsea tie-back solution to the Marathon-operated Alvheim facilities. In November 2004, Hydro submitted a PDO for gas export from the Njord Field to the authorities, which was approved in January 2005.



The total average daily production in 2004 from Hydro-operated fields was approximately 979,000 boe, which demonstrates that Hydro is a relatively large operator of oil and gas fields, in particular offshore fields. Measured in terms of equity production, however, Hydro is a medium-sized upstream oil and gas company. This is partly due to the Norwegian licensing system, under which a relatively low equity interest historically has been awarded to the operators.

Hydro has an equity interest in most of the main producing oil and gas fields on the NCS. The most important producing fields for Hydro in 2004 were the fields in the Oseberg area, the Troll field and the Snorre fields. The Grane oil field, which started production in 2003 and is expected to reach plateau production at the end of 2005, is now a large contributor to Hydro's Norwegian oil production. Other important fields were Åsgard, Tune, the Sleipner fields, the Gullfaks fields, and the Ekofisk fields. The Ormen Lange field is the largest field presently under development on the NCS and Hydro expects that Ormen Lange will be an important part of Hydro's production after start-up in 2007.

Hydro will continuously evaluate opportunities to optimize its portfolio on the NCS. In January 2004, Hydro signed an agreement with Statoil for the sale of Hydro's equity share in the Snøhvit field. The sale was approved by the Norwegian authorities and completed in 2004. In 2003, Hydro also entered into an agreement to sell its interest in the Gjølå field, which is presently in the pre-development phase. The sale was completed in the first quarter of 2004.

In January 2004, Hydro agreed to purchase an additional 2 percent equity interest in the Kristin field from Statoil in order to improve Hydro's position in the Norwegian Sea. In the second quarter of 2004 Hydro also signed an agreement for the purchase of ExxonMobil's 20 percent equity share in license PL 248 including gas-condensate discoveries. Hydro is the operator of PL 248 with an equity share of 40 percent after the acquisition. In order to ensure a cost effective development of Skinfaks/Rimfaks fields, Hydro acquired a 9 percent share in licenses PL 152, PL 277 and PL 037 E. After this transaction Hydro has 9 percent in all licensees involved in the Skinfaks/Rimfaks development.

### *Interesting International Positions*

In 2004, Hydro's international oil production represented approximately 10 percent of its total oil and gas production. The main producing fields are in Canada and Angola. Hydro also has producing fields in Russia and Libya. In addition to these countries, Hydro is involved in exploration or exploration-related activity in other countries, including the United States (Gulf of Mexico), Iran, Denmark, Madagascar and Morocco.

**Angola:** Hydro has participated in Angola's oil and gas industry since 1991. Hydro's main asset is its 10 percent interest in the deep water offshore Block 17, where a total of 15 discoveries have been made as of 31 December 2004. This includes Girassol and Jasmim, which contributed to Hydro an average of almost 22,000 boed of oil production in 2004. The development of the Dalia project is progressing and is expected to come on stream in 2006. The development of the Rosa field was approved in 2004 as a tie-back to the Girassol field. Rosa is expected to come on stream in 2007. The process of selecting a development solution is ongoing for the Cravo and Lirio discoveries, as well as for the Acacia, Zinia, Perpetua and Hortenzia discoveries. Development of a third production hub in Block 17 has been targeted as a potential concept.

Hydro also holds a 30 percent interest and is the technical assistant to the Angolan national oil company, Sonangol, the field operator, on Block 34. The first well, drilled in April 2002, did not result in the discovery of hydrocarbons. A second exploratory well, drilled in December 2003, discovered gas, but was considered a non-commercial well. Technical evaluations are continuing and are focusing on new exploration models for a third exploratory well.



As of 31 December 2004, Hydro holds shares in a total acreage of around 9,000 square km, mainly deep-water or ultra deep-water acreage with water depths down to 2,600 meters. Of this acreage, about 5,900 square km is exploration acreage where Hydro has a 30 percent interest.

**Canada:** In 1996 Hydro entered into a strategic alliance with Petro-Canada which included a swap of certain Hydro interests in licenses on the NCS in exchange for the right to participate in oil production from proven fields and explore for further oil discoveries on the Grand Banks of Newfoundland. Hydro has maintained its ownership position in the ongoing projects acquired in 1996. Hydro has ownership in two producing fields, Hibernia and Terra Nova, and is presently focusing on optimization of these two fields. Hydro holds a 5 percent interest in the Hibernia field and a 15 percent interest in the Terra Nova field. These fields contributed a total average oil production of approximately 27,000 boed in 2004. Hydro is also working together with the operator, ChevronTexaco, to develop the Hebron field in the same area.

Hydro's strategy in Canada includes infrastructure led exploration, maturing the existing exploration license portfolio and assessing risks and volumes in immature basins on the Grand Banks and on the Scotian Shelf. At present, Hydro is working with its partners in evaluating the Annapolis discovery located offshore Nova Scotia. As of 31 December 2004, Hydro's 11 exploration licenses cover a gross exploration area of approximately 18,000 square km and a net exploration area of approximately 6,200 square km, including shelf and deep-water acreage with water depths ranging from 50 to 3,100 meters.

**Russia:** Hydro has been present in Russia for 15 years and has equity production from the onshore Kharyaga field, which covers about 350 square kilometers of acreage in the Timan Pechora basin. Hydro is a 40 percent co-owner. This field started production in 1999 and phase two came on stream in 2003. In 2004, average equity production was 6,700 boed, which was less than expected partly due to lack of access to transportation. Hydro believes that this problem will be solved in 2005. Hydro is also pursuing new business opportunities in Russia. In December 2004, Hydro signed a Memorandum of Understanding (MoU) with Gazprom for the evaluation of the giant Shtokman gas field, which is located in the deep water continental shelf on the Russian side of the Barents Sea. The MoU outlines a joint work program between the two companies covering technical, marketing and commercial aspects of the project.

**Libya:** Hydro is a partner in the onshore Mabruk field, which lies in the northern part of the country. Hydro holds a 25 percent interest in Mabruk. In addition, Hydro has taken part in oil exploration in the Murzuq Basin, in the Sahara Desert, since 1998. Production in the Murzuq Basin started in the autumn of 2003 from the A-field and in June 2004 from the D-field. Hydro's equity share of the fields in the Murzuq basin is 20 percent in the exploration phase, 10 percent in the development phase and 8 percent in the production phase. Total average daily equity production from Hydro's Libyan fields was around 2,800 boed (net after royalties and profit oil) in 2004. Libya represents an interesting resource potential. Hydro will continue to pursue new opportunities in Libya in light of the currently improving general political situation in the country. As of 31 December 2004, Hydro's four licenses in Libya cover a gross onshore area of around 37,000 square km. The net exploration acreage is around 7,400 square km.

In 2004, Hydro and Wintershall formed a consortium for the purpose of evaluating and negotiating new business opportunities in Libya in 2004 - 2006, and possibly beyond. Wintershall, a crude oil and natural gas producer based in Germany, has been active in Libya since 1958.

**Iran:** Hydro established an office in Tehran, Iran during November 1999. Hydro currently has no assets under development or in production in Iran. In April 2000, Hydro entered into a contract with the National Iranian Oil Company for the exploration of the Anaran Block close to the Iraqi border. The Anaran Block covers an area of approximately 3,200 square kilometers, of which Hydro will acquire 1,000 square km of 2D seismic and drill 5 wells. The contract has a term of 4.5 years with an option for a one-year extension. In July 2004, Hydro was granted a one-year extension until October 2005. The agreement provides Hydro with the right to enter into negotiations for a

buy-back agreement to develop

reserves in the event of a commercial discovery. The Anaran block is considered challenging to explore, with a difficult geological environment. After clearing seismic tracks for mines, Hydro completed the seismic acquisition program. The first well (Azar 1) was spudded in the spring of 2003, but drilling proved to be more difficult than anticipated, and the well was abandoned in January 2004. Azar 2 was spudded in May 2004 with the same target as Azar 1, and is estimated to be completed in the second quarter of 2005. Pending the results from this well, Hydro plans to drill a third well on the block (the Changuleh West well) during the second half of 2005. Hydro's farm-out of 25 percent of the interest in the Anaran contract to the Russian company, Lukoil, was approved by the Iranian authorities in 2003, leaving Hydro with an equity share of 75 percent.

Hydro's prime objective in Iran is to focus on completion of the exploration program on the Anaran Block. A successful completion of the activity in Anaran could better position Hydro for new opportunities in Iran. Hydro has submitted a bid for a new exploration contract on the Khoramabad block in the Lurestan area. Awards are expected to be announced in the summer/fall of 2005. In September 2004, Hydro submitted a bid for negotiating a contract for developing the Yadavaran field. Awards for companies to enter into negotiations are expected to occur during the first half of 2005.

**US Gulf of Mexico:** Hydro entered into a joint venture agreement with ConocoPhillips in September 2001. The agreement provided Hydro with a 25 percent working interest in five firm and three contingent exploratory wells in the US Gulf of Mexico. An obligation to participate in the fifth firm well was later eliminated and the joint venture agreement amended to provide for Hydro's participation in the Lorien prospect, which at the time was operated by ConocoPhillips. The Lorien prospect was drilled in 2003 and resulted in a discovery. The other four firm wells did not result in commercial discoveries. In 2004, Hydro increased its working interest in the Lorien discovery from 10 to 30 percent. An appraisal well was drilled in 2004 and an integrated project team is working on plans for developing the Lorien discovery, which is now operated by Noble Energy. Hydro also acquired a 57.5 percent interest in the Champlain discovery in 2004. In January 2005, Hydro was approved by the Minerals Management Service - Gulf of Mexico Region, as operator of the Champlain field. As the new operator, Hydro has renamed the field Telemark. In total, Hydro's 72 exploration leases as of 31 December 2004 in the US Gulf of Mexico, of which Hydro is the operator of 27 leases, cover a gross exploration area of around 1,700 square km, and a net exploration area of around 790 square km, in deep-water. Hydro has concentrated its efforts in the Central US Gulf of Mexico to establish a good geological knowledge base in the area. In the lease sale in April 2004, Hydro was awarded seven new exploration blocks, all in these areas.

In addition, Hydro has two exploration licenses in **Denmark**. Hydro had one exploratory license in **Trinidad and Tobago**, which was relinquished in December 2004. During 2004 Hydro also commenced evaluation of frontier acreage offshore **Madagascar** in the Majunga basin together with ExxonMobil and Vanco Energy, an oil and gas company based in the US. The gross exploration acreage is almost 18,000 square kilometers, and Hydro has a 30 percent equity share while Vanco is operator of the project. Acquisition of seismic information was finalized in 2004, and limited financial exposure exists at present. Drilling alternatives will be evaluated during 2005 prior to potential exploration decisions. A similar approach was taken relating to the NW Safi offshore basin in **Morocco** during 2004. Hydro signed an investigation contract for the license in April 2004. The gross exploration acreage is about 6,500 square km. Hydro is the operator of the project, and plans to develop possible drilling prospects prior to seeking potential partners to reduce its financial exposure prior to actual drilling.

## Exploration

The following tables reflect the number of exploratory oil and gas wells drilled by Hydro as of 31 December 2004. The first table reflects all of the gross exploratory wells drilled and completed during the years indicated. The second table reflects the exploratory wells in the process of being drilled as of 31 December 2004. A total of 17 wells were drilled and completed in 2004, of which 11 were considered productive. In addition, 3 wells were in the process of

being drilled at year-end.

**Drilling Activity**

		Norway			International			Total		
		2004	2003	2002	2004	2003	2002	2004	2003	2002
Exploratory wells										
Productive <sup>(1)</sup>	Gross <sup>(3)</sup>	2	2	6	9	1	8 <sup>(5)</sup>	11	3	14 <sup>(5)</sup>
	Net <sup>(4)</sup>	0.33	0.4	0.78	1.8	0.1	1.2	2.13	0.5	1.98
Dry <sup>(2)</sup>	Gross	4	4	5	2	6	12	6	10	17
	Net	1.05	0.8	1.24	0.45	1.64	2.67	1.5	2.42	3.91

<sup>(1)</sup> A productive well is an exploratory well deemed to be commercially viable.

<sup>(2)</sup> A dry well is an exploratory well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

<sup>(3)</sup> A gross well is a well in which a whole or fractional working interest is owned.

<sup>(4)</sup> A net well is the sum of the whole fractional working interests in gross wells which equal one.

<sup>(5)</sup> Includes the Acacia and Hortensia discoveries in Angola. These wells were drilled during 2002 and the result announced in 2003.

**In Process Drilling Activities**

As of 31 December 2004		Norway	International	Total
Exploratory	Gross	0	3	3
	Net	0	1.1	1.1

As part of its exploration program in 2005, Hydro plans to participate in approximately 30 exploration and appraisal wells. Around 20 of these wells are planned on the NCS and the remaining wells are planned internationally, mainly in Libya and Angola.

**Norway**

In 2004, Hydro participated in 6 exploratory wells and was operator for one of the wells. Two of the wells resulted in commercial discoveries: the Linerle well, located north of the Norne field, and the Topas well, located between the Gullfaks and Visund fields. The Linerle discovery, in which Hydro holds a 13.5 percent interest, will be evaluated through one or two appraisal wells in 2005. The Hydro-operated exploratory well, Brontes, which is located south of the Oseberg field, was dry. In 2004, Hydro also participated in drilling activity in connection with producing wells that resulted in three additional commercial discoveries: the Vigdis extension well, the Brage 31/4-A-30 B well, and an extension of the first production well on the Kristin field that proved a new reservoir zone, the Tofte formation.

Several of the wells planned for 2004 were postponed due to operational problems and a labor dispute relating to floating rigs on the NCS. These wells include the Obelix well in the Barents Sea, the Stetind well located in the deepwater Norwegian Sea, as well as the Hejre appraisal well located in Denmark.

In 2004 Hydro was awarded a total of 12 new licenses. Four of the licenses were awarded as part of the 18<sup>th</sup> Concession Round initiated in December 2003, and 8 related to licenses offered in the Awards in Predefined Areas initiated in January 2004. Several of the licenses awarded to Hydro have the potential for large discoveries and new,

stand-alone developments. These include the award in the Farsund Basin blocks 11/5 and 11/6 and the award in block 35/2, where Hydro was chosen as operator and awarded a 60 percent equity interest.

In October 2004, the government requested the nomination of blocks for the 19<sup>th</sup> Concession Round covering the Norwegian Sea and the Southern Barents Sea. The deadline for submission of nominations was 23 February 2005. The deadline for submission of license applications is expected to be the fourth quarter of 2005, with awards of new licenses taking place early in 2006. In January 2005, the government announced the Awards in Predefined Areas 2005. The deadline for submission of applications is 30 September 2005 and the awards are planned to take place in December 2005.

Hydro is the operator of PL 248 located in the northern part of the North Sea and intends to submit a PDO of these gas-condensate discoveries during 2005. Production is planned to begin during 2008, but the actual start date is highly dependent upon the development concept selected. The current plan is to develop the discoveries as subsea tie-backs to existing or new infrastructure in the area. In 2004, Hydro acquired an additional 20 percent equity share in PL 248 from ExxonMobil and now holds a 40 percent equity interest.

### *International*

In 2004, Hydro's international exploration activities encompassed Angola, Canada, Libya, Iran, the United States (Gulf of Mexico), and Denmark. Hydro participated in 11 exploratory and appraisal wells that were completed during 2004.

In **Angola**, one appraisal well was successfully drilled and completed on Block 17 during 2004. A second appraisal well was spudded in December and is scheduled to be completed in the first quarter of 2005. The appraisal wells are expected to confirm the reserve estimates as a basis for selecting a development concept during 2005 for the UM area in Block 17. Appraisal of the Lirio discovery in Block 17 is planned for 2005. One exploration well remains to be drilled in Block 34 and alternative exploration models will be evaluated for the well. In 2004, Sonangol P&P found oil in Block 4 in cooperation with Hydro. Sonangol P&P and Hydro have signed a letter of intent with the objective to commercialize the discovery.

In **Canada**, one well was drilled relating to a new prospect in the Annapolis license. The well did not result in a commercial discovery.

In **Libya**, two exploration wells and six appraisal wells relating to license NC-186 in the Murzuq basin were drilled during 2004. Three appraisal wells were drilled on the B-structure of NC-186 and a Field Development Plan ( **FDP** ) was submitted to Libyan authorities in December. A new commercial discovery was made on the H-structure in NC-186 and 3 appraisal wells were drilled. By year end, production testing was taking place in well H4 in the NC-186 license. The exploration and appraisal program in Libya will continue in 2005 with the planned drilling of further wells relating to the Murzuq licenses.

In **Iran**, the Azar 1 well on the Anaran block was spudded in the spring of 2003 and was abandoned in January 2004 due to technical difficulties. Azar 2 was spudded in May 2004 with the same target as Azar 1. Completion is estimated during the second quarter of 2005.

In the **US Gulf of Mexico**, Hydro participated in a successful appraisal well relating to the Lorien discovery.

In **Denmark**, Hydro has a 25 percent interest in license 6/98 covering the Hejre discovery. An appraisal well was completed at the end of February. The well discovered hydrocarbons, and the results will now be further evaluated before a decision can be taken regarding possible development and production on Hejre.

### **Reserve Information**

At the end of 2004, Hydro's share of proved developed reserves of oil and gas was estimated to be 1,447 million boe. Hydro's share of proved undeveloped reserves accounted for an additional 629 million boe. Total developed and undeveloped proved reserves amounted to 2,076 million boe, of which gas reserves represented approximately 56 percent.



Reserve life, defined as the number of years of production from proved reserves at the present production level, was approximately 10 years at the end of 2004, with approximately 6 years for oil and approximately 21 years for gas.

The following table summarizes Hydro's net quantities of proved oil and gas reserves as of 31 December 2004, 2003 and 2002.

### Oil and Gas Reserves

Oil in millions of boe	2004			2003			2002		
	Norway	Int'l (1)	Total	Norway	Int'l (1)	Total	Norway	Int'l (1)	Total
<i>Gas in billions of cubic feet ( bcf )</i>									
Proved oil reserves, developed and undeveloped <sup>(2)</sup>	749	156	905	839	154	993	883	172	1,055
Of which developed	607	97	704	690	88	778	559	93	652
Proved gas reserves, developed and undeveloped <sup>(2)</sup>	6,626		6,626	7,317		7,317	6,629		6,629
Of which developed	4,197		4,197	4,415		4,415	4,416		4,416
Proved oil and gas reserves, developed and undeveloped (in millions of boe) <sup>(2)</sup>	1,920	156	2,076	2,134	154	2,288	2,053	172	2,225
Of which developed	1,350	97	1,447	1,470	88	1,558	1,339	93	1,432

(1) Reserves reflected in the International columns are shown net of royalties in kind and the government's share of profit oil.

(2) For the definition of proved reserves, proved developed reserves and proved undeveloped reserves, and applicable conversion factors, see Definitions of Oil and Gas Terms at the end of the Exploration and Production business description.

Proved reserves are estimates and are expected to be revised as oil and gas are produced and additional data become available. Accordingly, recoverable reserves are subject to upward and downward adjustments from time to time. Please see the discussion in Item 5. Operating and Financial Review and Prospects Hydro's Critical Accounting Policies Proved Oil and Gas Reserves.

An analysis of changes to proved developed and proved undeveloped reserves of oil and gas as of and for the three years ended 31 December 2004, 2003 and 2002 is included in the table in Note 27 to the Consolidated Financial Statements. Estimates of the proved reserves, presented on an individual field basis, as of 31 December 2004, can be found in Exhibit 99.2 Operational Data to this annual report.

### Development

In 2004, Hydro invested<sup>2</sup> NOK 10,678 million in the development of new and existing fields and transportation systems compared to NOK 8,487 million and NOK 8,222 million in 2003 and 2002, respectively. The implementation of SFAS 143 relating to asset retirement obligations resulted in an additional charge of NOK 1,089 million for 2003,

which is not included in the above amount. For more information on Hydro's adoption of SFAS 143, see Note 1 to the Consolidated Financial Statements. Hydro's most important exploration and production development projects in 2004 were the Snøhvit, Kristin, Ormen Lange, and Dalia fields. Hydro's sale of its equity share in Snøhvit was finalized 31 December 2004.

---

<sup>2</sup> Includes changes in estimates for asset retirement costs and new accruals for fields that commenced production during the year.

A summary of the fields under development as of 31 December 2004 is included in the following table. Only the main fields are presented in the table. Development projects in connection with fields under production and smaller satellite developments relating to fields in production are described under the caption "Production" below.

### Fields under Development

Field	Type of Field	Production		Total Estimated Investment <sup>(1)</sup> (in NOK billion)	Investment Incurred to Date <sup>(1)</sup> (in NOK billion)	Hydro's Equity Share
		Approved for Development	Scheduled to Commence			
<i>Norway</i>						
Ormen Lange <sup>(2)</sup>	Gas/Condensate	April 2004	October 2007	52.9	4	18.0728%
Kristin <sup>(3)</sup>	Oil/Gas	December 2001	October 2005	20.8	14.7	14%
Vilje <sup>(4)</sup>	Oil	Pending approval	February 2007	2.2	0	28.8%
<i>International</i>						
Dalia	Oil	April 2003	October 2006	22.6	7.5	10%
Rosa	Oil	August 2004	April 2007	12.4	2	10%

(1) Total Estimated Investment and Investment Incurred to Date amounts are as of 31 December 2004. These amounts represent the total estimated investment based on the PDO or current cost estimate and total incurred investment for the applicable field, respectively. All amounts are in nominal values (i.e., not discounted to present value). The exchange rate used for Dalia and Rosa was US dollar/NOK 6.0386 as of 31 December 2004.

(2) The total estimated investment for Ormen Lange excludes the cost of the Langeled gas export pipeline.

(3) Hydro's interest in the Kristin field was increased from 12 percent to 14 percent in 2004. The operator of the Kristin field, Statoil, increased the investment estimate for Kristin in March 2005. The Kristin reservoir is very complex and deep, and has a number of faults, and flow properties are not as good as the development plan forecast.

(4) The Vilje PDO was submitted to the authorities in December of 2004. Approval is expected in March 2005.

In connection with the development projects described in this section, Hydro has invested (excluding internal costs) NOK 0.2 billion, NOK 1.1 billion and NOK 2.6 billion for the years 2002, 2003 and 2004, respectively. Estimated investments for the same projects for 2005, 2006 and 2007 are NOK 4.1 billion, NOK 3.7 billion and NOK 1.7 billion, respectively.

#### *Norway*

The PDO for the **Ormen Lange** gas field was submitted to the Ministry of Petroleum and Energy on 4 December 2003, together with the Plan for Installation and Operation ( **PIO** ) for the new gas export pipeline, Langeled. The authorities approved both the PDO and the PIO in the beginning of April 2004. Ormen Lange is situated in water depths of 850 to 1,100 meters in the Norwegian Sea, 100 km off the northwest coast of Norway. Based on seismic and other data, Ormen Lange is believed to be the second-largest gas field and the largest field presently under development in Norway. Given Hydro's estimate of the total proved reserves for the field, Hydro's share is 234 million boe including 35.0 billion cubic meters (bcm) of gas. The field development is planned as a sub-sea installation linked to the Nyhamna onshore processing plant not far from the city of Molde in Norway. Gas is to be exported from the plant through a new pipeline (Langeled) via the Sleipner riser platform to Easington

on the east coast of England. Langedel will be merged with the Gassled pipeline joint venture after start-up of operations of the southern leg of the pipeline in 2006. Production is scheduled to begin in October 2007. The total investment, in nominal terms, is estimated at NOK 72.9 billion, including NOK 52.9 billion for field and plant development and NOK 20 billion for the pipeline. Hydro's equity share is 18.0728 percent. Hydro is the operator during the development phase of the field.

The **Kristin** oil and gas field is situated in the Norwegian Sea, approximately 20 km south of the Åsgard field. The field will be developed with sub-sea production facilities tied back to a semi-submersible production platform. Gas will be exported through the Åsgard transport pipeline while condensate will be loaded offshore from Åsgard C. Production from the field is expected to commence in October 2005. Hydro entered into an agreement with Statoil in 2004 to increase its interest in the Kristin field from 12 to 14 percent. The Norwegian authorities approved the transaction during the second quarter of 2004. The transaction was finalized in December 2004. Given Hydro's estimate of the total proved reserves for the field, Hydro's share is 43 million boe including 2.8 bcm of gas.

The **Vilje** oil field (formerly called Klegg) will be developed as a 2-well subsea tie-back to the Alvheim Floating Production, Storage and Offloading unit ( **FPSO** ) situated 18 km away. The PDO is expected to be approved in March 2005. The total investment, in nominal terms, is estimated at NOK 2.2 billion. Hydro's equity share in the Vilje field is 28.8 percent. Production is expected to commence in February 2007, dependent upon production start of the Alvheim FPSO, which is currently under construction. Hydro has no equity interest in the Alvheim development.

In January 2004, Hydro announced that it had entered into an agreement to sell its equity share in licenses relating to the **Snøhvit** field to Statoil. The Norwegian authorities approved the transaction during the second quarter of 2004. The transaction was finalized in December 2004.

### *International*

**Angola:** The Dalia field is the third development on Block 17 and was sanctioned by the Angolan government at the end of April 2003. The development concept comprises a sub-sea production system linked to a FPSO with an average production capacity of 225,000 boed. Production is expected to commence in October 2006. The total proved reserves for the Dalia field are 31 million boe. Hydro's equity share is 10 percent. The Rosa field was sanctioned by the Angolan government in August 2004. The Rosa field will be developed as a tie-back to the Girassol FPSO. Production is expected to commence in April of 2007 and is expected to reach a plateau production of 130,000 boed. The total proved reserves for the Rosa field are 9 million boe. Hydro's equity share is 10 percent.

### **Production**

The following table includes the number of gross and net productive oil and gas wells in which Hydro had interests as of 31 December 2004.

<b>Type of well</b>		<b>Norway</b> <sup>(1)</sup>	<b>International</b>	<b>Total</b>
Crude oil	Gross	531	120	651
	Net	72	20	92
Natural gas	Gross	106	0	106
	Net	11	0	11

<sup>(1)</sup>Includes 52 wells with multiple completions (i.e., more than one formation producing into the same well bore).  
If one of the multiple completions in a well is an oil completion, the well is classified as an oil well.

The following table reflects Hydro's share of the average daily production of oil and gas from fields in which Hydro had an interest during 2004 and 2003. Information regarding the total production of oil and gas in 2004, the remaining production period of the producing fields and the license period for such fields can be found in the table included in Exhibit 99.2 "Operational Data" to this annual report.

### Hydro's Share of Average Daily Production<sup>(1)</sup>

Field	2004			2003		
	Total in thousands of boe	Oil in thousands of boe <sup>(1)</sup>	Gas in millions of cubic feet	Total in thousands of boe	Oil in thousands of boe <sup>(1)</sup>	Gas in millions of cubic feet
Oseberg fields <sup>(2)</sup>	115.7	95.3	104.3	115.1	103.0	59.6
Troll	74.9	32.1	247.6	80.0	37.0	248.1
Snorre fields <sup>(3)</sup>	58.1	56.2	10.7	67.5	65.0	12.8
Grane	46.3	46.3		5.5	5.5	
Åsgard	37.7	21.3	92.4	40.6	24.2	91.6
Tune	33.4	6.1	144.8	30.8	7.8	122.0
Sleipner fields <sup>(4)</sup>	32.8	10.4	122.9	35.2	12.0	127.0
Gullfaks fields <sup>(5)</sup>	28.6	23.0	32.0	26.0	21.2	26.8
Ekofisk fields <sup>(6)</sup>	28.5	24.0	23.4	28.2	23.9	23.0
Fram Vest	12.3	12.3		2.9	2.9	
Norne	11.3	10.1	7.2	13.2	12.2	5.9
Visund	6.2	6.2		6.6	6.6	
Brage	6.1	5.7	2.1	7.3	7.0	1.9
Njord	5.8	5.8		6.1	6.1	
Mikkel	5.5	2.6	15.5	1.5	0.7	4.4
Frigg	4.8		27.7	3.9		22.6
Heimdal fields <sup>(7)</sup>	3.8	1.3	13.3	2.1	0.9	6.9
Kvitebjørn	2.3	0.8	8.5			
<b>Total Norway</b>	<b>514.1</b>	<b>359.5</b>	<b>852.4</b>	<b>472.5</b>	<b>336.0</b>	<b>752.6</b>
Girassol	19.0	19.0		19.5	19.5	
Terra Nova	16.5	16.5		20.1	20.1	
Hibernia	10.2	10.2		10.1	10.1	
Kharyaga	6.7	6.7		5.5	5.5	
Jasmim	2.7	2.7		0.2	0.2	
Mabruk	2.0	2.0		2.1	2.1	
Murzuq	0.8	0.8		0.2	0.2	
<b>Total International</b>	<b>57.9</b>	<b>57.9</b>		<b>57.7</b>	<b>57.7</b>	
<b>Total</b>	<b>572.0</b>	<b>417.4</b>	<b>852.4</b>	<b>530.2</b>	<b>393.7</b>	<b>752.6</b>

- (1) Includes crude oil and NGL/condensate.
- (2) Includes Oseberg, Oseberg Vest, Oseberg Sør and Oseberg Øst fields.
- (3) Includes Snorre, Tordis, Statfjord Øst and Sygna fields.
- (4) Includes Sleipner Vest, Sleipner Øst, Gungne and Sigyn fields.
- (5) Includes Gullfaks and Gullfaks Sør fields.
- (6) Includes Ekofisk, Eldfisk, Embla and Tor fields.
- (7) Includes Heimdal, Vale and Skirne fields.



*Norway*

**Oseberg Fields.** Hydro is operator and has a 34 percent equity share in the Oseberg fields. The Oseberg fields are core areas for Hydro on the NCS, contributing 22 percent of Hydro's total NCS production in 2004. The Oseberg Fields include the main Oseberg field (the Field Center installations and the Oseberg C production platform) and the two satellite fields, Oseberg Øst (East) and Oseberg Sør (South). Oil and gas from the satellites are piped to the Oseberg Field Center for processing and transportation. Oil is brought ashore through the Oseberg Transport System pipeline to the Sture terminal in Norway. Gas is exported through the Oseberg Gas Transport pipeline to the Heimdal field and further through the Gassled pipeline system. Oil production from the Oseberg Field Center and the Oseberg C platform are currently in the decline phase. Natural gas export from the Oseberg Field Center and Oseberg Øst and Oseberg Sør began in 2000 and 2001, respectively. A revised PDO for the development of the Oseberg Sør field was approved by the authorities in May 2003. The revised PDO covers the J-structure that will be developed with a separate sub-sea installation with production start-up in the early part of 2005. The total cost for the J-development is estimated at NOK 1.6 billion, of which NOK 0.87 billion was invested as of 31 December 2004. The PDO of the Oseberg Vestflanken (West flank) was submitted to the authorities in October 2003 and approved in December 2003. Production start-up is planned for December 2005. Oseberg Vestflanken is planned to be developed by a sub-sea installation tied into the Oseberg Field Center platforms. Total investments are estimated at NOK 2.3 billion, of which NOK 396 million was invested as of 31 December 2004. In 2004, partners in the Oseberg license and the Norwegian authorities approved a plan for upgrading the Oseberg Øst platform to achieve a profitable solution for further drilling and well activities, and the drilling of seven new wells. Total project costs are expected to be NOK 1.9 billion, of which NOK 25 million was invested as of 31 December 2004. Production from the new wells is planned to commence early in 2007. In June 2004 the Agreement relating to Unitization and Operation of the Oseberg Area was signed, establishing the Oseberg Area Unit. The agreement established the foundation for a coordinated and long-term view on the development of the resources in the Oseberg area through balanced ownership, a prolonged license period and the establishment of the Oseberg Area Unit. Hydro is currently preparing a PDO for the Delta and G-Sentral structures in the Oseberg region, scheduled for submittal to the Norwegian authorities in June 2005.

**Troll Field.** The Troll field is the largest gas field on the NCS. Hydro holds a 9.78 percent interest in the Troll field, which comprises two main structures: Troll East and Troll West. A staged development has taken place with Phase 1 covering gas reserves in Troll East and Phase 2 focusing on the oil reserves in Troll West. Statoil is the operator of the Troll East facilities and Hydro is the operator of the Troll West. Gas from the Troll field represents a major part of Hydro's current developed gas reserves and gas production. In 2004, approximately 30 percent of Hydro's gas production came from the field. The gas development consists of a platform linked to the Kollsnes gas terminal. The gas is exported from Kollsnes through the Gassled system. Gas production started in 1996. Troll is also a major oil field. The oil development on the western part of Troll consists of two floating production units linked by two oil pipelines to the Mongstad terminal. Oil production started in 1995.

**Snorre Fields.** The Snorre fields, operated by Statoil, are located in the Tampen area and include the Snorre, Tordis, Vigdis, Statfjord Øst and Sygna fields. Hydro's interest in the Snorre field is 17.65 percent. Production of oil and associated gas from the **Snorre field** began in 1992. The Snorre B platform came on stream in June 2001. Oil and gas from the Snorre field is piped to the Statfjord field for processing, storage and transportation. Production of oil and gas from the **Tordis field** began in 1994. Hydro's interest in the Tordis field is 13.28 percent. Oil from the Tordis field is processed on the Gullfaks C platform. Production from the field peaked in 1996 and is currently in the decline phase. Since the Tordis field started declining, several satellite structures have been connected to the field including Tordis Øst in 1998, Borg in 1999 and Tordis Sørøst in 2001. In 1999, water injection was implemented to increase the recoverable reserves from the field. Production of oil and gas from the **Vigdis field** began in early 1997. Hydro's interest in the Vigdis field is 13.28 percent. Production began declining in 2000. To maintain production levels, a PDO for the Vigdis Extension was submitted to and approved by the government in 2002 with production start-up in October 2003. Oil from the Vigdis field is processed on the Snorre platform and piped to Gullfaks A for storage and transportation. In order to



maintain production levels, several projects for increased oil recovery (IOR) have been initiated in the Snorre area during 2004. This applies for the Snorre A, Vigdis and Tordis fields. If approved by the partnerships, these projects are expected to commence with a 2007 to 2009 time frame. The **Statfjord Øst** and **Sygna** fields started production in 1994 and 2000, respectively. Hydro's interest in the Statfjord Øst field is 6.64 percent and in the Sygna field 5.98 percent. Both fields are linked to the Statfjord C platform. Due to technical problems related to a gas leak from a gas injector underneath the Snorre A platform, both the Snorre and Vigdis fields were closed down on 28 November 2004. Production from both fields started up again in January 2005.

**Grane Field.** The Grane field is located in the North Sea and is developed with an integrated production and drilling platform. Hydro is operator of Grane and has a 38 percent equity share. Production from the field started September 2003. Oil from the field is exported in a new pipeline from the Grane platform to the Sture terminal in Øygarden, Norway. Gas for injection into the field is imported through a 50 km pipeline from the Heimdal Gas Center to ensure optimum production of oil. The Grane field contains heavier oil than what is normally found on the NCS.

**Åsgard Field.** The Åsgard field, operated by Statoil, is situated in the Norwegian Sea. Hydro's interest in the Åsgard field is 9.6 percent. The Åsgard Unit covers the three fields, Midgard, Smørbukk and Smørbukk Sør. The field is developed with a production ship (Åsgard A) for oil and condensate production and a floating production platform (Åsgard B) for condensate and gas production and a storage vessel (Åsgard C). Oil production started in May 1999 and gas export commenced in October 2000. The gas is transported through the Åsgard Transport pipeline to the Kårstø gas terminal for processing.

**Sleipner Fields.** Production of gas and condensate began at **Sleipner Øst** in late 1993 and from **Sleipner Vest** in the middle of 1996. Statoil is operator of both fields, and Hydro's interest in the fields is 10 percent and 8.85 percent respectively. Production from the satellite fields, **Gungne**, **Loke Trias** and **Sigyn**, began in 1996, 1999 and 2002, respectively. Gas from Sleipner is exported through Gassled and the condensate is transported to the Kårstø facilities. In 2002, a decision was made to develop the northern part of the Sleipner Vest field with four sub-sea wells. These wells came on stream in October 2004.

**Tune Field.** The Tune gas and condensate field (phase 1), operated by Hydro, is developed as a sub-sea satellite to Oseberg. Hydro's interest in the Tune field is 40 percent. The Tune field came on stream in November 2002, using spare processing capacity at the Oseberg Field Center and was a major contributor to Hydro's growth in production in 2003. A decision to develop Tune phase 2 was made in June 2004, with start up of a single well planned for October 2005. Tune Phase 2 exploration well was determined to be dry in February 2005. Further evaluation on the use of subsea equipment for Tune Phase 3 is ongoing. Under considerations for Tune phase 3, is a 4-slot satellite with a potential production start-up late 2005 or spring 2006 depending on rig availability.

**Gullfaks Fields.** The Gullfaks fields, where Hydro has a 9 equity share, are situated in the Tampen area. Statoil is the operator of Gullfaks. The main Gullfaks field consists of three integrated platforms, where production started in 1986. The satellite fields, **Gullfaks Vest**, **Gullveig**, **Rimfaks** and **Gullfaks Sør**, are linked to the main field. Tankers transport the oil from the fields while gas is transported by pipeline to the Kårstø terminal in Norway. The **Gulltopp satellite** is under development (one long-reach well) and is expected to start production in August 2005. A PDO relating to the **Skinfaks/Rimfaks** Increased Oil Recovery (IOR) satellite project was submitted to the Norwegian authorities in December 2004 and approved in February 2005. Production is planned to start in December 2006. Recovery from Rimfaks will be improved by drilling supplementary wells. The development solution for the Skinfaks discovery is based on a subsea production system tied back to the Gullfaks C platform. The total project investment is estimated at approximately NOK 3.4 billion.

**Ekofisk Fields.** Ekofisk, operated by ConocoPhillips, is situated in the southern part of the North Sea and is the oldest operating field complex within Hydro's portfolio, having commenced production in 1971. Oil is exported

through the Norpipe oil pipeline to Teesside in England, while gas is

exported through the Gassled system. The Ekofisk Area Growth project includes installing of a new wellhead platform tied in to the Ekofisk II process platform. The platform jacket was installed in August 2004 and pre-drilling of production wells started in November 2004. The platform deck will be installed during second quarter of 2005 with potential first production in the third quarter of 2005. Total investments for the Ekofisk Area Growth project are estimated at NOK 8.5 billion, of which NOK 3.6 billion was invested as of 31 December 2004. Hydro's equity share is 6.65 percent. Alternatives for further development of the Eldfisk and Tor fields are being discussed among the owners. A delineation well in the satellite field Embla is planned to be drilled during the summer of 2005 with the potential of increasing the reserves in Embla considerably.

**Fram Field.** The Fram field is located approximately 22 km from the Troll field. Hydro is operator and has a 25 percent equity share in the Fram field. The first phase of the field, Fram Vest that comprises the H structure, is developed by a sub-sea installation linked to the Troll C platform for processing. Production commenced in October 2003. Processed oil is transported to the Mongstad terminal while gas will be used for re-injection for a period of approximately six years to facilitate oil recovery. After this period, gas will be transported to the Kollsnes gas terminal. The second phase of the Fram field, Fram Øst, comprises the F-East Upper Sognefjord, the F-East Lower Sognefjord, the C-West Sognefjord and the C-West Etive reservoirs. Fram Øst, is in the final stages of development planning, and is expected to include 5 horizontal oil production wells and 2 multilateral (branched) water injection wells, drilled from two 4-slot subsea templates. Investments are estimated at NOK 4.4 billion. The Sognefjord well streams will be routed via a new production pipeline to the existing Fram and Troll facilities on the Troll C Platform for processing, while the Etive well stream will be routed through the existing Fram Vest production flowline. Water produced from Troll and Fram will be re-injected through a new flowline into the Sognefjord reservoirs for pressure support. Processed oil will be transported to the Mongstad terminal, while gas will be sent to the Kollsnes gas terminal. Production is expected to start in October 2006. The drilling program on Fram Øst includes appraisal aspects, which could lead to a third phase of Fram field development in the future. Facilities designed for Fram Øst incorporate flexibility to add two more subsea templates. Hydro submitted a PDO for the Fram Øst Field to the Norwegian Authorities in February 2005.

**Norne Field.** The Norne field, operated by Statoil, is located in the Norwegian Sea. Oil production started in late 1997. Gas production started in February 2001. The installation consists of a combined production and storage vessel with gas handling facilities and a gas transportation pipeline. The gas is transported via the Åsgard transportation pipeline to the Kårstø gas terminal in Norway. Hydro's equity share in the Norne field is 8.1 percent. In May 2004, the PDO for **Urd** (also known as Norne satellites) was submitted to the Norwegian authorities. The PDO was approved by the authorities in July. The two discoveries will be developed with sub-sea installations tied back to the Norne Field installation. Total investments are estimated to be NOK 3.5 billion. Hydro's equity share in Urd is 13.5 percent.

**Visund Field.** The Visund field, operated by Statoil, is situated in the Tampen area. The field is developed with a floating production unit that came on stream in early 1999. Oil produced from Visund is stored in and shipped from Gullfaks A. A sub-sea installation for developing the northern reservoir of Visund was put on stream in early 2002. In October 2002, the authorities approved the PDO of the Visund Gas Extension, which covers development of the gas volumes. The project includes increased gas treatment and injection capacity and a gas export pipeline connected to the Kvitebjørn gas pipeline for transport to the Kollsnes terminal. Gas export is expected to start in October 2005. The total investment is estimated at NOK 2.0 billion, of which approximately NOK 1.1 billion was invested as of 31 December 2004. Hydro's equity share is 20.3 percent.

**Brage Field.** The Brage field is located in the North Sea, approximately 13 km east of the Oseberg Field Center. Production began in 1993. Hydro is operator and has a 20 percent equity share in the Brage field. Oil from the field is transported to the Sture terminal via the Oseberg Field Center. Production from the field is currently in the decline phase.



**Njord Field.** The Njord field, operated by Hydro, is located in the Norwegian Sea. Hydro's equity share in the Njord field is 20 percent. Production from the field began in late 1997. The installation consists of a floating production unit (Njord A) combined with a tanker, Njord Bravo, for storage and loading of oil. Gas produced is re-injected into the field to maintain reservoir pressure. In November 2004, Hydro submitted a PDO for gas export from the Njord Field to the authorities for approval. The PDO was approved in January 2005. Investments are estimated to be NOK 1.1 billion. Gas exports are planned to commence late in 2007. The gas will be exported through the Åsgard gas transportation system to Kårstø.

**Mikkel Field.** The Mikkel field, operated by Statoil, is located in the Norwegian Sea and started production in October 2003. Hydro has a 10 percent interest in the Mikkel field. The development concept consists of sub-sea installations linked to the Åsgard B platform for processing. The condensate will be exported from Åsgard C for offshore loading. The gas will be transported to the Kårstø terminal through the Åsgard transport system.

**Frigg Field.** The Frigg gas field was permanently shut down in October 2004. A removal and abandonment project relating to the field installations and wells is scheduled to be completed 2010.

**Kvitebjørn Field.** The **Kvitebjørn** gas and condensate field, operated by Statoil, is situated southeast of the Gullfaks field. Hydro's equity share is 15 percent. The field is developed with a fixed production platform. Rich gas is transported through a new pipeline to the Kollsnes gas terminal for processing and export. Condensate is transported through the new Kvitebjørn oil pipeline, which is connected to the Troll2 pipeline and further to the Mongstad terminal. Production commenced in the end of September 2004. Drilling of production wells will continue through year 2005.

**Skirne Field.** The **Skirne** gas and condensate field, operated by Total, is situated approximately 20 km east of the Heimdal field. Hydro's equity share is 10 percent. The field consists of the Skirne and Bygge structures, which have each been developed with one single subsea well and tied back to the Heimdal gas center. Production started in March 2004. A booster compressor module will be installed at the Heimdal gas center in 2005.

**Vale Field.** Hydro is operator and has a 28.9 percent interest in the Vale field. The Vale field was developed by one satellite well that is tied to the Heimdal Gas Center. Production started in May 2002. In June 2005, the production will be suspended due to drilling of a new sidetrack well. Production is expected to start up again in September 2005.

**Heimdal Field.** Hydro is operator and has a 19.44 percent equity share in the Heimdal field. The Heimdal gas and condensate field is currently operated as a gas processing and distribution center after reconstruction of the platform in 2000 and 2001. Production of remaining reserves began in August 2001 after a temporary shut down during the construction period. This tail-end production is expected to last until early 2005. In March 2004, production started from the small Skirne field, which is connected to the Heimdal Gas Center.

### *International*

**Angolan Fields.** The **Girassol** field, operated by Total, is an offshore field located on Block 17 in Angola. Hydro has a working interest of 10 percent. Oil production started in December 2001. The installation consists of a production and storage-offloading vessel. The processing capacity is above 250,000 boed and the storage capacity is two million barrels. The **Jasmim** field is a sub-sea satellite connected to the Girassol FPSO. Production started in November 2003.

**Canadian Fields.** Both of Hydro's producing fields in Canada are located in the Grand Banks area off the east coast of Newfoundland. Oil production from the **Hibernia** field, operated by HMDC<sup>3</sup>,

<sup>3</sup> HMDC: Hibernia Management Development Company

35

---



came on stream in November 1997. Hydro has a five percent interest in the field. The **Terra Nova** field, operated by Petro-Canada, is southeast of Hibernia and started production in January 2002. Hydro has a working interest of 15 percent. The Terra Nova field was shut down from the end of November to mid December 2004 due to an oil spill.

**Russian Fields.** The **Kharyaga** field, operated by Total, is located in Northwest Russia. Production commenced in October 1999 under the Production Sharing Agreement ( **PSA** ) entered into with the Russian authorities. Hydro's share in the PSA is 40 percent. Production from phase 2 of the project has been gradually phased in since May 2003. A third phase is planned to further increase the total production from 2007.

**Libyan Fields.** Production from the Mabruk West field in the north of Libya, operated by Total, started in 1995. Hydro became owner of a 25 percent interest in the license through the acquisition of Saga in 1999. A FDP for Mabruk Phase IV (Mabruk Central and East) was approved by the Libyan authorities in July 2004. The development includes construction of new facilities and drilling of additional development wells in East and West Mabruk. The total estimated investment is USD 20 million. As of 31 December 2004, the incurred investment amounted to USD 25.3 million. Production from the Murzuq A-field in the south of Libya started in October 2003 and from the Murzuq D-field in June 2004. The Murzuq A- and D-fields are being developed as an integrated unit. A FDP for Murzuq B was sent to the Libyan authorities for approval on 9 December 2004. Approval is expected in the first half of 2005. The total estimated investment is USD 67.8 million. The NC 186 B-field will also be integrated with the NC 186 A-field. Oil from the A, B and D-fields will be transported from the NC 186 A gas oil separation plant to the El-Sharara field 29 km away, where it will be blended with oil from NC 115 and NC 174 and transported by pipeline 726 km to the As Zawiyah terminal west of Tripoli. Hydro's equity share of the fields in the Murzuq basin is 20 percent in the exploration phase, 10 percent in the development phase and 8 percent in the production phase.

## Transportation of Oil and Gas

### Norway

All the main gas pipelines and terminals in Norway are owned and operated by a joint venture called Gassled. Gassled is described in more detail in the business description for Energy and Oil Marketing, which includes more comprehensive information regarding Hydro's ownership share in Gassled than is reflected in the table below.

The information in the following table reflects Hydro's interest in the major pipelines for the transportation of oil and gas from the NCS and in the corresponding land terminals as of 31 December 2004.

Pipeline	End Point	Length (km)	Hydro's percentage interest
Gassled (gas)	From the NCS to Germany, Belgium, France and the U.K.	> 6,000	11.134 <sup>(1)</sup>
Langeled <sup>(2)</sup>	Nyhamna - Sleipner (Norway) - Easington (U.K)	1170	17.6102
Norpipe Oil A/S (oil)	Ekofisk - Teesside (U.K.)	354	3.50
Oseberg Transport System (OTS) (oil)	Oseberg - Sture (Norway)	115	22.23
Frostpipe (oil)	Frigg - Oseberg (Norway)	82	13.75
Sleipner Øst NGL pipeline (NGL)	Sleipner - Kårstø (Norway)	245	10.00
Troll Oil 1 & 2 (oil)	Troll - Mongstad (Norway)	165	9.73

Edgar Filing: NORSK HYDRO A S A - Form 20-F

Grane Oil Pipeline (oil)	Grane - Sture (Norway)	212	24.40
Grane Gas Pipeline (gas)	Grane - Heimdal (Norway)	50	38.00
Norne Gas Transport (gas)	Norne- Åsgard (Norway)	130	8.10
Vestprosess (NGL)	Kollsnes/Sture - Mongstad (Norway)	56	17.00

---

(1) Initial interest. For further information please see Energy and Oil Marketing business description.

(2) The plan for installation and operation was approved by the authorities in April 2004.

The **Sture** terminal outside Bergen receives crude oil and condensate from the Oseberg fields, Brage, Veslefrikk and Huldra through the Oseberg Transport System (OTS), and since 2003, from the Grane field through the Grane Oil Pipeline. The terminal started operations in 1988. The Sture terminal includes facilities for further processing of crude oil and for production of LPG (a mix of propane and butane gases). The Sture terminal has the same ownership structure as OTS excluding the LPG facilities that are owned 100 percent by Hydro and the export facilities for NGL that are owned by Vestprosess DA, in which Hydro has an equity share of 17 percent.

***International***

Crude oil from the Hibernia and Terra Nova fields in Canada is transported from the fields either directly to market or to a terminal located at Whiffen Head, Newfoundland in dedicated offshore loading tankers. Hydro has an ownership interest in two of the tankers of 14.9 percent and 12.7 percent, respectively, and a 5 percent interest in the terminal. In addition, Hydro has long-term contracts for use of storage capacity at the terminal.

### Definitions of Oil and Gas Terms

Term	Definition
bbbl	Barrels
bcm	Billion cubic meters (Sm <sup>3</sup> )
boe	Barrels of oil equivalents
boed	Barrels of oil equivalents per day
bcf	Billion cubic feet
cf	Cubic feet measured at 60 degrees Fahrenheit. See also Sm <sup>3</sup>
condensate	Light hydrocarbon substances produced with natural gas, which condense into liquid at normal temperatures and pressures associated with surface production equipment.
development well	A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive. See Regulation S-X, Rule 4-10(a)(11).
dry well	An exploratory well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.
exploratory well	A well drilled to find and produce oil or gas in an unproved area, to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir, or to extend a known reservoir. See Regulation S-X, Rule 4-10(a)(10).
FDP	Field Development Plan
field	An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. See Regulation S-X, Rule 4-10(a)(8).
FPSO	Floating Production, Storage and Offloading
gross well	A well in which a whole or fractional working interest is owned.
LPG	Liquefied petroleum gas, a liquid composed chiefly of butane and propane.
net well	The sum of the whole or fractional working interests in gross wells that equals one.
NGLs	Oil and gas condensate and natural gas liquids. For purposes of converting quantities of NGL cited in this annual report, 1 ton NGL = 11.951 boe.
PDO	Plan for development and operation
proved reserves, , proved developed reserves, proved undeveloped reserves	Proved reserves are estimated quantities of crude oil, natural gas and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions (i.e., prices and costs as of the date the estimate is made).

**Term**

**Definition**

Proved developed reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods.

Proved undeveloped reserves are reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

For a more complete understanding of these terms, see Regulation S-X, Rule 4-10(a) (2), (3) and (4). This information can be accessed on the website of the SEC at [www.sec.gov](http://www.sec.gov).

PSA  
reservoir

Production sharing agreement.

A porous and permeable underground formation containing a natural accumulation of producible oil or gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs. See Regulation S-X, Rule 4-10(a)(9).

Sm<sup>3</sup>

Standard cubic meters measured at 15 degrees C. For purposes of converting quantities of natural gas cited in this annual report, 1 Sm<sup>3</sup> = 35.3826 cubic feet. When converting natural gas into barrels of oil equivalents, Hydro makes an adjustment for calorific value to an equivalent 40 MegaJoule/Sm<sup>3</sup> volume. 1000 Sm<sup>3</sup> of natural gas = 6.2898 boe.

## ENERGY AND OIL MARKETING

### ENERGY

#### Overview

Energy's business activities include:

marketing of Hydro's equity oil production, including gas liquids;

marketing of Hydro's equity gas production as well as third-party sourced gas to customers, primarily on the European continent;

managing Hydro's interest in the gas transportation system on the NCS and Hydro's sea-borne transportation of crude oil, NGLs and other petroleum products;

production and sale of electricity generated at hydroelectric power plants in Norway;

sourcing Hydro's natural gas and power requirements for its Norwegian and European industrial facilities; and

developing Hydro's hydrogen and renewable energy business activities.

Hydro has an established position in the Northern European natural gas and power markets as a producer of natural gas and power, a holder of an equity interest in the natural gas transportation systems and as an active trader in the markets. By combining all commercial activities for energy products and services in one operating segment, Hydro leverages its commercial skills and contacts in each of the energy sectors. Hydro's experience in the Nordic region contributes to Hydro's knowledge base in pursuing opportunities in other markets.

#### Industry Trends

##### *Liberalization of European Electricity and Gas Markets*

In Europe, both the electricity and gas markets are undergoing liberalization as a result of European Union (EU) policy. For more information on the EU's regulatory initiatives to further the liberalization of EU energy markets, see Oil and Energy Government Regulation - Liberalization of European Electricity Markets and Oil and Energy Government Regulation - EU Gas Directives and Related Regulatory Developments.

In October 2004, the European Commission announced that 18 member states have failed to correctly transpose the new generation of electricity liberalization directives (Directive 2003/54/EC) and/or gas liberalization directives (Directive 2003/55/EC) into national law.

The European Commission is of the view that the main problem for electricity in coming years will be the issues of market dominance at the national level and the inadequate level of interconnection between member states.

Significant political, structural and transactional barriers still must be overcome before a sustained gas wholesale liquidity can support a competitive gas end-customer market. Harmonizing transmission and transport networks, tariffs, and accounting methods and breaking the strangle hold of dominant producers is proving a challenging task. The 25 gas markets in the EU are at widely differing stages of development and maturity, a factor that has long been acknowledged as one of the key barriers to bringing about a truly liberalized and competitive single

European gas market. However, competition has increased in some markets. One example, the recent decision by the Dutch government to acquire full ownership of the Dutch gas grid, is viewed as a catalyst toward a more liberalized Dutch market.

To be successful, exploration and production companies, traders, resellers and even major industrial gas users need to be present at the international and regional European market hubs.

### ***Growth in European Natural Gas Demand***

It is anticipated that natural gas demand growth in Europe over the coming years will lead to a shortfall in terms of current committed contracts of approximately 50 billion cubic meters (bcm) by 2010. By 2010, all European countries, except Norway, are predicted to become net importers of gas; Russia, Algeria and Norway are predicted to be key suppliers of Europe's gas in 2010.

Analysts indicate that demand for natural gas in Europe is expected to grow significantly from the 2003 level of approximately 528 bcm. Electricity generation is the key to growing demand for gas. Approximately 42 percent of EU power generation in 2030 is expected to come from gas-fired plants, up from 40 percent in 2020, 29 percent in 2010 and 17 percent in 2000.

In 2003, Norway supplied approximately 13 percent of the total consumption of natural gas in Europe. This percentage is expected to rise in future years based on existing contract commitments and remaining reserves. The United Kingdom, in particular, is an attractive market for Norwegian gas due to the declining UK gas reserves. It is estimated that by around 2006 the UK will no longer be self-sufficient in gas production. By 2010, it is estimated that the UK will be 50 percent dependent on imported gas, rising to 80 percent by 2020.

### ***Integration of Energy Markets***

Along with the liberalization of the energy markets in Europe, there is a trend towards integration of the electricity and gas markets because the business models are, to a large degree, based on the same competence and types of customers. One of the main trends in the development of the European energy market is the enlargement of companies that want to control more energy sectors.

### ***Increased Focus on Renewable Energy and Hydrogen***

There is an increasing interest in renewable energy and the utilization of hydrogen in the energy market in developed economies throughout the world. The major political drive and basis for a number of public support schemes is driven by concerns about the security of energy supply and environmental considerations. The International Energy Agency (IEA) expects the dependence on oil imports in the EU to grow from 50 percent to 70 percent from 2002 to 2030. The IEA further predicts a higher CO<sub>2</sub> emission increase compared to energy demand in the same period, because the rise in use of fossil fuels is higher than that of renewables.

The European Union has adopted a directive (Directive 2001/77/EC) that seeks to promote the production of electricity from renewable energy sources, including wind and hydropower. EU member states have set an indicative target of 22 percent share of electricity to be produced from renewable energy sources by 2010. The Norwegian Ministry of Oil and Energy has announced that Norway wishes to implement the RES-E Directive and has also put forward a proposal for legislation on a Norwegian mandatory green certificate market. The certificate market will be linked to the existing Swedish certificate market and the plan for start-up of the common market is 1 January 2007. This is expected to increase focus on wind energy in an area characterized by having strong and consistent wind conditions.

### **Strategy and Competitive Position**



Hydro's strategy is to further enhance its position in the Northern European energy market, based on increasing gas production and commercial competence gained from the European gas market and the liberalized Nordic power market. Focus areas comprise:

enhancing the value of Hydro's crude oil portfolio;

enhancing the value of Hydro's natural gas portfolio;

optimizing Hydro's power activities; and

pursuing hydrogen and renewable energy opportunities.

***Enhancing the Value of Hydro's Crude Oil Portfolio***

The focus of Hydro's marketing efforts with respect to its North Sea and international crude oil production is to achieve optimal prices by marketing fewer grades of crude oil, in larger volumes, while minimizing logistical costs. Swap arrangements result in savings in logistical costs, particularly with respect to production from Hydro's international crude oil portfolio.

Trading activities include the sale of Hydro's crude oil and NGL production. The volumes of these activities have increased partly due to increased equity oil and gas production over the past years. Furthermore, Hydro Oil and Energy supplies NGL feedstock to Hydro's petrochemical plants, as well as the former Hydro Agri (now Yara) fertilizer plants. Following the demerger of Agri, Hydro has continued to supply the Yara fertilizer plants under arm's-length agreements.

The tables below reflect the volumes of Hydro's sales and refining activities, respectively, in the last three years.

<b>Sales</b> ( <i>thousands of tonnes</i> )	<b>2004</b>	<b>2003</b>	<b>2002</b>
Crude oil/NGL	20,096	18,560	19,068
Oil products	0	2,808	2,326

***Enhancing the Value of Hydro's Natural Gas Portfolio***

Hydro is increasingly becoming a key gas supplier for Europe. Because of location, transportation infrastructure and substantial reserves, Norwegian natural gas is competitive in the European region. Both the NBP (National Balancing Point in the UK) forward prices and German import price estimates up to 2008 are well above the expected cost of the Ormen Lange gas to the UK.

Hydro is the third-largest producer on the NCS, with a strong expected increase in equity gas production. Hydro has an interest in all the major natural gas fields and in Gassled. Hydro also holds capacity rights in Gassled, enabling access to five landing points for natural gas in Europe. This offers a flexible and favorable position with respect to capturing value in the market. In the European continental market, Hydro has achieved an attractive position through its flexible portfolio based on a combination of long-term sales contracts, long-term supply contracts and access to transportation.

Hydro's strategy is to combine its role as a natural gas producer with that of a wholesaler and trader to increase its market share in the developing liberalized European natural gas market. The main geographic focus is Northwest Europe. Hydro wants to develop a strong and balanced customer portfolio, including a mix of long-term contracts with wholesalers, end-user sales to the power and industrial segments, and spot sales, in order to optimize its natural gas portfolio.

It is a continuous focus for Hydro to increase the value of Hydro's natural gas portfolio through, among other things, more optimal utilization of Hydro's production and transportation capacity. These upstream positions, combined with Hydro's market presence across Europe, provide Hydro with an opportunity to create business further down the gas value chain in Northwest Europe. Further development will be based on both increased access to natural gas from fields in which Hydro has an equity interest, and sourcing natural gas in the market. In line with this strategy, Hydro has throughout

2004 focused on integrating into its activities the portfolio acquired in late 2003 through the purchase of Duke Energy's gas sales and marketing organization in the Netherlands (Duke Energy Europe Northwest B.V.), consisting of sourcing, sales, transportation and storage agreements.

Another main activity in realizing the strategy has been the successful start-up of the activities of HydroWingas, the UK joint venture between Hydro and Wingas GmbH, the German gas transportation and supply company. The main goal in pursuing this joint venture is to establish a competitive and effective UK gas marketing channel by combining Wingas' and Hydro's gas positions and marketing skills. HydroWingas will focus on large industrial customers, power producers and the wholesale segment. Marketing activities started in 2004, resulting in several signed contracts and initial gas deliveries in the market.

The table below reflects Hydro's equity gas production and downstream non-equity gas sales and sourcing in the last three years.

<b>(in bcm)</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>
Equity natural gas production	8.8	7.8	6.4
Sales of non-equity gas	3.9	3.8	3.7

In 2004, Hydro's equity natural gas production from the NCS amounted to 8.8 bcm, an increase of 13 percent compared to the previous year.

In addition to its equity gas, during 2004 Hydro supplied 3.9 bcm in the downstream market, including 1.9 bcm supplied to the former Hydro Agri, now Yara, fertilizer activities.

Natural gas produced from fields in which Hydro has an equity interest is mainly sold under long-term contracts. Pricing under long-term contracts is generally based on a price formula whereby the natural gas price is indexed to oil product prices in the end-user market, mainly gas oil and low sulphur fuel oil. These contracts typically have provisions for price reviews based on changes in certain market conditions.

In the future, Hydro expects that an increasing volume of its natural gas will be sold under contracts indexed to liquid European gas hubs such as NBP or Zeebrugge. Physical positions are still necessary in order to gain increased margins by optimizing logistics and trading. Liquidity within the UK NBP market has increased, and is now considered to be a viable, short-term market. There is less liquidity on the European continent, however, but liquidity is increasing at several emerging hubs, in particular at Zeebrugge in Belgium. Hydro's presence at these major hubs enables it to optimize its equity gas positions, both short- and long-term.

Hydro has made substantial investments in natural gas export capacity from the Oseberg and Troll fields, together comprising a major portion of its proved reserves of natural gas. This capacity will enable Hydro to increase exports of gas significantly in the coming years as reservoir conditions allow higher natural gas production. The start-up of the Ormen Lange gas field will further increase Hydro's gas production and the development of the connected Langedled transportation system will further increase transportation flexibility on the NCS. The gas will be transported by the world's longest subsea export pipeline approximately 1200 kilometres from the west coast of Norway via Sleipner in the North Sea to Easington in UK.

Gassled, the natural gas transportation infrastructure joint venture on the NCS, has been in operation since 1 January 2003. The NCS natural gas pipelines and associated terminals had previously been organized as several

different joint ventures owned by oil companies and the Norwegian State. Gassled consists of the following systems: Europipe, Europipe II, Norpipe gas pipeline, Zeepipe, Franpipe, Vesterled, Statpipe, Oseberg Gas Transport, Åsgard Transport and the Kårstø terminal. The Kollsnes gas terminal is included in Gassled from 1 February 2004. Currently Hydro holds a direct ownership interest of 11.134 percent in Gassled. Hydro's participation in future capacity expansions such as Langeled will initially result in a moderate increase in Hydro's ownership interest before it is expected to be reduced to about 10 percent in 2011 in accordance with the agreed redistribution of ownership shares.

*Optimizing Hydro's Power Activities*

Hydro is one of the largest producers of electric power in Norway, with a normal annual production from hydroelectric facilities in Telemark, Røldal/Suldal and Sogn of approximately 8.5 terrawatt hours ( **TWh** ). Hydro has been engaged in a large development project to expand the Tyin hydropower plant in Sogn at a cost of approximately NOK 1.3 billion. The new Tyin power plant has been in operation since fall 2004. Revitalization of the power plant has increased production by 15 percent based on the existing water reservoirs.

Hydro has title concessions that will never revert to the Norwegian government for hydroelectric power plants with an average generating capacity of 2.7 TWh per year. This represents approximately 32 percent of Hydro's normal production capacity. The remaining hydroelectric production capacity, 5.8 TWh, or approximately 68 percent of Hydro's normal production capacity, will under the present legislation revert to the Norwegian government without compensation at the expiration date of each concession. Separate concessions apply to each power plant. The year of expiration of the individual concessions ranges from 2022 to 2051.

In addition to its hydroelectric power stations, Hydro is a partial owner (44 percent) of the Havøygavlen wind power plant with a potential annual production of about 105 gigawatt hours (GWh).

Hydro is, as a 50 percent owner of the company Naturkraft AS, evaluating the possibility of building a new gas fired power plant at Kårstø, Norway. The final investment decision regarding the project is expected to be taken by the summer of 2005. The power plant is planned to be in operation during the fall of 2007. Hydro's share of the expected annual production of the plant is roughly 1.5 TWh.

Since the liberalization of the Norwegian electricity market in 1991, Hydro has developed its power trading and marketing activities, along with analysis, portfolio and risk management systems. Hydro's Nordic electricity portfolio includes owned generation facilities, long-term supply contracts, internal and external sales contracts and short-term optimization contracts.

The table below reflects Hydro's power production and the volumes acquired under long-term purchase contracts for the last three years.

<b>(in TWh)</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>
Power production	8.1	7.5	10.3
Acquired under long-term contracts for Hydro's industrial use	7	7	7

As reflected in the table above, power production in 2004 was lower than normal due to low precipitation during the early winter of 2004, and the residual effect of low precipitation in Norway during the autumn and winter of 2002/03.

Hydro Oil and Energy supplies electric power to Hydro's industrial plants in Norway. To meet those needs, Hydro has entered into long-term purchase contracts, the majority of which are with the Norwegian State-owned power company, Statkraft. These long-term contracts provide assurance of the availability of and predictable prices for a certain quantity of power to Hydro's power intensive industries. In 1997, Hydro entered into an agreement with Statkraft to purchase electricity from 2000 to 2020. The agreement replaces supplies under existing contracts, which terminate during the 2006-2010 period.

- <sup>4</sup> The legislation regarding reversion is under revision. The proposed change would have moderately positive effects for Hydro.

From 2005 and onwards, Hydro Oil and Energy will focus its power activities on management of the Nordic electricity portfolio and sourcing of power to Hydro's larger consuming plants in the Nordic area and continental Europe.

***Pursuit of Hydrogen and Renewable Energy Opportunities***

Hydro has extensive experience within the traditional industrial hydrogen markets as well as with renewable hydroelectric energy production. Hydro is seeking to leverage its experience to position itself in renewable energy and new energy markets for hydrogen.

Hydro views wind power generation as the most important part of the renewable energy market and is making selective investments in this market. In 2002, Hydro completed the Havøygavlen wind park, located in northern Norway. Havøygavlen is one of the largest wind power projects in Norway, with a potential annual output of around 105 GWh. Further Norwegian and European projects are continuously evaluated, in Norway pending the framework for production and sale of renewable energy.

Hydro is presently involved in several hydrogen projects. These include partially owned filling stations for hydrogen-fueled vehicles in Iceland and Germany, and combining hydrogen and wind power to form a demonstration project of a sustainable energy society on the Norwegian island of Utsira.

**OIL MARKETING**

Oil Marketing markets and sells refined petroleum products (gasoline, diesel and heating oil) and electricity to customers in Scandinavia and the Baltic countries. Hydro owns 100 percent of its oil marketing unit in Sweden and 50 percent of Hydro Texaco, an oil marketing company with retail outlets in Norway, Denmark and the Baltic countries. Hydro markets a range of complementary energy products in addition to refined petroleum products, such as electricity, natural gas, biogas for cars and bioenergy for heating purposes, as well as convenience store goods.

At the end of 2004, Hydro's retail network in Sweden comprised 539 gasoline stations and 130 Hydro Diesel service stations. Hydro operates both Hydro and the Uno-X branded stations in the Swedish gasoline market. Approximately 50 percent of the station network is Hydro-branded. As of year-end 2004, Hydro Texaco operated 405 gasoline outlets and 46 diesel sites in Norway, 408 gasoline outlets and 102 diesel sites in Denmark, and 49 gasoline outlets and 10 diesel sites in the Baltic countries with Hydro Texaco or Uno-X brands. Hydro's strategy is to maximize its return on investments already made in its gasoline station chains by focusing on the most profitable stations and closing smaller and unprofitable outlets, building strong brand recognition and expanding on profitable segments of the market.

Hydro has a strong brand and market position in the most profitable segments of the industrial and residential heating oil markets. Its large customer base offers a platform for the sale of electricity to residential and industrial customers. Also, Hydro's and Hydro Texaco's large customer bases provide a potential for cross-sales. Sales of electricity have, to date, been relatively modest compared to Hydro's sale of gasoline and gasoil, but are growing.

Gasoline is sold through service stations and unmanned, automated stations in Scandinavia and the Baltic countries. Gasoils are sold through automated diesel stations and through direct deliveries from depots to end consumers.

<b>Volumes (thousands of m<sup>3</sup>) (1)</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>
---	-------------	-------------	-------------



Edgar Filing: NORSK HYDRO A S A - Form 20-F

Gasoline	1,487	1,435	1,476
Gasoil	2,266	2,109	2,074

---

(1) Volumes reflected in the table include 100 percent of Hydro Texaco's volumes.

In 2004, Hydro's market share in the Swedish gasoline market declined by 0.3 percentage points mainly as a result of the discontinuation of agreements with Volvo dealers and their customers. These agreements are being phased out over a period of 5 years, from 2001 to 2005. To compensate for the loss in market share, Oil Marketing has entered into a deal with VW/Audi Sweden, allowing holders of VW/Audi credit cards access to Hydro and Uno-X stations.

<b>Market share (%) ( 2004) <sup>(1)</sup></b>	<b>Sweden<sup>(2)</sup></b>	<b>Norway<sup>(3)</sup></b>	<b>Denmark<sup>(3)</sup></b>
Gasoline	9.6	20.8	17.3
Gasoil	14.4	17.1	18.4

<sup>(1)</sup> Includes 100 percent of Hydro Texaco.

<sup>(2)</sup> As of December 2004.

<sup>(3)</sup> As of November 2004.

### **Oil and Energy Government Regulation**

The principal Norwegian legislation applicable to petroleum activities in Norway and on the NCS is currently the Norwegian Petroleum Act of 1996, a number of regulations issued under that Act, and the Petroleum Taxation Act of 13 June 1975.

The general principles underlying the Petroleum Act are that:

the Norwegian State is the owner of all petroleum resources in the ground;

the exclusive right to resource management is vested in the Norwegian State; and

the Norwegian State alone is authorized to award licenses with respect to petroleum activities.

Under the Petroleum Act, the Norwegian Ministry of Petroleum and Energy (the **Ministry**) has been delegated responsibility for resource management and administering petroleum activities on the NCS. The Ministry primarily implements petroleum policy through its power to award licenses, to approve operators' field and pipeline development plans, and to approve gas sales contracts.

#### ***Norwegian Licensing System***

Hydro normally participates in exploration and production activities with other parties, including private and state-owned oil and gas companies and other government entities. Contractual arrangements among partners are generally governed by an operating agreement, which provides that costs, production entitlements and liabilities are allocated according to each partner's respective percentage interest in a particular field or license area. Normally, one party is appointed as operator by the Ministry. Field activities are conducted under the overall supervision and control of an operating committee consisting of representatives from each participant in the field. This enables each of the non-operator partners to be involved in field development and operations.

The Petroleum Act and related regulations contain the main legal basis for the license system, which regulates Norwegian petroleum activity. The most important type of license award under the Petroleum Act is the production license. A production license grants the holder an exclusive right to explore for and produce petroleum

within a specified geographical area. The licensee becomes the owner of the petroleum produced from the field covered by the license, and, together with any partners, is jointly and severally responsible to the Norwegian State for obligations arising from petroleum operations carried out under the license. Notwithstanding the exclusive rights granted under the production license, the Ministry has the power to, in exceptional cases, permit third parties to carry out exploration in the area covered by a production license.

Production licenses are normally awarded through licensing rounds. The first licensing round for NCS production licenses was announced in 1965. Awards of licenses take place both through the principal licensing rounds (of which the 18<sup>th</sup> was awarded in June 2004) and through separate rounds covering a defined area.

Prior to the development of a field, licensees are required to submit a PDO to the Ministry for approval. In respect of fields of a certain size, the Norwegian Parliament (Storting) must accept the PDO before it is formally approved by the Ministry.

Production licenses are normally awarded for an initial exploration period, which is typically six years but can be for a shorter period or for a period of a maximum of ten years. During this exploration period, the licensees must meet a specified work obligation set out in the license. The work obligation will typically include seismic surveying and/or exploration drilling. If the licensees fulfill the obligations under the production license, they are entitled to extend the license for a period specified at the time when the license is awarded, typically 30 years. The licensees are, however, normally not entitled to require that the license is extended for more than half of the originally awarded license area.

For licenses granted after 1 July 1985, the Norwegian governmental authorities can delay development of a field indefinitely under the Norwegian Petroleum Act. Should development be delayed, licensees can apply for an automatic extension of the license term corresponding to the delay period. For licenses granted before 1 July 1985, the conditions in the specific license apply.

The Norwegian State may, if important public interests are at stake, direct licensees on the NCS to reduce their production of petroleum. From 15 July 1987 until the end of 1989, licensees were directed to curtail oil production by 7.5 percent. Between 1 January 1990 and 30 June 1990, licensees were directed to curtail oil production by 5 percent. In 1998, the Norwegian State resolved to reduce Norwegian oil production by about 3 percent, or 100,000 boed. In March 1999, the Norwegian State decided to further decrease production by 200,000 boed. In the second quarter of 2000, the reduction was brought back to 100,000 boed. On 1 July 2000, this restriction was removed. By a royal decree of 19 December 2001, the Norwegian government decided that Norwegian oil production should be reduced by 150,000 boed from 1 January 2002 until 30 June 2002. This amounted to roughly a 5 percent reduction in output.

Licensees may buy or sell interests in production licenses subject to the consent of the Ministry and the approval of the Ministry of Finance of the tax treatment. The Ministries must also approve direct or indirect transfers of interests in a license, including change of control of a licensee, if it would result in a new entity obtaining a decisive influence over the licensee. In most licenses there are no pre-emption rights in favor of the other licensees. The State's Direct Financial Interest ( **SDFI** ), or the Norwegian State, as appropriate, however, still holds pre-emption rights in most licenses.

A license from the Ministry is also required in order to establish facilities for transport and utilization of petroleum. When applying for such licenses, the owners, which are in practice licensees under a production license, must prepare a plan for installation and operation. Licenses to establish facilities for transport and utilization of petroleum will normally be awarded subject to certain conditions. Typically, these conditions require the facility owners to enter into a participants' agreement. For major new gas infrastructure, the Ministry will typically require that the new facilities shall be included in Gassled when operational. The ownership of most facilities for transport and utilization of petroleum in Norway and on the NCS is organized as a partnership or joint venture of a group of license holders, and the participants' agreements are similar to the joint operating agreements entered into among the members of the partnership holding production licenses.

Licensees are required to prepare a decommissioning plan before a production license or a license to establish and use facilities for transportation and utilization of petroleum expires or is relinquished, or the use of a facility ceases. The decommissioning plan must be submitted to the Ministry no sooner than five and no later than two years prior to the expiry of the license or the cessation of the use of the facility, and must include a proposal for the disposal of facilities on the field.

On the basis of the decommissioning plan, the Ministry makes a decision as to the disposal of the facilities.

The Norwegian government can require that licensees participate in the removal of offshore oil and gas installations (platforms, pipelines, etc.) on the NCS when production ceases or at the expiration of the concessions, whichever occurs first. The Norwegian government has the option to take ownership of a permanent offshore installation at no cost to it when a license expires, is surrendered or revoked or when the use of such installation has been terminated permanently. For onshore installations, compensation for expropriation has to be paid. In such cases, the Norwegian government would assume total responsibility for any well closure and decommissioning costs after this time, as well as removal costs of the installation. As a basis for estimating Hydro's future liabilities related to well closures, decommissioning and removal costs of the installation, Hydro's management evaluates Norwegian and international laws, treaties and practices, and the estimated value of recoverable oil and gas reserves that are expected to exist at the end of the various concession periods. See the discussion in Item 5. Operating and Financial Review and Prospects Hydro's Critical Accounting Policies Asset Retirement Obligations. The regulations allow for full deductibility in taxable income of dismantlement and removal costs.

### ***Organization of Norwegian Gas Sales and Transportation***

Until June 2001, gas sales contracts with buyers for the supply of Norwegian gas were required by Norwegian authorities to be concluded with the Gas Negotiation Committee, known as the *Gassforhandlingsutvalget* ( **GFU** ).

The structural changes taking place in the European gas market (see the discussion under EU Regulation EU Gas Directives and Related Regulatory Developments below) prompted the Norwegian State to consider whether changes to the gas resource management system on the NCS could contribute to further enhancing the efficiency of Norwegian gas producers. Accordingly, the Norwegian State, by a royal decree dated 1 June 2001, determined to abandon the GFU system and put in place a system whereby the individual licensees manage the disposal of their own gas. Adjustments in legislation, license agreements and other existing contracts necessary to implement the new system were finalized during 2002.

With the approval of Gassled, Norwegian authorities have, by a royal decree of 31 December 2002, issued regulations for access to and tariffs for capacity in the upstream gas transportation system. Gassled has a uniform access regime, giving all natural gas undertakings and eligible customers who have a duly substantiated reasonable need of transportation a right to access the system under non-discriminatory, objective and transparent conditions. Access to the system is based on long-term and short-term transportation agreements. Gassled tariffs have been established through regulations established by the Ministry of Petroleum and Energy with effect from 1 January 2003.

### ***Health, Safety and Environment Regulations***

Petroleum operations in Norway are subject to extensive regulation with regard to health, safety and the environment ( **HSE** ). Under the Petroleum Act, which is in this respect administered by the Ministry of Labor and Social Affairs, all petroleum operations must be conducted in compliance with a reasonable standard of care, taking into consideration the safety of employees, the environment and the economic values represented by installations and vessels. The Petroleum Act specifically requires that petroleum operations be carried out in such a manner that a high level of safety is maintained and developed in accordance with technological developments.

Licensees and other persons engaged in petroleum operations are required to maintain at all times a plan to deal with emergency situations. During an emergency, the Ministry of Labor and Social Affairs may decide that other parties should provide the necessary resources, or otherwise adopt measures to obtain the necessary resources, in

order to deal with the emergency on the part of the licensees.

In the HSE area, the Norwegian Pollution Control Authority, the Norwegian Social and Health Directorate and the Petroleum Safety Authority Norway ( separated from the Norwegian Petroleum Directorate as of 1 January 2004) have adopted joint, total regulations relating to health, environment and safety on the NCS. The Ministry of Labor and Social Affairs and the Ministry of Environment administer these regulations. In addition, a number of regulations adopted under other acts, such as the Working Environment Act of 1977 and the Pollution Act of 1981, apply to Hydro s operations. Violations of such regulations can lead to fines.

In Hydro s capacity as a holder of licenses under the Petroleum Act, it is subject to strict statutory liability in respect of losses or damages suffered as a result of pollution caused by spills or discharges of petroleum from petroleum facilities covered by any of its licenses. This means that anyone who suffers losses or damages as a result of pollution caused by any of Hydro s NCS license areas can claim compensation from Hydro without needing to demonstrate that the damage is due to any fault on Hydro s part. If the pollution is caused by a force majeure event, a Norwegian court may reduce the level of damages to the extent it considers reasonable.

### *EU Regulation*

Although Norway is not a member of the EU, it is a member of the European Free Trade Association ( **EFTA** ). The European Union and its Member States have entered into the Agreement on the European Economic Area (the **EEA Agreement** ) with the members of the EFTA other than Switzerland. The main purpose of the EEA Agreement is to include the EFTA countries in the European Common Market. The EEA Agreement makes relevant provisions of EU legislation binding for the EFTA states other than Switzerland. Regulations and directives affecting Hydro are being adopted, in an increasing number, within the EU and then implemented in Norway under the EEA Agreement.

### *EU Emissions Trading Directive*

In January 2005, the Union Greenhouse Gas Emission Trading Scheme (EU ETS) commenced operation. The scheme is based on Directive 2003/87/EC, which became effective in October 2003. The scheme will limit carbon dioxide emissions from a broad range of industries, including power generation, and place them within a regulatory framework. Under the directive, all producers with significant emissions of climate gases will be given an emissions permit for each year of production. Each member state will develop a national allocation plan for such permits. The emissions trading system will increase a producer s costs if that producer does not achieve its targets. Additional costs would also be associated with the development of emissions reduction technology and trading tools. Norway considers the directive to fall outside the scope of the EEA Agreement and has passed an act establishing its own national emissions trading scheme with effect from 1 January 2005. Offshore oil and gas production is currently not included in this scheme.

### *EU Gas Directives and Related Regulatory Developments*

Fundamental changes are now taking place in the organization and operation of the European gas market, with the objective of opening up national markets to competition and integrating them into a single EU internal market for natural gas. It is difficult to predict the effect of liberalization measures on the evolution of gas prices, but the main objective of the single gas market is to bring greater choice and reduced prices for customers through increased competition.

The EU Gas Directive of 1998 (Directive 98/30/EC, 1<sup>st</sup> Internal Gas Market Directive) established common rules for the transmission, distribution, supply and storage of natural gas. The main purpose of the directive was to require owners of natural gas pipelines to open up their transport systems, including systems within domestic markets, to customers, such as distribution companies and large industrial customers, in order to bring greater



competition into the European gas market. The directive established rules relating to the organization and functioning of the natural gas sector, access to the market, the operation of systems, and the criteria and procedures applicable to the granting of

authorizations for transmission, distribution, supply and storage of natural gas. The directive imposed a series of obligations on EU member states and other states implementing the directive. In June 2002, the Norwegian Parliament (Storting) agreed to incorporate the directive into its legislation as part of the EEA Agreement.

On 26 June 2003, the European Parliament and the Council of the European Union adopted Directive 2003/55/EC (2<sup>nd</sup> Internal Gas Market Directive), providing for common rules for the internal market for natural gas. Directive 2003/55/EC repealed the earlier Directive 98/30/EC, which was viewed as taking the first relatively tentative steps toward the creation of an internal market for natural gas. Directive 2003/55/EC is not yet incorporated in the EEA Agreement. Directive 2003/55/EC is expected to provide the necessary structural changes in the regulatory framework to tackle the remaining barriers to the completion of the internal market. The directive provides for:

the right for all non-household gas customers to freely choose their supplier no later than 1 July 2004, with all customers to have this right by 1 July 2007;

third party access to transmission and distribution networks on the basis of published and ex ante regulatory approved tariffs;

the establishment of a regulatory authority in each Member State with a common minimum set of responsibilities;

legal unbundling of transmission and large and medium-sized distribution companies; and

access to storage facilities either on a negotiated or regulated basis.

In addition, the directive contains provisions relating to upstream pipeline networks. EU member states are required to take the necessary measures to ensure that natural gas undertakings and eligible customers, wherever they are located, are able to obtain access to upstream pipeline networks, including facilities supplying technical services incidental to such access in accordance with the directive, except for the parts of such networks and facilities which are used for local production operations at the site of a field where the natural gas is produced. Access is to be provided in a manner determined by the EU member state in accordance with the relevant legal instruments. EU member states are to apply the objectives of fair and open access, achieving a competitive market in natural gas and avoiding any abuse of a dominant position, taking into account security and regularity of supplies, capacity that is or can reasonably be made available and environmental protection.

In February 2002, the European Gas Regulatory Forum, which is chaired by the EU Commission and made up of national regulators, network operators and users and gas consumers, agreed on a set of voluntary guidelines (referred to as the Guidelines for Good TPA Practice) on granting access to the gas transmission system. The guidelines were revised in September 2003. In a first compliance report presented to the Forum in October 2002, the EU Commission observed significant lack of compliance with the rules. In its second report presented at the Forum's meeting in September 2003, the EU Commission indicated a significant improvement in terms of compliance with the guidelines, but a continuing unacceptable level of non-compliance such that a level playing field in terms of access conditions to the gas transmission networks was far from being achieved. As a result, in December 2003, the EU Commission proposed a regulation providing for a set of basic principles to be respected as regards third party access (TPA) services to be offered by the system operators, capacity allocation and congestion management procedures, transparency requirements and tariff structures. The proposal also provides for detailed implementing rules to be contained in guidelines annexed to the regulation, which can be adopted and modified through a regulatory comitology procedure whereby the Commission submits a proposal to a committee consisting of representatives of the Member States. On April 20, 2004, the EU Parliament in its first reading adopted the proposal with a number of amendments, and on 15 November 2004, the Energy Council adopted a common position on the draft regulation. The common position is based on the Commission's proposal, but is more limited with regard to subjects that are covered

by the Commission's authority to propose implementing guidelines.

The Energy Council agreed that the date for applying the regulation should be moved from 1 July 2005 to 1 July 2006.

#### *Liberalization of European Electricity Markets*

The EU electricity liberalization directive of 1996, to a large extent, left implementation of the deregulation process to the EU member states. As a result, each country designed its own national market structure. These structures are not entirely compatible. The European Commission has acknowledged this problem on a number of occasions, indicating that action will be taken to remedy the situation. In 2003, the European Union enacted a number of provisions bearing on the European electricity market:

Directive 2003/54/EC sets forth common rules for the internal market in electricity. The directive establishes common rules for the generation, transmission, distribution and supply of electricity. This directive replaces the directive from 1996.

Regulation (EC) No. 1228/2003 on cross-border trade in electricity addresses conditions for access to the network for cross-border exchanges of electricity. It attempts to establish fair rules for cross-border exchanges of electricity, thus enhancing competition within the internal electricity market, taking into account the specificities of national and regional markets. Realizing that objective will involve the establishment of a compensation mechanism for cross-border flows of electricity, the setting of harmonized principles on cross-border transmission charges, and the allocation of available capacities of interconnections between national transmission systems. The European Commission is currently working on binding guidelines to be adopted through EU committee procedure. The future guidelines are expected to enter into force in 2005.

#### **Taxation of Oil and Gas Production**

##### *Norway*

**Ordinary Taxes.** Profits from petroleum production and pipeline transportation are subject to Norwegian income tax at the rate of 28 percent. Revenue for tax purposes is based on market norm prices (as determined by a government-appointed board, normally on a quarterly basis but in recent years with large price fluctuations, on a monthly basis) for crude oil and on realized prices for gas and other primary products. The taxation of a company's income associated with its exploration and production activities on the NCS is assessed on a consolidated basis.

Investments in oil and gas production facilities are, in general, depreciated for tax purposes over six years using a straight-line method of depreciation (i.e., 16.66 percent per year). However, there is an exception for certain large-scale gas liquefaction facilities; such investments are depreciated over three years (i.e., 33.33 percent per year). Depreciation commences when expenditures are incurred. Deductions for exploration and other costs can be taken in the year such costs are incurred.

Any NCS losses may be carried forward indefinitely against subsequent income earned. Any onshore losses may be carried forward for 10 years. Half of the losses relating to activity conducted onshore in Norway may be deducted from NCS income subject to the 28 percent tax rate. Losses from foreign activities may not be deducted against NCS income. Losses from offshore activities are fully deductible against onshore income.

**Special Petroleum Tax.** A special petroleum tax is levied on profits derived from petroleum production and pipeline transportation on the NCS. The special petroleum tax is currently levied at a rate of 50 percent. The special petroleum tax comes in addition to the standard 28 percent income tax, resulting in a 78 percent marginal tax rate on income subject to the petroleum tax. The basis for computing the special petroleum tax is the same as for income subject to ordinary corporate income tax, except that onshore losses are not deductible against the special petroleum tax, and a tax-free allowance, or uplift, has been granted at a rate of 5 percent of capital expenditures per year over a

period of a

minimum of six years (equal to a maximum total of 30 percent of the capital expenditures). The uplift is computed on the basis of the original capitalized cost, including capitalized interest, of offshore production installations. The uplift may be deducted from taxable income for a period of six years beginning in the year in which the capital expenditures are incurred. Unused uplift may be carried forward indefinitely. Special provisions apply to investments made prior to 1992. Deficits relating to NCS exploration and production activities can be carried forward indefinitely, both for ordinary and special petroleum tax purposes. Deficits incurred in 2002 and later can for both tax categories be carried forward with interest. The Ministry of Finance is authorized to issue guidelines on the interest rate.

As part of Revised National Budget passed in June 2004, the Norwegian government adopted changes to the Petroleum Tax Act effective for 2005. The tax-free allowance, or uplift, will be accelerated to 7.5 percent of capital expenditures per year over a period of four years. Furthermore, if in a non-taxpaying position, the State will pay in cash the tax value of deficits connected to exploration in connection with the yearly tax assessment. The State will also pay in cash the tax value of deficits if a company ceases its activities on the Norwegian Continental Shelf. Changes also include simplification of tax-related conditions in relation to transfer of licenses, and changes in regulations regarding depreciation of investments in fields with life spans of less than six years. Larger flexibility in contracts between oil companies and contractors will be allowed.

### ***Taxation Outside Norway***

Hydro's international petroleum activities are covered by local tax legislation. The following provides a brief description of the relevant tax systems of the countries where Hydro has production. Hydro's Canadian production is covered by the corporate income tax regime, which is not project specific. Royalties apply to both producing projects and the terms are project specific. Hydro's remaining international production is regulated by production sharing agreements (PSAs). Under a PSA, the host government typically retains the right to the hydrocarbons in place. The contractor under a PSA normally receives a share of the oil produced to recover its cost, and is entitled to an agreed share of the oil as profit in addition. Normally, the contractors carry the exploration costs and risk prior to a commercial discovery. Provisions are, to a large extent, negotiable and are unique to each block. All negotiated and bilateral provisions in the PSAs are subject to a confidentiality clause. The presentation of the taxation as such is, therefore, limited to the structure of the PSAs and to the official information involved.

Under some PSAs, all government take will be in the form of royalty and/or profit oil allocated to the state, whereas other PSAs also include an income tax element. Income is split between a cost oil share for the recovery of costs, and a profit oil pool for further split between the state and the contractors. Allocation of profit oil between the state and the contractor group may depend on many factors, for example, the development of the internal rate of the return of the project, the production rate or the accumulated production. As a result, a larger share will normally be allocated to the state during the life of the production period. Linear depreciation over the first four to five years in production is commonly used. Some PSAs allow for an uplift of the investments, which is included as an additional depreciation in the investment costs and thereby increases the cost recovery entitlement. Most PSAs allow unrecovered costs in one year to be carried forward for recovery in later years. The direct state participation in PSAs has varied, but seems to be more frequent in recently awarded blocks. Different variations as to financing of the direct state share are seen.

Some PSA regimes allow for consolidation of income from different developments in a block; other PSAs set a ring fence for tax purposes around each development. A ring fence around a development area means that the area is defined as a separate entity for tax calculation purposes, meaning that all development and production costs related to a development can only be recovered through income from the same development. One development may also consist of more development areas, all of which are ring fenced for tax purposes. The term development area in this respect may be a defined geological structure that may be produced from a common production facility.



Under a tax/royalty regime, the companies are granted licenses by the government to extract petroleum, and the state may be entitled to royalties, in addition to income tax based on the contractor's net income from the operations. The terms are, in general, not negotiable and are subject to legislative change.

**Canada.** The fiscal regime consists of both royalty and provincial/federal tax systems. There are generic royalty regimes for the Grand Banks and Scotian Shelf areas; however, the Hibernia and Terra Nova fields have unique royalty systems. An allowance of 25 percent of operating income is deductible for income tax purposes, and replaces the actual royalty paid. This allowance will be phased out by 2007 and replaced by full deductibility of royalties paid for income tax purposes. The East Coast royalty regimes are progressive with the size of the royalty depending on the field's economy and life cycle. Tax depreciation of facilities is 25 percent per year based on a declining balance method of depreciation. Exploration expenses may be fully written off. The combined Canadian federal and provincial tax rates are declining and will be reduced from the current 40 percent to 36 percent by 2007. Consolidation for tax purposes across all Canadian income is allowed within one legal entity (corporation); however, it is not allowed between separate legal entities.

**Russia.** The Kharyaga field is taxed based on a PSA. Gross income after deduction of the royalty is split in cost oil and a profit oil share. A 35 percent income tax is levied on the contractor share of the profit oil. The profit oil split is based on the project's cumulative internal rate of return.

**Libya.** The Mabruk field is taxed based on a PSA. Gross income after deduction of royalty is eligible as cost oil, and any surplus oil is allocated as profit oil. The profit oil is divided between the state and the contractors based on a sliding scale which is related to the daily production rate and a cumulative income to cost ratio. No further income tax is levied on the contractor's share of the profit oil. The Murzuq fields are taxed based on a PSA. The Libyan national company ( **NOC** ) is carried through the exploration phase and partly through the development phase, and then takes a certain ownership share of total production. The net income, after deduction of NOC's direct share, is used for cost recovery. Any surplus is split as profit oil between the NOC and the contractors, with a sharing principle as for the Mabruk development. No further income tax is levied. Consolidation of operations within the Murzuq blocks is allowed.

**Angola.** The producing fields, Girassol and Jasmim, are taxed based on the Block 17 PSA. Gross income is split in cost oil and a profit oil share. The contractor's share of the profit oil is based on the project's cumulative internal rate of return. A 50 percent income tax is levied on the contractor's share of the profit oil. A ring fence around each development area in the block applies for tax purposes. Exploration costs, however, can be recovered from the entire block.

## **Taxation of Electricity**

### ***Ordinary Taxes (Norway)***

Profits from hydroelectric power production are subject to ordinary Norwegian income taxation at a rate of 28 percent. Fixed assets are depreciated for tax purposes over 67 years or the concession period, if shorter (dams and tunnels); 40 years (machinery); and at a 5 percent declining balance (transmission and other electrical equipment).

A company's ordinary income tax for hydroelectric power plants is assessed on an aggregate basis and may be tax consolidated with other activities in Norway.

A natural resource tax of NOK 0.013 per KWh is leveled on hydro-generated electricity. The tax is fully deductible from the ordinary income tax of the company.





***Resource rent tax on hydroelectric power plants (Norway)***

The resource rent tax on hydroelectric power production in Norway is a tax on profits above a certain level and is additional to the ordinary tax. The tax rate is 27 percent and it is assessed individually for each hydroelectric power plant (i.e., ring-fenced taxation). Unlike the ordinary income tax, finance costs are not deductible. Uplift is a special deduction in the net income computed as a percentage of the average tax basis of fixed assets (including intangible assets and goodwill) for a given year. The percentage, which is determined annually by the authorities, essentially provides for a certain return on fixed assets that is not subject to surtax. The percentage used to calculate the uplift for 2004 was 8.5 percent.

Revenue for resource rent tax is, with certain exceptions, calculated on the plant's production, hour by hour, multiplied by the area spot price in the corresponding hour. Revenues from power supplies used for a company's own industrial production facilities and from sales under certain long-term contracts are not subject to market spot price assessment. As most of Hydro's hydroelectric production is used for its own industrial production or sold under qualifying contracts, only a minor portion of the production is subject to taxation based on spot prices at the time of production. The resource rent price for power production supplied to the corporation's own industrial use in Norway is 170 NOK/MWh in 2004.

Losses in the resource rent assessment can be carried forward indefinitely or until the plant reverts to the Norwegian government. Losses carried forward are increased with interest.

**HYDRO ALUMINIUM**

**Introduction and Overview**

Hydro Aluminium is one of the top three integrated aluminium suppliers in the world, in terms of volume of integrated aluminium products produced. Hydro Aluminium is a full range aluminium supplier including primary aluminium, rolled products, extruded and other fabricated products. In 2004, Hydro Aluminium's total revenues were NOK 79.7 billion compared to NOK 69.2 billion in the prior year.

Over the past few years, Hydro Aluminium has focused on improving performance through:

the execution of major improvement programs including targeted annual cost reductions of NOK 2.5 billion with full effect from 2004 and related aggregate manning reduction of over 1700 employees;

major developments such as the expansion of the Sunndal smelter in Norway, the Alouette smelter in Canada and the expansion of the alumina refinery Alunorte in Brazil, projects executed on time and within budget; and

strengthening of market positions.

Hydro Aluminium's organizational structure in 2004 has been as follows:

The graph below depicts Hydro Aluminium's aluminium operations, in terms of 2004 tonnage along the value chain.

### **Overview of Aluminium Industry**

Aluminium is the third-most abundant element in the earth's crust and the second-most used metal. The main properties that make aluminium an attractive material include its light weight, strength, recyclability, corrosion resistance, durability, ductility and electrical conductivity. Because of aluminium's unique combination of properties, the variety of aluminium products continues to grow.

### ***Aluminium Smelting***

The primary raw material for aluminium smelting is alumina, which is refined from bauxite. Bauxite deposits are most commonly found in tropical and subtropical regions of the world, such as West-Africa, India, Jamaica, South America (Brazil, Surinam, Venezuela, and Guyana) and Australia. Bauxite is generally extracted by open pit mining. More than 100 million tonnes of bauxite are mined each year. Approximately two tonnes of bauxite are required to produce one tonne of alumina; and approximately two tonnes of alumina are required to produce one tonne of aluminium.

Alumina is dissolved in an electrolyte, which is contained in a silicon carbide and graphite lined steel container known as a pot. An electric current is passed through the electrolyte at low voltage, but at very high current, typically 150,000 amperes, or as high as 300,000 amperes with modern technology. By means of electricity and carbon (anode), the alumina is reduced into liquid aluminium metal and carbon dioxide gas. Various technologies can be used for the process. Some production lines are based on the Söderberg technology, which will be phased out of Hydro's Norwegian smelters due to environmental legislation (see discussion under Metals Primary Aluminium Production below). Newer and more efficient is the so-called prebake cell technology. Hydro's own prebake cell technology, HAL 275, combines low investment costs with high productivity, low energy consumption and reduced emissions. The technology is compact, economical and environmentally friendly.

The molten aluminium is periodically siphoned off into a holding furnace, then cleaned and cast into metal products, such as extrusion ingot, sheet ingot, wire rod, primary foundry alloy, continuous cast coil and standard ingot. The molten aluminium is often alloyed with other metals, including iron, silicon, zinc, copper and magnesium, to form alloys with different properties.

It takes roughly 14 kilowatt-hours ( kWh ) of electricity (industry average) to produce one kilogram of aluminium from alumina. Design and process improvements have progressively reduced this figure from about 21 kWh in the 1950s. In a modern smelter, the electricity consumption could be approximately 13 kWh per kilogram. Nonetheless, aluminium smelting remains an energy-intensive process, which is why the world's smelters are located in areas that have access to abundant power resources. High energy prices have reinforced this trend with more smelters being located in remote, low energy cost areas, where electricity is generated specifically for the aluminium plant. A significant part of the energy used to produce aluminium is supplied to the European market from hydro-electricity.

The reduction process is continuous. A metal plant cannot easily be stopped or started. If production is interrupted by a power failure of more than three to five hours, the metal in the pots will solidify, often requiring an expensive restarting process.

## ***Processing of Aluminium***

### *Rolled Products*

The aluminium rolling process changes the characteristics of the metal, making it less brittle and more ductile. Prior to rolling, the aluminium is in the form of a continuous cast coil or rolling sheet ingot that typically is up to 600 millimetres ( mm ) thick. The rolling sheet ingot is then heated to around 500 degrees Celsius and passed several times through a hot rolling mill. This gradually reduces the thickness of the metal to around 3-13 mm. The thinner aluminium is then cooled and transported to a cold rolling mill for further processing. There are various types of cold rolling mills, producing various types of rolled product with thicknesses as low as 0.006 mm in the case of foil. In general, the type of product depends on the alloy used, the rolling deformation and the thermal treatment used in the process. Rolling mills are controlled by very precise instruments and measuring systems. Rolled products include:

Foil typically less than 0.06 mm thick, foil is used mainly in the packaging industry (e.g., for foil containers and wrapping), for electrical applications and for building insulation.

Lithographic sheet typically of a thickness between 0.12 – 2.2 mm and with a high surface quality, lithographic sheet is used in the printing industry.

Sheet and strip typically between 0.06 and 3-4 mm in thickness. Sheet and strip are widely used in the construction industry, in transport applications and in packaging.

Plate and shate over 3-4 mm in thickness, plate and shate are used in a number of applications, including airframes, military vehicles and structural components in bridges and buildings.

### *Extrusion*

Aluminium cylinders, referred to as extrusion ingots, which are cast from molten aluminium, can be extruded by heating the aluminium to around 450-500 degrees Celsius and pushing it through a die at great pressure to form intricate shapes and sections. The primary applications for extrusions include:

Building and construction applications such as window frames, door frames and facades;

Automotive applications like bumper beams, window and door frames and subframes;

Transport segments such as components for trucks, trains and airplanes; and

Machines, furniture and consumer durables.

Extruded products are sold in various forms, such as long lengths (e.g., six meters), cut to length, machined, formed, assembled in a component or module or as systems.

### *Casting*

Aluminium can be cast into an infinite variety of shapes. Cast parts are used in a variety of applications including: light weight components for vehicles, aircraft, ships and spacecraft; general engineering components; architectural fittings; and high-tech products for office and home. Cast products can be produced using either sand casting (used for high production volume processing) or die casting.

### *Recycling*

Anything made of aluminium can be recycled repeatedly. The recycling of aluminium requires only about five percent of the energy needed to produce primary metal. Scrap aluminium has significant value and commands good market prices. Many aluminium companies, including Hydro Aluminium, have invested in dedicated state-of-the-art secondary metal processing or remelt plants to recycle aluminium.

## **Long-term Market Developments**

### *Growth in Aluminium Consumption*

Aluminium consumption in the Western World (i.e., the world, excluding China, the Commonwealth of Independent States (CIS), North Korea and Eastern Europe) has realized an average annual growth rate of approximately 2.5 percent over the last two decades. Industry analysts, such as Brook Hunt, predict future growth in the Western World's consumption of aluminium in the next decade to be approximately three percent per year. On a global basis, the growth rate is expected to be about four percent, mainly due to increasing consumption in China and the CIS. World consumption of primary aluminium in 2004 was approximately 30 million tonnes.

Asia's, and in particular China's influence on the aluminium market has increased over the last years. China's rapid increase in aluminium production has created increased uncertainty around the potential oversupply situation that could negatively affect international prices. China has traditionally been a net importer of primary aluminium. However, during 2002, China's capacity and production increased by about 30 percent while consumption grew by about 17 percent, and the country became a net exporter (approximately 200,000 tonnes). For 2003, net exports increased by an estimated 150,000 tonnes to a total estimated 350,000 tonnes. Production in China increased significantly during the last quarter of 2004, leading to a growth rate of roughly 20 percent in 2004 compared with 2003. Consumption increased by an estimated 17 percent for 2004 as a whole. Net exports of primary



aluminium surged during the fourth quarter of 2004, to a total accumulated 2004 volume of about 650,000 tonnes. This development was apparently triggered by an announcement by the Chinese authorities of the abolition of an eight percent export subsidy by year end, together with the imposition of a five percent export tax. However, including scrap, semi-fabricated and other aluminium products, China imported an estimated 350,000 tonnes on a net basis in 2004 according to Chinese trade statistics. Over the longer term, China is expected to devote more or all of its aluminium production to domestic consumption. However, if consumption and production in China fail to develop in parallel, it will likely influence the metal pricing and the need for new capacity in the rest of the world. China has few natural advantages for primary production. The country must import alumina and power sources are located far inland. In addition, Chinese authorities announced a reduction of available credit for industrial development in China during the first quarter of 2004.

In 2004, growth in demand in the United States, the world's largest aluminium consuming region, was high, while growth in Europe was moderate. Total shipments of primary aluminium in the Western World increased approximately 7.5 percent (or 1.6 million tonnes) compared to the prior year. New capacity, adjusted for idled capacity, resulted in increased production of about 550,000 tonnes. In the world's third largest consuming region, China, the increase in consumption was estimated at 17 percent. There was an increase in net primary exports to the Western World from China of about 300,000 tonnes. In addition, the CIS and Eastern Europe are estimated to have increased their net exports to the Western World by about 150,000 tonnes in 2004 compared to 2003. According to CRU International (CRU), total reported and unreported stocks are estimated to have decreased by about 200,000 tonnes in 2004, compared with an increase of about 400,000 tonnes in 2003.

#### *Development in aluminium inventories*

In 2004, reported inventories of primary aluminium (defined to include London Metal Exchange (LME), International Aluminium Institute (IAI), Japanese merchant/consumer and other reported stocks) in the Western World decreased significantly by approximately 700,000 tonnes to a level of approximately 2.9 million tonnes.

Historically, stocks in the Western World have fluctuated considerably. From a level of approximately 1.5 million tonnes in the late 1980s, stocks peaked in 1993 at approximately 4.5 million tonnes and were thereafter rapidly reduced to approximately 2.6 million tonnes at the end of 1995. These changes were mainly attributable to the export of Russian metal to the Western World, and the subsequent production reduction implemented by producers. Since 1995 and until 2004, the annual fluctuations have been less than 500,000 tonnes. High and increasing stocks historically have had a downward impact on the aluminium price as illustrated in the following graph showing the LME 3-month price (i.e., the price quotation on the LME for delivery of metal three months from the date of quotation) and reported stocks estimated in days of consumption since 1994.



*Aluminium price development*

Primary aluminium is traded on the LME. The most common benchmark is the 3-month price. Prices are quoted on a daily basis, and normally reflect the market's expectations as to the future supply and demand balance, together with actual consumption and production data. Due to the liquidity in the LME market, hedge funds enter the market to varying degrees to capitalize on volatility in the prices. The LME price, which is stated in US dollars per tonne, serves as the main reference price for aluminium purchase and sale contracts worldwide. For medium to long-term alumina contracts, prices are also normally linked to the LME price of aluminium rather than alumina spot prices. For semi-fabricated products, a variety of contracts are used, both with respect to duration and pricing.

The graph below illustrates the annual average LME 3-month price of aluminium during the 1981-2004 period.

During the 1981-2004 period, the nominal LME 3-month price has reflected fluctuations based upon the factors described above while increasing marginally on an average annual basis. Seen over a long period (1960–2003) and adjusting for the U.S. GDP deflator, the LME 3-month price, stated in real terms, declined at an average annual rate of approximately one percent. Industry sources, like CRU, expect a decline in the real price of aluminium to continue in the long term.

However, the increases in the prices of input factors (including alumina and energy) have contributed to high LME prices throughout 2004. According to independent market analysts alumina prices are expected to remain high in 2005, while a softening in the alumina market is expected from 2006 and onwards due to the introduction of new capacity. Average energy prices are expected to increase in real terms. An additional factor affecting the aluminium price is an expected favorable aluminium market balance in the short-term.

#### *Development in downstream consumption*

Aluminium is used in a variety of applications in several industries. The table below reflects a percentage breakdown of the estimated levels of Western World consumption by the principal consuming industries in 2004, and the historic annual growth rates for these industries over the period of 1998 through 2004 (2004 reflects forecasted figures).

<b>Industry</b>	<b>Percentage of Western World Consumption in 2004</b>	<b>Annual Growth Rates (1998-2004) %</b>
Transport	29.5	3.0
Building & Construction	20.6	2.4
Packaging	18.0	1.0
Electrical	9.1	1.4
Consumer Goods	8.6	3.2
Machinery and equipment	7.8	1.3
Other	6.4	0

---

Source: Brook Hunt

Regarding major applications, the transport segment is expected to experience the most significant growth rates in the foreseeable future. The packaging, as well as building and construction industries, appear to be more mature industries in terms of aluminium consumption.

During 2004, there was a significant economic recovery in the United States, which has impacted the downstream aluminium industry, while the economy in Europe has experienced only a moderate improvement.

#### *Geographical production and market balance*

The table below provides a breakdown of the 2004 production volumes in the principal aluminium producing regions and the estimated percentage of total global production represented by each such region.

<b>Region</b>	<b>Production Volume (in millions of tonnes)</b>	<b>Estimated Percentage of Total Global Production</b>	<b>Net export 2004 (estimated as production consumption, in millions of tonnes)</b>
North America	5.1	17.1	- 2.0
South America	2.4	8.1	1.3
Western Europe	4.3	14.4	-2.5
Eastern Europe (including Russia and Ukraine)	4.5	15.1	2.6
Asia	9.5	31.9	-3.0
Oceania	2.3	7.7	-1.9
Africa	1.7	5.7	1.3
Total	29.8	100.0	-0.4

---

Source: Brook Hunt

The net import of primary aluminium into Europe, USA and Asia (excluding China) has increased during the period from 2001 to 2004. Based on estimates from CRU and other market analysts, this trend is expected to increase further in the medium and long-term reflecting among other things, the shift of aluminium smelter locations to areas with lower energy costs see Overview of Aluminium Industry Aluminium Smelting . The main uncertainty is how Chinese production and consumption of primary aluminium develops over this time horizon. However, the Chinese government has taken steps to discourage export of energy through primary aluminium.

### Industry Structure

Aluminium competes with substitution materials like steel, plastic materials such as polyvinyl chloride ( PVC ), wood, glass, magnesium, etc. In addition, there is strong competition among the various aluminium producers focused on supplying their customers and offering new solutions, and focused on reducing costs in order to retain or improve their competitive position. As a consequence, pressure has been put on uneconomic smelters using outdated technology, and some closures have been completed or announced. According to CRU, as of the end of 2004, approximately 2 million tonnes of capacity remained idle in the Western World, 1.2 million tonnes of which were located in the Northwest United States, due primarily to the high price of electricity in the regions where the production capacity is located, as well as high alumina prices. The likelihood and timing of significant reactivation of this capacity is uncertain. In response to the competition, aluminium producers are seeking to expand their existing smelter units to capture economies of scale and investing in the development of cost-efficient plants (i.e., in areas with ample energy supplies and favorable energy prices). This is expected to continue in the foreseeable future.

Over the last decade the aluminium industry has consolidated significantly. Alcoa (based in the United States) has established itself as the number one integrated aluminium company through the acquisitions of Alumix (based in Italy), Inespal (based in Spain), Alumax (based in the United States) and Reynolds (based in the United States). Alcoa has also developed a significant position in alumina. Alcan (based in Canada), the number two integrated aluminium company, has acquired Alusuisse (based in Switzerland), and, in February 2004, Pechiney (based in France). Following the acquisition of Pechiney, Alcan's integrated aluminium operations are estimated to be approximately of a

size comparable to that of Alcoa. However, Alcan subsequently announced the spin-off of substantially all of the rolled products businesses held by them prior to its acquisition of Pechiney and that the spin-off would achieve the regulatory divestiture requirements stipulated by the European Commission as a result of the acquisition. The name of the new company is Novelis and the transaction was completed on 6 January 2005.

Hydro Aluminium, following its acquisition of VAW in March 2002, has become the third-largest globally integrated aluminium company in terms of volume, with approximately 25 percent of the revenues of Alcoa and of the combined Alcan/Pechiney. Industry analysts expect that the consolidation activity within the aluminium industry will continue, although at a reduced scale compared to previous years.

In addition to the integrated companies mentioned in the preceding paragraph, there are several large companies whose focus is on upstream operations (i.e., bauxite, alumina and/or primary metal), such as BHP Billiton (based in Australia and the United Kingdom), Rio Tinto, through its subsidiary, Comalco Limited (Comalco) (based in Australia), and CVRD/Aluvalle (based in Brazil). The Russian aluminium industry has consolidated into two companies, Rusal and Sual. Both companies focus on metal production in Russia, with minor downstream operations. Since the 1990s, China has emerged as a major producer of primary metal. The industry structure in China is still fragmented with many small- and medium-sized companies, of which Chalco has evolved as the most significant.

Downstream, there are a few major independent semi-fabricating producers outside the large integrated systems. In finished products, the structure is much more fragmented.

## **Hydro Aluminium's Competitive Position and Strategy**

### ***Optimizing its Business Portfolio***

As a result of the acquisitions over the last several years, Hydro has achieved a better balance between Hydro Aluminium's primary upstream production and downstream activities. The downstream activities added to Hydro Aluminium's business activities through the VAW acquisition have complemented and broadened Hydro Aluminium's product portfolio, contributing to such activities achieving a critical size.

Hydro Aluminium's management believes the composition of its portfolio has several benefits compared with other integrated aluminium companies. The benefits enable Hydro to maximize high margin product offerings with less capital employed. This is accomplished by or as a result of:

sourcing a similar tonnage of metal from scrap, other ingot sources and alliance partners (see Focus on Midstream Activities below) as Hydro Aluminium produces from its own electrolysis production.

the composition of its downstream product mix. Hydro Aluminium has a higher proportion of extrusion production than rolled products production when compared with other integrated aluminium companies. Extruded products offer attractive margins and require less capital invested per tonne than rolled products. Hydro Aluminium also has a higher level of automotive activity than its competitors, a market with the highest expected growth rate.

sourcing approximately 50 percent of the alumina needed to produce aluminium through medium- to long-term contracts, rather than through ownership interests.

### ***Improving Relative Cost Position for Alumina***

Hydro Aluminium has, over the last decade, based its supply of alumina on a combination of equity investments in production facilities having competitive, low cost positions and a portfolio of medium- to long-term contracts. As a consequence of the second expansion of the Alunorte alumina plant in Brazil, and the sale of the German based special alumina business, Hydro Aluminium will improve the cash-cost position of its equity alumina interests (see discussion under Metals-Raw Materials-Alumina below). Hydro's average cash cost of equity alumina production is expected to decrease from around USD 165 per tonne in 2000 to approximately USD 120 per tonne in 2006.



Hydro Aluminium has never been an operator of alumina plants, but has instead prioritized its capital and management resources in areas of the value chain where Hydro Aluminium believes it can add greater value. In general, over the last decade there has been a favorable alumina supply situation, with the exception of a few short periods of tight supply. Consequently, it has been possible for Hydro Aluminium to capitalize on its financial strength to enter into favorable contracts. During 2003 and in 2004, the alumina market was tight with spot prices remaining at high levels. For Hydro Aluminium, this had little impact due to its combination of supply from equity interests and long-term contracts. While this situation may continue for several years, Hydro Aluminium's management believes the risk for a long-term tightening of supply of alumina in the market is limited, since there is remaining potential to expand current capacity with moderate investments. Accordingly, Hydro Aluminium will continue to pursue an alumina strategy based on sourcing a substantial part of its needs through medium- to long-term contracts.

***Restructured Smelter Portfolio; Improving Relative Cost Position for Primary Metal***

Hydro Aluminium, like the other leading integrated aluminium companies, plans to increase the share of its production being produced at larger smelters. Based on approved projects, Hydro Aluminium expects to increase its share of production being produced by smelters with a capacity of more than 350,000 tonnes per year from 4 percent in 2002 to approximately 30 percent by the end of 2007. Expansions in primary production are completed or underway in plants where the existing infrastructure supports a larger capacity. Expansion of existing facilities improves the operating cost position of the plant, thereby improving the overall long-term cost position.

In 2004, Hydro Aluminium completed an expansion of its fully owned Sunndal metal plant (in Norway) increasing the plant's annual primary aluminium capacity to 360,000 tonnes. In 2002, Hydro approved participation in the expansion of the Alouette smelter in Canada. Total annual primary aluminium production capacity will increase by 307,000 tonnes to 550,000 tonnes in 2005, making Alouette the largest aluminium smelter in North America and among the world's lowest cost smelters. Hydro's ownership interest and share of the production is 20 percent. Including other smaller projects, the expansions of primary aluminium production capacity will increase Hydro Aluminium's total annual primary aluminium capacity to approximately 1.8 million tonnes by 2005, from the level of nearly 1.5 million tonnes in 2003.

In December 2004, Hydro entered into a Heads of Agreement with Qatar Petroleum to evaluate the possible construction of what would be one of the world's largest aluminium plants (consisting of an aluminium metal plant, anode plant and cast house, along with a dedicated power plant), to be located in Qatar. The Heads of Agreement is non-binding and reflects a number of uncertainties that could cause the parties to determine not to go forward with the project. The current contemplation is that, if completed, the initial capacity of the plant would be 570,000 tonnes. Total project costs have been estimated to be USD 3 billion, with Hydro's share being approximately USD 1.5 billion.

As indicated earlier, aluminium smelting is an energy intensive process. However, Hydro has self-generated power production and long-term energy contracts (10–15 years) for a vast majority of its production with the exception of the German metal plants. The current electricity contracts for Hydro Aluminium's German metal plants will expire at the end of 2005. Based on ongoing negotiations for renewal of the contracts, Hydro expects substantial increases in energy costs for these plants. As a result of the higher expected costs and a weakened competitiveness due to the strengthening Euro compared to the US dollar, Hydro wrote down the value of the German metal plants in 2004 by approximately NOK 2.3 billion (See discussion under Metals Raw Materials Energy below).

Even with Hydro's efforts to improve the relative cost position of its smelter system through continuous improvement and reduced cost within existing capacity and expanding capacity at low cost

smelters, Hydro's European smelters face challenges in reaching acceptable cost levels. Approximately 30 percent of production costs in these smelters relate to direct and indirect labor. A combination of higher wages, social benefits, shift schedules, higher manning for support functions and higher prices for purchased services in Norway result in a cost disadvantage for these smelters. As a result, on 7 May 2004, Hydro's Board of Directors decided to recommend to the Corporate Assembly a plan aimed at reducing annual costs by NOK 350 to NOK 400 million. The plan implies a reduction of manning by about 800 employees in the Norwegian plants. As of the end of 2004, a total of NOK 432 million of related costs had been expensed.

***Focus on midstream activities***

Since the early 1990's Hydro Aluminium has pursued a multi-sourcing strategy, which it refers to as the metal supplier concept. This strategy, focusing on building a strong market position in the metal products market, the mid-stream part of the value chain, has been based on three primary components:

better utilize Hydro Aluminium's casthouse capacity;

expand Hydro Aluminium's remelt activities; and

develop alternative metal sources through commercial alliances and other agreements.

To optimize its casthouse capacity for the production of midstream aluminium products, Hydro Aluminium supplements the metal produced by its own smelters with remelt metal. In addition to remelting scrap returned from its customers and purchased from third parties, aluminium ingot is procured globally under a combination of short and long-term contracts, with the major sources in the CIS, South America and in Southern Africa. Hydro Aluminium's total remelting activities in 2004 accounted for approximately 1.7 million tonnes.

Hydro Aluminium has entered into several long-term commercial alliances and agreements to enhance its strategy of developing and leveraging the metal supplier concept with limited asset investment.

In 2004, Hydro Aluminium was supplied with approximately 300,000 tonnes of aluminium remelt ingot from the Tajik Aluminium Plant in Tajikistan (TadAZ) under long-term arrangements. However, at the end of 2004, the metal deliveries to Hydro Aluminium from this source stopped prematurely. Although Hydro Aluminium is attempting to find an amicable solution, it is confident that, if required, it can replace such volumes, but most likely at higher costs. In order to protect its legal rights and recover damages, Hydro Aluminium has commenced arbitration proceedings in London.

Under another agreement, Hydro Aluminium is participating in the upgrading of the aluminium casthouse at Rusal's Sayanogorsk smelter, located in southern Siberia. After completion of the first stage of the construction during the first half of 2004, Hydro Aluminium is being supplied with 80,000 tonnes per year of high quality extrusion ingot under the terms of a technology and remarketing agreement. The second stage, to follow within a few years is expected to double the production capacity.

Hydro Aluminium has also entered into a long-term agreement with Talum in Slovenia, under which Talum will supply Hydro Aluminium with 70,000 tonnes of foundry alloy products per year during 2004-2010.



### ***Focused Growth in Selected Markets Downstream***

Hydro Aluminium has downstream operations both within and outside of Europe. However, the major parts of the downstream activities are in Europe representing approximately 84 percent of the related total operating revenues.

#### *Rolled Products*

Hydro Aluminium is the second largest producer in the European rolling industry in terms of market share, which management estimates to be approximately 19 percent.

Hydro Aluminium has important European positions within high margin rolled products segments such as lithographic (printing) plates and foil. Each of Hydro and Alcan has a 50 percent ownership interest in Aluminium Norf GmbH ( AluNorf ), which is the world's largest hot rolling mill according to CRU's Rolled Mills Equipment Profiles 2000 report. (See discussion above regarding Novelis, which will include the Alunorf rolling mill.) Hydro Aluminium's management does not expect that the change of legal entity status of its partner in Alunorf will influence the operations of the rolling mill.

Hydro Aluminium's rolled products strategy is to focus on growth in selected segments such as lithography, while at the same time continuing to work on operating improvements. Several initiatives have been launched to improve the Rolled Products sub-segment's financial results, addressing selling, general and administrative costs and direct production costs. Plant specialization has been and will continue to be pursued to improve efficiency. For example, there has been upgrading of foil mills and a new litho line is under construction. A key ambition here is also to ensure high plant capacity utilization. Following completion of a number of projects in 2004, the level of capital expenditures is expected to decrease to a similar level as depreciation.

#### *Extrusions*

Hydro Aluminium currently holds a leading position in the European soft-alloy extrusions market with a market share estimated by Hydro Aluminium's management to be approximately 14 percent. Hydro Aluminium is one of the leaders in the building systems market in Europe, with its position having been bolstered by the acquisition of the French-based company, Technal, in 2002. In a similar manner, the acquisitions of the former Wells Aluminum (based in the United States) in 2000 and VAW in 2002 have strengthened Hydro Aluminium's position in the North American extrusions markets. In South America, the plants in Brazil and Argentina have been established as important footholds that will provide bases for future developments. In parallel with this growth, Hydro Aluminium has focused on improving the performance of its extrusions operations to position itself to capture new growth opportunities. Hydro Aluminium intends to continue to expand its product offerings in the global extrusions markets through selected forward integration into value-added services (including surface treatment processes and various forms of fabrication, such as cut-to-length, machining, etc.) to improve margins and volume as well as further expansion of its building systems operations. Further, Hydro Aluminium will seek to increase its presence in these markets through organic growth and selective acquisitions.

#### *Automotive*

Hydro Aluminium is actively engaged in meeting the needs of the automotive market, which has become the principal source of the growth in demand in the aluminium industry during the last ten years. On average, approximately 25 percent of Hydro Aluminium's sales in tonnes of own primary metal production have been ultimately destined for the automotive sector, either as customers of Hydro Aluminium's own semi-fabricated and finished products or through other tier suppliers using Hydro Aluminium's foundry alloys to make automotive parts. Hydro Aluminium's product portfolio includes casting of engine blocks and cylinder heads, and precision tubing and

crash management systems (e.g., bumper beams). In addition to production in Europe, Hydro Aluminium produces aluminium engine blocks and cylinder heads in Mexico, precision tubing in United States, Brazil and China and crash management systems in the United States.

In 2004, Hydro Aluminium's Automotive sector focused on improving its profitability by streamlining production processes to reduce costs. The short- to medium-term strategy is to continue to focus on selected products, turn around underperforming units and leverage the investments made to improve profitability.

## Hydro Aluminium's Operating Sub-Segments

### METALS

Hydro Aluminium's Metals sub-segment (Metals) consists of the two sectors, Primary Metal and Metal Products. The Metals sub-segment encompasses Hydro Aluminium's upstream activities, principally the production and sale of primary aluminium produced in Hydro Aluminium's smelters, both in wholly-owned and part-owned units. Metals activities also include the processing of scrap and ingot into high quality products for the mid- and downstream markets, all aluminium and raw materials trading activities, Hydro Aluminium's high purity business and magnesium operations. As of 1 January 2005 the magnesium operations have been transferred to the Automotive sector.

#### *Primary Aluminium Production*

Hydro Aluminium produces its primary aluminium at 12 wholly or partly owned primary aluminium smelters. Most smelters operated at full capacity during 2004. Production at the smelters during the three most recent years are reflected in the table below:

Aluminium production (tonnes)	2004	2003	2002 <sup>(1)</sup>
<i>Primary Aluminium</i>			
Karmøy	278,000	271,000	273,000
Årdal	222,000	215,000	206,000
Sunnal (2)	306,000	210,000	153,000
Høyanger	76,000	74,000	73,000
Sørå (Hydro's 49.9 percent share) <sup>(3)</sup>	82,000	79,000	67,000
Slovalco <sup>(4) (5)</sup>	157,000	27,000	22,000
Neuss	223,000	221,000	173,000
Stade	69,000	69,000	48,000
HAW (33.3 percent share)	44,000	43,000	33,000
Kurri Kurri	155,000	156,000	122,000
Tomago (12.4 percent share)	60,000	59,000	45,000
Alouette (20 percent share)	48,000	49,000	38,000
Total primary aluminium production	1,720,000	1,473,000	1,253,000
Average price primary aluminium (U.S.\$/tonne per LME 3-month price)	1,721	1,428	1,365

(1) Includes VAW volumes from the VAW acquisition date of 15 March 2002.

(2) The Sunndal smelter has been expanded to an annual primary aluminium capacity of 360,000 tonnes. The 2003 and 2004 production volume reflects the partial completion of the expansion, which was completed in 2004.

(3)

The annual production capacity of the Sørå smelter has been expanded by approximately 32,000 tonnes. The 2003 and 2004 production volume reflects Hydro's share of that expansion.

- (4) The annual production capacity of the Slovalco smelters has been expanded by approximately 34,000 tonnes. The 2003 production volume reflects Hydro's share of that expansion.
- (5) As of 1 January 2004 Slovalco has been fully consolidated in Hydro both in terms of financial results and in volumes. In 2003 and 2002 Hydro's share of 20 percent is included.

Emission standards, established by the Norwegian Pollution Authority in accordance with the Oslo and Paris Convention regulations (see Environmental Matters Oslo and Paris Commission (OSPAR) below), require primary aluminium production facilities using the Söderberg technology in the Høyanger and Årdal primary aluminium plants to be closed by the end of 2006 and at Karmøy by the end of 2009. Hydro has decided that investments to replace this capacity will not be made in Høyanger and Årdal. The resulting closures will reduce Hydro Aluminium's annual primary aluminium production capacity by 72,000 tonnes by 2007 and another 125,000 tonnes by 2010.

### ***Raw Materials***

#### *Alumina*

Hydro Aluminium has secured a part of its long-term alumina requirements for its primary metal production through investments in alumina plants. In 2004 approximately 45 percent of its alumina requirements for primary metal production was provided by such equity investments.

In 2004, Hydro entered into an agreement to sell its German based alumina business to the Dadco Group for approximately NOK 700 million. The business sold consists of a 50 percent share in Aluminium Oxid Stade GmbH (AOS), which has a total production capacity of 850,000 tonnes of alumina. The sale also included AOS's related chemical grade alumina business and a dedicated bauxite supply source represented by Hydro's 10 percent share in Halco (Mining) Inc. AOS was sold primarily because the chemical grade alumina is not used in Hydro Aluminium's production process. AOS will continue to produce smelter grade alumina to supply Hydro's wholly owned primary aluminium unit in Stade and Hamburger Aluminium-Werk, in which Hydro has a 33 percent shareholding, through a long term supply agreement with Dadco.

Hydro Aluminium's major alumina investment is its 34 percent participation in Alunorte. After an expansion of the plant in 2003, capacity reached approximately 2.4 million tonnes, enabling Hydro Aluminium to secure access to 810,000 tonnes of alumina per year. In the third quarter of 2003, Hydro decided to participate in a further expansion of Alunorte. This planned expansion will increase capacity to approximately 4.2 million tonnes in 2006, providing Hydro Aluminium with a total of approximately 1.4 million tonnes of alumina annually. Hydro Aluminium believes that Alunorte's cash operating costs are significantly below the alumina industry's world average. As a result of this investment in Alunorte, Hydro Aluminium will maintain approximately 50 percent coverage of its alumina needs through its equity investments, taking into account the higher production arising from planned primary metal expansions.

Hydro Aluminium also has a 35 percent equity interest in the Alpart alumina refinery in Jamaica, which has an annual production capacity of approximately 1.5 million tonnes. In late May 2004, Hydro decided to exercise its right of first refusal, provided under the Alpart partnership agreement between Hydro Aluminium and Kaiser Aluminum, to acquire the remaining 65 percent interest. Immediately after this purchase was completed, Hydro sold its 65 percent interest to the Swiss-based Glencore AG on the same terms and conditions as those governing Hydro's acquisition of the interest. Following the completion of these transactions, Alpart changed from being operated by a managing partner to having independent management. Both Hydro and Glencore are represented on Alpart's ultimate governing body, the Executive Committee. The changes in the ownership have been approved by the US Bankruptcy Court for the District of Delaware and the Jamaican government. Hydro and Glencore have also entered into a memorandum of understanding under which each company will explore the possibility of closer cooperation and utilization of synergies between Alpart and Windalco, an alumina refining company in Jamaica that is partially owned by Glencore.

In addition to the equity interests in alumina production capacity mentioned above, Hydro Aluminium has a number of short-, medium- and long-term purchase contracts to secure alumina for its own smelters and trading activities. These contracts typically have pricing formulas based upon a percentage of the LME price.

In June 2003, Hydro Aluminium and Comalco signed one of the largest alumina supply contracts in the history of the aluminium industry. Under the agreement, Comalco will supply Hydro Aluminium with 300,000 tonnes of alumina in 2005 and 500,000 tonnes of alumina annually from 2006 through 2030.

### *Energy*

Energy represents on average about 25 percent of the operating costs associated with primary aluminium production. As mentioned earlier, Hydro Aluminium has access to self-generated power and negotiated long-term contracts for a vast majority of its production.

Much of the energy for Hydro Aluminium's Norwegian smelters is purchased from or through Hydro Oil and Energy. Hydro Oil and Energy produces, in its own hydroelectric generating plants, electricity amounting to more than 70 percent of the requirements of Hydro Aluminium's Norwegian primary aluminium smelters. Virtually all of the electricity needed to operate the Norwegian smelters in 2005 is covered by contracts. Certain long term supply contracts with Statkraft expire in the summer of 2006. Hydro has already entered into new contacts with Statkraft replacing these contracts through year 2020. Compared with the expiring contracts, the new pricing structure will increase energy costs starting in the second half of 2006. Long-term availability of electricity at predictable prices is considered a prerequisite for the further development of the Norwegian operations particularly since Nordic spot market prices can be highly volatile.

The smelters outside Norway source energy under contracts with local producers. For the large smelters in Canada and Australia, Hydro has entered into long-term contracts.

The German smelter system is comprised of the fully owned smelters located in Neuss (Rheinwerk) and Stade (Elbwerk) and the Hamburger Aluminium Werk smelter in which Hydro owns 33.33 percent. Together these smelters provide Hydro with approximately 330,000 tonnes or around 20 percent of the total production of Hydro. The current electricity contracts for the German smelters will expire at the end of 2005. Current negotiations for new contracts and other increasing tariffs, indicate that significant price increases can be expected. Hydro Aluminium is currently considering future improvement initiatives and the overall competitiveness of these smelters. Should it not prove possible to obtain new power contracts at an acceptable price, the ultimate consequence could be the closure of the German smelter system.

As a result of weakened competitiveness due to the strengthen Euro compared to the US dollar and increasing energy costs, Hydro has written down the value of the German primary metal plants system by approximately NOK 2.3 billion in December 2004.

### *Anodes*

Anodes are used and consumed in the smelting process. Most of Hydro Aluminium's smelters produce their anodes at their own on-site facilities. During the last several years Hydro Aluminium has expanded its capacity of anode production both in its Årdal plant and in its part-owned company Aluchemie in the Netherlands. In addition, Hydro has upgraded the anode facility at its Kurri Kurri plant in Australia.

### ***Remelt Activities***

Hydro Aluminium has established remelt plants for conversion of scrap metal and ingot into extrusion ingot and sheet ingot in all major European markets. Facilities are located in Norway, Luxembourg, the United Kingdom, Germany, Spain, Italy and France, as well as at the primary metal plants in Norway, Germany and Slovakia.

Scrap is sourced from internal and external customers, and in addition standard ingot is used as input material. The main customers are internal and external extrusion plants and internal rolling mills.

### ***Sales and Distribution; Trading Activities***

Most of Hydro Aluminium's own production of aluminium cast house products is sold in Western Europe and in the United States to semi-fabricating plants like extruders, rollers and wire and cable mills, as well as foundries. The main consumer areas are transportation, construction and packaging. The major consuming countries in Western Europe are Germany, France, the United Kingdom, Italy and Spain. Most of the aluminium is sold in the form of value-added products such as extrusion ingot, rolling ingot, wire rod and foundry alloys.

Hydro Aluminium has consistently strengthened its commitment to customer service and increased the efficiency of its production systems. Metals' regional market teams have competencies within technical and commercial service, research and development, logistics, contract administration and scrap conversion. To enhance its existing service level, Metals implemented a program in 2001 called Hydro Billet Plus. The aim of the program is to reward the Metals sub-segment's most important customers and customers who wish to increase their business volume. This service concept includes a web-enabled tool allowing customers to improve their understanding of commercial and LME price risk and to optimize their production system.

To support the metal supplier concept, Hydro Aluminium engages in trading of aluminium and related raw materials, mainly alumina. Trading is a natural extension of Hydro's internal sourcing activity. Trading contributes to optimizing capacity utilization within Hydro's own system as well as reducing logistical costs by sourcing from a variety of sources. Aluminium trading activities consist of physical metal purchases and sales, as well as trading on the LME. In 2004, Hydro's metal traders sold externally 738,000 tonnes of primary aluminium products, compared to 705,000 tonnes in 2003. The main trading product is aluminium ingot, which is also the global aluminium product on which price quotations on the LME and other metal exchanges are based. In addition, Hydro Aluminium has an alumina trading activity that has been profitable during the last five years. Alumina is often used in combination with metal trading/sourcing activities, for example, by supplying a third party smelter with alumina and receiving metal as compensation.

### ***High Purity Aluminium***

Hydro Aluminium produces and sells high purity aluminium products, which are mainly used in the electronics industry in products like electrolytic capacitors, semiconductors and flat panel displays. The aluminium content varies between 99.98 to 99.9999 percent depending on the final end product. High purity aluminium is produced in Europe, Japan, China and Russia. Markets for 99.99 percent high purity aluminium are mainly Japan, Europe and China. Markets for 99.999 percent high purity aluminium are mainly in the USA and Japan.

Global production of 99.99 high purity aluminium is estimated at around 75,000 tonnes and around 1,000 tonnes for 99.999 high purity aluminium. Hydro Aluminium produces and casts high purity aluminium at three production sites located in Vigeland (Norway), Naoetsu (Japan) and Grevenbroich (Germany). Sales volumes of 99.99 are 14,000 tonnes and of 99.999 the volume is 500 tonnes.

*Magnesium*

The magnesium industry in the Western World comprises only a few producers of primary magnesium. The International Magnesium Association (IMA) estimates that worldwide net shipments of primary magnesium reached approximately 402,000 tonnes for 2004 compared with its estimate of



actual shipments of 387,000 tonnes for 2003. Based on the latest statistics available, China and CIS shipments represented about 60 percent of the total. Increased quantities of Chinese magnesium available in Western markets over the past several years have resulted in significant downward pressure on magnesium prices. However the pressure has eased over the past year. In 2004 prices for pure magnesium were up by around 19 percent due to energy shortages and higher raw material (silicon) prices. Silicon is principally used by Chinese producers.

Hydro Aluminium has a primary (electrolytic) magnesium plant in Becancour, Canada, that produced approximately 57,000 tonnes in 2004. In addition, it has remelt operations in Norway, Germany and China with a combined remelt and recycling capacity of approximately 50,000 tonnes.

### ROLLED PRODUCTS

Hydro Aluminium's Rolled Products sub-segment (Rolled Products) is centered in Europe, with rolling mills in Germany, Norway, Spain and Italy, as well as a foil rolling mill in Malaysia that provides a foothold in Asia. Production capacity includes a 50 percent share in the AluNorf hot rolling mill in Germany, which in 2004 provided almost 576,500 tonnes to Rolled Products. Most of Hydro Aluminium's entitlement to the products from AluNorf is further processed in Hydro's nearby plant in Grevenbroich before being delivered to customers. Grevenbroich is the center (from the standpoint of technology, best competence and capacity) of Rolled Products' foil and lithographic sheet operations.

The table below shows the ownership interest and sales volume per main site in Rolled Products' production system.

Site	Ownership Percentage	2004 Sales Volume (1) (in thousands of tonnes)
Grevenbroich, Germany	100	534.9
Hamburg, Germany	100	134.7
Slim, Italy	100	78.7
INASA, Spain	100	22.8
AISB, Malaysia	81	22.0
Karmøy, Norway	100	63.4
Holmestrand Norway	100	84.6
<b>Total</b> , excluding internal sales and wire rod		941.1
AluNorf, Germany	50	576.5

(1) Excludes intra-company shipments, except volume cited for AluNorf.

(2) 100 percent of shipments from AluNorf are intra-company.

In 2004, Rolled Products had external shipments of 941,000 tonnes, mainly to the European market, where Hydro Aluminium's management estimates it holds a market share of approximately 18 percent.

Rolled Products, like the rest of the rolling industry, produces a wide variety of products for different industries and with different product margins. Important success factors within the rolling industry are optimizing the product mix and capacity utilization, as well as streamlining the production system. Because the rolling industry is capital intensive, high capacity utilization (volume) is important to reach an acceptable fixed cost per tonne. This must be

balanced with optimizing margins and product mix. Capacity utilization in the industry varies between the products. In general the strip business has overcapacity while Hydro Aluminium's Foil and Lithography units have a higher capacity utilization.

Rolled Products' customer base includes customers in the packaging, automotive, transport, building, engineering, electrical and printing industries. A major part of Rolled Products' sales functions is organized centrally along the product lines. Such organization enables optimization of sales, planning and production in Rolled Products' total system.

Rolled Products consists of three business units serving different market segments, which in 2004 had the following sales volumes to external customers:

Unit	2004 External Sales Volumes (in tonnes)
Lithography	146.8
Foil	153.4
Strip	640.8
<b>Total</b>	<b>941.0</b>

In 2004, the Lithography business unit had an average annual growth in sales volume of about 19 percent, outpacing management's estimate of five to seven percent growth in general lithography demand in the market. Rolled Products' management attributes this primarily to Rolled Products' focus on quality and customer service. Hydro Aluminium's Lithography business unit is well positioned to continue to expand its customer base and meet increased competition. Both on the demand and supply side, the lithography market is characterized by a high degree of concentration.

Rolled Products' Foil business unit has endeavored to leverage its market position in Europe to respond to the needs of global customers for a global supplier with a local presence. Within important foil segments such as liquid packaging, management estimates Rolled Products to be the global leader (in terms of volume). In 2001, Rolled Products acquired a 65 percent ownership interest (increased to 81 percent in 2002) in a Malaysian rolling mill to serve as a base for supplying customers in the Asian region.

The Strip unit's business is characterized by higher volumes and lower margins compared to the other units within Rolled Products. For this business, high capacity utilization and production efficiency are particularly important. The current strategy is to optimize the combined production and market system of Rolled Products to realize the full potential.

Automotive flat rolled products (part of the Strip unit) are expected by Hydro Aluminium's management to have higher growth than other flat rolled products in Europe. Principally using its existing asset base, Rolled Products is expanding its flat rolled product range from non-visible applications to applications that are visible on a finished manufactured vehicle (referred to as the "body-in-white" market). Body applications are expected to be a strong, growing market segment due to auto manufacturers' continued desire to reduce weight. CRU projects that auto body sheet consumption will approximately double in size from 2002 to 2007 in Europe. As the surface requirement demands a special quality, a new finishing line has been constructed in Grevenbroich, Germany.

Most of the metal required for the production in Rolled Products is delivered from Metals. In addition, process scrap from Rolled Products' customers and scrap collected from the market are, together with Rolled Products' own process scrap, remelted and cast to rolling ingots in the casting facilities of Metal Products. Supplies from Metals are priced on an arm's-length basis with reference to the LME price. External supplies of rolling ingot to Rolled Products are approximately 10 percent of its total requirements.

## EXTRUSION AND AUTOMOTIVE

The Extrusion and Automotive sub-segment of Hydro Aluminium consists of three sectors: Extrusion, Automotive and North America. Their main products are extruded aluminium profiles, used primarily in the building and construction markets and the transportation segment.

### *Extrusion*

The Extrusion sector ( **Extrusion** ) is primarily focused on the European market. Extrusion is Europe's largest soft alloy extruder of aluminium, in terms of volume, based upon estimates of Hydro Aluminium's management. Extrusion also has operating entities in Brazil and Argentina, and has a minority participation in a South African entity. In 2004, Hydro Aluminium's total production of extruded products (i.e., from all sectors) was approximately 626,000 tonnes.

Extrusion mainly consists of general extrusion activities and its Building Systems unit. With respect to its general extrusion activities, Extrusion supplies custom-made general extrusions of soft alloy aluminium, surface treatments such as anodizing and powder coating, fabrication, components and finished products. Building Systems supplies complete design and solution packages to metal builders, enabling them to supply both the commercial and residential building markets with products, such as facades, partition walls, doors and windows, as well as other building applications through its three main brands: Technal™, Wicona™ and Domal™.

A key to the success in the Extrusion sector is its network of smaller, relatively independent extrusion plants where decentralized organizations ensure good market alignment and close contact with customers and where plants actively use internal benchmarking and apply best practices to ensure continuous improvements in flexibility and efficiency.

In January 2002, Extrusion enhanced its position through the acquisition of Technal, a French-based manufacturer of aluminium building systems. The Technal acquisition augmented Extrusion's general extrusion operations through the addition of extrusion capacity in France and by doubling Building Systems' volumes.

### *Automotive*

The Automotive sector ( **Automotive** ) is comprised of Hydro Aluminium's Precision Tubing, Structures and motor Casting business units which include all related worldwide operations and activities. In the last few years, Automotive has followed a strategy of continuous growth in order to strengthen its position as a supplier to the automotive industry. Automotive is currently introducing several new products with start-up of new production lines. From 1 January 2005 the Magnesium business unit has been combined with Hydro Aluminium's Automotive sector because many of the customers are common to both units and a vast majority of magnesium applications are within the automotive sector. In addition, growth in the magnesium business is expected to be within the automotive market sector.

Hydro Aluminium's management believes that its Automotive Structures unit is the leading supplier of aluminium extrusion-based applications within crash management (e.g., bumper beams, crash boxes) in Europe. Automotive also has crash management operations in the United States. The sector has received safety awards for crash management systems supplied to several vehicles. Automotive Structures will concentrate on its activities within crash management in order to improve profitability.

Automotive's Precision Tubing unit produces applications used primarily within radiators, fuel coolers and liquid lines. This unit has a significant market presence in Europe, North America and South America. The unit also supplies part of the Chinese market through its joint venture plant in China. Hydro Aluminium announced that it would start construction of its first wholly owned precision tubing plant in China, to deliver precision drawn tubing, multi-port extrusions and extruded tubular profiles used in automotive heat transfer applications. Construction began in the first half of 2004 and production is expected to start in first half 2005. The plant, which is estimated to cost NOK 150 million, is expected to create about 140 new jobs in Suzhou. In addition Hydro Aluminium has decided to build a new precision tubing plant in Reynosa in Northern Mexico with an expected capital expenditure of USD 30 million. Construction of the plant started in second half 2004 and production is expected to begin in second half 2005.



Automotive's Casting unit is one of a few independent (i.e., not affiliated with an automotive manufacturer) suppliers in Europe of aluminium cylinder heads and engine blocks. In June of 2004, Hydro announced its intended closing of the aluminium cylinder head production plant located in Leeds in the U.K. as a result of an unfavorable competitive environment/position. Production is planned to cease in 2005. Remaining outstanding orders will be transferred to the plant in Győr, Hungary.

Automotive has a 49 percent ownership in Meridian Technologies Inc. (Meridian) a Canadian company owned 51 percent by Teksid S.p.A. (a subsidiary of the Fiat group). Meridian provides magnesium die-casting products to the automotive industry.

### ***North America***

The North America sector ( North America ) comprises all non-automotive extrusion and remelt plants in the United States. Through the acquisition of Wells Aluminum in 2000 and VAW's North American extrusion assets in 2002, the sector has increased its size as an extrusion company in the North American market, with seven extrusion plants and four stand-alone component manufacturing fabrication facilities, including one in Mexico.

The North America sector produces a broad range of extruded shapes, and provides finishing services, for numerous end markets. The sector has a leading position within the North American drawn tube market for demanding applications in office imaging products and health care. It also supplies extrusion-based products to the transportation, building and construction, and consumer durable markets. However, the US extrusion market still suffers from overcapacity in general.

The sector operates six remelters representing one of the largest remelt systems in the United States. Since its inception, the North American sector has upgraded and refurbished the older remelters within its system. When the last plant finishes its upgrade in 2005, the sector will operate a portfolio of modern, cost efficient remelters. The remelt network produces extrusion ingot and offers cost-efficient remelt solutions to the North American sector's customers.

The U.S. market experienced a strong recovery in 2004 growing approximately 11 percent compared to 2003 (according to CRU), with apparent consumption for 2004 estimated at 1,905 kt. By comparison, estimated consumption in the Western European market increased by about 3.8 percent from 2003 to 2004 (according to CRU), ending up at 2,589 kt for 2004.

### ***Environmental Matters***

Hydro Aluminium is subject to a broad range of environmental laws and regulations in each of the jurisdictions in which it operates. These laws and regulations, as interpreted by relevant agencies and the courts, impose increasingly stringent environmental protection standards regarding, among other things, air emissions, the storage, treatment and discharge of wastewater, the use and handling of hazardous or toxic materials, waste disposal practices, and the remediation of environmental contamination. The costs of complying with these laws and regulations, including participation in assessments and remediation of sites, could be significant.

Aluminium production is an energy-intensive process that has the potential to produce significant environmental emissions, especially air emissions. Carbon dioxide, a greenhouse gas, is a major emission from primary aluminium production. The European Commission has adopted a directive that would limit carbon dioxide emissions from a broad range of industries and establish an internal emission trading system. So far the aluminium industry has not been included in the emission-trading directive, but will be exposed to the EU emission trading system through the indirect effects on power prices.





In the European Union and other jurisdictions, various protocols address trans-boundary pollution controls, including the reduction in emissions from industrial sources of various toxic substances such as poly-aromatic hydrocarbons, and the control of pollutants that lead to acidification. Carbon dioxide regulation has been the subject of significant political debate in the United States, but thus far the United States has decided not to ratify the Kyoto Protocol. U.S. legislation regarding carbon dioxide emissions could be enacted in the future. Such legislation could have an effect on costs, but until such legislation is passed, it is not possible to provide a meaningful estimate. The United States has an extensive regulatory program to control other air emissions from aluminium facilities, including hazardous air pollutants.

The European Union has a framework of environmental directives integrated into the Water Framework Directive (2000/60/EC) regarding discharges of dangerous substances to water. The implementation of the directive has started in Europe and must be finalized by 2009. The manner in which this directive will be interpreted and enforced cannot be predicted. However, based upon the information currently available, Hydro Aluminium's management does not believe it will have a material negative impact on its business. The United States has a regulatory permit system limiting the discharge from facilities to water bodies and publicly owned treatment works, as well as regulations to prohibit discharges of hazardous substances into groundwater.

Hydro Aluminium has a number of facilities that have been operated for a number of years by Hydro Aluminium or have been acquired by Hydro Aluminium after operation by other entities. Subsurface contamination of soil and groundwater has been identified at a number of such sites and may require remediation under the laws of the various jurisdictions in which the plants are located. Hydro Aluminium has reserved amounts for sites where contamination has been identified that it believes will be sufficient to pay the cost of remediation under existing laws. Because of uncertainties inherent in making such estimates, it is possible that such estimates could be revised in the future. In addition, contamination may be determined to exist for additional sites that could require future expenditure. Therefore, actual costs could be greater than the amounts reserved.

Hydro Aluminium believes that it is currently in material compliance with the various environmental regulatory and permitting systems that affect its facilities. However, the effect of new or changed laws or regulations or permit requirements, or changes in the ways that such laws, regulations or permit requirements are administered, interpreted or enforced, cannot be predicted.

### ***Oslo and Paris Commission (OSPAR)***

The Oslo and Paris Convention for the Protection of the Marine Environment of the North-East Atlantic has resulted in new emission levels for the aluminium industry related to the prevention of marine pollution, which are scheduled for implementation by all signatories to the Convention before 2007. Emission standards, established by the Norwegian Pollution Authority in accordance with the Oslo and Paris Convention regulations, require primary aluminium production facilities using the S oderberg technology in the H oyanger and  rdal primary aluminium plants to be closed by the end of 2006. Due to scrubbing equipment, the S oderberg line at the Karm y plant meets the above requirements at least until 2010.

### ***Integrated Pollution Prevention and Control***

Under the EU Directive on Integrated Pollution Prevention and Control 96/61/EC, from October 2007 existing industrial installations will require national emission permits, which will be based on best available techniques (BAT) for pollution prevention and control. The directive already applies to all new installations. The European Commission has issued a guidance document relevant for the aluminium industry; Best Practice Reference (BREF) for the Non-Ferrous Metals Industries (2001). This is also relevant for the European Economic Area (EEA) and the Norwegian authorities will start a process whereby the emission permits will be changed accordingly, to be effective

by, at the latest, 2007. Hydro Aluminium's production facilities currently meet the EU requirements and are positioned to comply with future expected requirements from the Norwegian authorities.

### *Climate Gases*

EU directive 2003/87/EC issued on 13 October 2003, establishes a scheme for trading greenhouse gas emission allowances. The directive introduces mandatory trading of carbon dioxide from combustion plants and certain specified industry sectors effective as of 1 January 2005. The intention with the directive is to broaden it to include more gases and sectors as of 1 January 2008. EU Member States' national authorities are currently setting up National Allocation Plans and registries. This EU directive is also believed to be relevant for the EEA, although it is not clear at this time how the directive will be implemented in the EEA. The aluminium industry is not expected to be included before, at the earliest, 2008. Hydro Aluminium's operations are positioned to comply with the new requirements, when applicable.

The directive could impact production costs at facilities in the EU indirectly through increased electricity costs.

### **Government Regulation**

#### *EU Aluminium Tariffs*

The EU has implemented an import duty of six percent on non-EU imports of primary aluminium. This import duty became effective for the Eastern European countries that joined the EU on 1 May 2004 although inventories of aluminium located in these countries prior to the date of accession were exempt from duty regardless of origin. The EEA, of which Norway is a member, is exempt from such duty for aluminium metal produced in the EEA.

The import duty has been subject to debate within the European Union and it is not possible to predict to what extent it will be maintained. The World Trade Organization (WTO) round of negotiations on tariff and non-tariff barriers on industrial products may ultimately lead to a reduction, if not elimination, of aluminium tariffs. However, it is likely that changes arising from WTO commitments will not be phased in until 2007, at the earliest. Thus, the WTO negotiations are not expected to have a substantial impact on Hydro Aluminium in the near future. The Federation of Aluminium Consumers in Europe, which represents some aluminium consuming industries in the EU, has been pressing the EU authorities for the removal of the EU's aluminium tariff for the past several years. The EU Commission has, however, so far resisted a unilateral reduction of the tariff. In addition, some of the new EU member countries are requesting duty free quotas, which, if granted, would tend to reduce the effect of the duty.

#### *Energy Taxation*

An EU directive on the taxation of energy products became effective on 1 January 2004. The directive expanded the minimum tax system of energy products from mineral oils to all energy products, including coal, coke, natural gas and electricity. This could affect Hydro Aluminium by making energy inputs, including electricity, more expensive as a result of the tax. However, countries subject to the directive will be authorized to apply reduced rates or tax exemptions on certain products or energy uses, such as energy used in reduction processes, renewable energy sources or heat produced in combined generation installations. Accordingly, aluminium producers in the European Union may be able to secure tax relief depending upon how the individual countries implement the directive and its reductions and exemptions.

### **OTHER ACTIVITIES**

Other activities comprise businesses and activities outside of Hydro's core business areas Oil & Energy and Aluminium.

Other activities include both production units as well as service functions. Hydro's main focus relating to Other activities is profitability improvements and strategic development of the units as well as sales or disposals of businesses Hydro wishes to exit.

Other activities also includes Industriforsikring a.s., Hydro's captive insurance company.

The main businesses and activities included in Other are:

## HYDRO POLYMERS

Hydro Polymers is involved in all stages of production of the plastic raw material, PVC, also known as vinyl, and its intermediate products, ethylene, chlorine and vinyl chloride monomer ( **VCM** ). Hydro Polymers is the largest PVC supplier in the Nordic countries, with a market share of approximately 65 percent. In the United Kingdom, Hydro Polymers ranks first with approximately 38 percent of the market. The PVC industry in Europe is relatively fragmented, reflecting the industry's development on a national, rather than a European, basis. Hydro has an advantage in being backward integrated into ethylene and having close proximity to other Scandinavian countries and the United Kingdom, as well as long-term strategic relationships with customers in these markets.

Hydro has a 29.7 percent interest in Qatar Vinyl Company Ltd., which operates a petrochemical plant at Mesaieed Industrial City, Qatar. The plant has an annual nameplate capacity of 230,000 tonnes of VCM, 175,000 tonnes of ethylene dichloride and 290,000 tonnes of caustic soda. The operation in Qatar enjoys low gas prices, and is very competitive when world energy prices are high. In China, Hydro has a 31.8 percent interest in Suzhou Huasu Plastics Co., Ltd., which produces PVC film and has a suspension PVC ( **S-PVC** ) capacity of 120,000 tonnes per year. Hydro also has a 26.2 percent interest in CIRES, a PVC resin and compound manufacturer in Portugal.

Hydro Polymers will continue to focus on operational improvements through the establishment of best practice teams to ensure the transfer of knowledge in both operations management and process technology. The efficiency enhancement process is expected to entail further staff reductions, improved supply contracts, increased productivity and improved margin management. Through the last part of 2004, the business climate for PVC producers in Europe has improved substantially, and the prospects for Hydro Polymers in 2005 are considered good.

## Raw Materials and Production

Hydro has a 50 percent ownership interest in an ethylene cracker through Hydro's joint venture interest in Noretyl AS. The cracker is integrated with Hydro's chlorine and VCM production facilities located at Rafnes, in Norway. The production efficiencies inherent in an integrated production process contribute to higher margins compared to margins of competitors that rely on purchased ethylene. In June 2004, Hydro decided to carry out a project to debottleneck the production process at Noretyl, increasing total capacity to 557,000 tonnes of ethylene per year. With this expansion, Hydro Polymers will cover its total ethylene needs from own production. The total cost of the project is estimated to be NOK 700 million.

### Petrochemicals production (in tonnes)

	2004	2003	2002	2001
Base Products				
VCM	541,000	575,000	540,000	591,000
Caustic Soda	260,000	281,000	262,000	279,000

Edgar Filing: NORSK HYDRO A S A - Form 20-F

Polymers				
S-PVC	496,000	507,000	458,000	465,000
P-PVC	82,000	81,000	70,000	72,000
Total Polymers	578,000	588,000	528,000	537,000
PVC Compounds	132,000	129,000	128,000	143,000

**Average Market Quoted Prices in Northwest Europe**

	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>
Ethylene /tonne delivered	629	522	518	616
VCM Spot export fob US\$/tonne	722	452	451	345
S-PVC /tonne delivered	853	683	714	656

Hydro manufactures PVC at the following plants: Hydro Polymers AS (Porsgrunn, Norway), Hydro Polymers AB (Stenungsund, Sweden) and Hydro Polymers Ltd. (Aycliffe, United Kingdom). The Nordic sites produce S-PVC and paste PVC ( **P-PVC** ) while the U.K. site produces S-PVC for external sale and mixing with additives to generate PVC compounds in a variety of grades to meet customer specifications. There is also a small compounding plant at Halsingborg, Sweden. VCM is produced at Hydro's Rafnes and Stenungsund plants.

Ethylene feedstock for the Rafnes facility is supplied by long-term contracts for NGLs from a number of North Sea fields for approximately 50 percent of the required volumes. The remaining needs are covered by spot purchases. The share of NGL purchased under long-term contracts will increase from the autumn of 2005. Price formulas are linked to naphtha and therefore indirectly to oil prices. As such, oil prices are an important driver of ethylene costs. Hydro's share of ethylene produced at Rafnes in 2004 was 215,000 tonnes. Hydro Polymers AS and Borealis have entered into an agreement with Statoil and Petoro, under which it will purchase their ethane production at Kårstø, for the period up until 2015. This, together with the Noretyl project described above, should help enhance the long-term competitiveness of the ethylene plant.

The total production of chlorine in 2004 was approximately 231,000 tonnes. Chlorine feedstock in excess of Hydro's own production is covered by medium-term and spot purchases (approximately 95,000 tonnes). Plant closures in Europe reduced the chlorine supply in 2002. In March 2003, Hydro's Board of Directors approved a plan to build a new 130,000 tonne chlorine plant at Rafnes, based on modern membrane technology, at a cost of approximately NOK 1,000 million (phase 1). The project is expected to be completed in the summer of 2005. In addition, a further investment of approximately NOK 700 million to convert the existing chlorine plant from diaphragm to membrane technology (phase 2) was approved in February 2005, with start-up of production scheduled for 2006.

At present, Hydro Polymers transports raw materials and intermediates among its plants in Rafnes, Stenungsund and Aycliffe. Increased efficiency and lower transportation costs could be achieved by an improved balance between input (raw materials) and output (final product) streams at the individual plants. The new chlorine plant (phase 1) will make Rafnes self-sufficient in chlorine, and transportation of chlorine will cease.

**Sales and Distribution**

PVC and PVC compounds are mainly sold by Hydro's own sales organization. Distribution is mainly by truck. Pipe grade S-PVC is considered to be a commodity product, while there is considerable product and price differentiation in other S-PVC applications. P-PVC accounts for about 7 percent of the total PVC market. P-PVC is traditionally considered to be a specialty product influenced only to a limited extent by S-PVC price developments.

Caustic soda, a by-product of chlorine production, which is used by a variety of industries such as in paper and pulp, alumina and soap production, is sold to customers in Europe and North America mainly through Hydro's own sales organization. Distribution is by vessel, rail or truck. In addition to its own production, Hydro trades moderate quantities of caustic soda in the same markets.



## **Environmental issues**

Hydro's chlorine plant in Stenungsund uses mercury in the production process. As a result of actions taken by the Swedish authorities, all industrial use of mercury should cease by 2010. As a result, a provision of SEK 36 million has been accrued to cover potential clean-up costs. In addition, it is intended that all waste containing mercury will be removed and stored in a secure environment by 2015. Due to substantial uncertainties regarding economic, technical and practical aspects of the final treatment and deposition of such waste, it is presently not possible to make an estimate of the potential costs involved.

PVC has been the focus of environmental groups due to alleged negative health and environmental effects arising from the production and use of PVC. Scientific research has indicated that much of this criticism is unjustified. However, because the requirements imposed by laws and regulations are frequently changed, laws and regulations enacted in the future, including changes to existing laws and regulations, could adversely affect Hydro Polymers business.

In addition, Hydro Polymers is subject to environmental laws and regulations in the different jurisdictions in which it operates. These laws and regulations impose increasingly stringent environmental protection standards regarding, among other things, air emissions, the storage, treatment and discharge of waste waters, the use and handling of hazardous or toxic materials, waste disposals practices, and the remediation of environmental contamination. The cost of complying with these laws and regulations, including participation in assessments and remediation of sites, could be significant.

## **OTHER**

**BioMar Holding AS** (previously Treka AS) is a publicly held Danish company listed on the Copenhagen stock exchange. Hydro has a 68.8 percent ownership in BioMar Holding AS. The operational activity in BioMar Holding AS consists of the fish feed company BioMar.

BioMar is the third largest producer of salmon feed globally (in terms of production volume) with factories in Norway, Denmark, UK, France, Greece and Chile. Biomar has an annual production of close to 450,000 tonnes. Biomar experienced a difficult year in 2003 including write-downs of goodwill and intangible assets as well as well as significant losses on bad debts. In 2004, BioMar improved its position through focus on cost efficient operations and by reducing risk exposure. Biomar has approximately 500 employees.

**Hydro Production Partner** is extensively involved in production and maintenance support within Hydro and also with external customers. The main activities are in Norway. The operations include approximately 1,400 employees.

**Hydro IS Partner** is a wholly owned subsidiary rendering IT/IS services primarily to Hydro units but also to external customers in Norway and internationally. The company has approximately 600 employees. Hydro IS Partner AS was established as a legal company 1 April 2004. Hydro holds 100 percent of the shares.

**Hydro Business Partner** renders services and support functions mainly to Hydro units in Norway. Its activities are mainly in the areas of procurement, accounting, human resources, and media as well as the operation of industrial parks at Porsgrunn and Rjukan.

## **INDUSTRIFORSIKRING**



Industriforsikring a.s., a captive insurance company, is a wholly-owned subsidiary of Hydro. Industriforsikring provides property damage, business interruption, cargo and third party liability insurance coverage for subsidiary companies of the Hydro Group. Industriforsikring also provides

similar coverage for several related companies where Hydro owns a substantial equity interest. Industriforsikring has an extensive reinsurance program and has maximum exposure per policy varying from NOK 5 million for cargo insurance up to NOK 110 million for third party liability claims exceeding NOK 1,500 million. Industriforsikring is also a member of a mutual insurance pool in order to reduce the cost of insurance coverage it provides to Hydro operating units. The operations of Industriforsikring are not substantial to Hydro's overall business and the Company's exposure to uninsured risk is not material.

#### ITEM 4.C. ORGANIZATIONAL STRUCTURE

The following significant subsidiaries, as that term is defined by applicable rules of the SEC, are included in the Hydro Group:

Company Name	Country of Incorporation	Proportion of ownership Interest*
Norsk Hydro Produksjon AS	Norway	100 percent
Hydro Aluminium AS	Norway	100 percent
Hydro Aluminium Deutschland GmbH	Germany	100 percent

---

\* Ownership percentage reflects proportion of voting power.

#### ITEM 4.D. PROPERTY, PLANTS AND EQUIPMENT

The Group's rights to oil and gas located on the Norwegian Continental Shelf, mainly in the North Sea, are among its most important assets. See Item 4.B. Business Overview Oil and Energy Exploration, Development and Production for information with regard to reserves and sources of oil and gas and Item 4.B. Business Overview Hydro Oil and Energy Oil and Energy Government Regulation with regard to the Norwegian government's authority to increase its participation in the development of certain oil and gas fields and other regulatory matters.

The Group's major production plants in Norway are located at Porsgrunn (PVC), Rafnes (petrochemicals), Karmøy, Årdal, Sunndalsøra, Holmestrand and Høyanger (aluminium). The Group owns clear title concessions to hydroelectric power stations with a generating capacity of 2.7 TWh per year. Generating capacity of approximately 5.8 TWh is operated under concessions from the Norwegian government that will expire without compensation in the period between 2022 and 2051. Hydro's principal aluminium production facilities abroad are located in Austria, Belgium, Brazil, Canada, China, Denmark, France, Germany, Hungary, Italy, Luxembourg, Poland, Portugal, Australia, Spain, Sweden, the United Kingdom and the United States. Hydro has an interest in a retail gasoline and fuel oil marketing network through an affiliated company in Denmark, Norway and the Baltic countries, and wholly owned operations in Sweden. Hydro also participates in alumina refineries in Jamaica and Brazil, and an automotive parts casting plant in Mexico.

Virtually all of the Group's properties are owned by the Company's subsidiaries, except certain facilities in the oil and gas, hydroelectric and petrochemicals businesses which are jointly-owned with other companies. All major facilities of the Group are insured in line with customary industry practices.

Hydro is subject to changing environmental laws and regulations that in the future may require Hydro to modernize technology to meet more stringent emissions standards or to take actions for contaminated areas. See Note 21 to the Consolidated Financial Statements for a description of expenses and accruals relating to corrective environmental measures for 2004 and preceding fiscal years. There were no environmental measures, implemented

voluntarily or required by law, which had a significant effect on the utilization of Hydro's main production facilities in 2004.

**ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS****ITEMS 5.A.-D. OPERATING RESULTS; LIQUIDITY AND CAPITAL RESOURCES; RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES; TREND INFORMATION**

The comparative discussion of Hydro's financial condition and results of operations as of and for the years ended 31 December 2004, 2003 and 2002 as well as information regarding Hydro's material commitments for capital expenditures as of year-end 2004 and Hydro's research and development policies for the three-year period ended 31 December 2004 is included in the following discussion.

**Financial review**

NOK million	<b>2004</b>	2003	2002
Operating revenues	<b>155,425</b>	133,761	134,093
Operating costs and expenses	<b>123,578</b>	112,136	116,426
Operating income	<b>31,847</b>	21,625	17,667
Non-consolidated investees	<b>628</b>	620	(24)
Financial income (expense), net	<b>136</b>	154	1,806
Other income (expense), net	<b>169</b>	(1,253)	77
Income from continuing operations before tax and minority interest	<b>32,780</b>	21,146	19,526
Income tax expense	<b>(21,197)</b>	(12,922)	(12,452)
Minority interest	<b>(106)</b>	151	26
Income from continuing operations	<b>11,477</b>	8,375	7,100
Income from discontinued operations	<b>1,083</b>	2,312	1,665
Income before cumulative effect of change in accounting principle	<b>12,560</b>	10,687	8,765
Cumulative effect of change in accounting principle		281	
Net income	<b>12,560</b>	10,968	8,765
Basic and diluted earnings per share from continuing operations (in NOK)	<b>45.10</b>	32.50	27.50
Basic and diluted earnings per share (in NOK)	<b>49.40</b>	42.60	34.00

This discussion should be read in conjunction with the information contained in the Company's consolidated financial statements and the related notes included in this annual report.

**Overview**

Hydro completed the demerger of its Agri business operation in 2004 following a comprehensive strategic review concluding that the Company should move forward as one, strong business enterprise with Oil and Energy and Aluminium as core focus areas.

Results for 2004 were strongly influenced by worldwide economic developments driving demand for energy in particular. Growth in China and the United States and the depreciation of the US dollar were key elements underlying market developments. Exceptionally high oil prices, combined with improved market conditions for aluminium together with increased production for both of the Company's core business areas delivered one of the best results in Hydro's 100 year history. However, expiring energy contracts resulting in higher future energy costs for the Company's primary aluminium plants in Germany, together with a weakening in competitiveness as a result of the weak US dollar, resulted in a write down impacting after tax results by NOK 1.5 billion. Market volatility generally had a notable impact on results during the year.

Strong production performance and capacity increases positioned the Company to take advantage of the robust market fundamentals. Average oil and gas production for 2004 reached a record level of 572,000 barrel of oil equivalents (boe) per day for the year while aluminium volumes increased 17 percent for the year. The expansion of the Sunndal aluminium plant in Norway was completed during the year. The plant is now the largest and most modern in Europe.

Increased competition in a rapidly changing market environment also continued to drive cost reduction initiatives. The Aluimprover cost reduction program announced early in 2004 is well underway and expected to be completed at the end of the first quarter of 2005. Total annual cost savings resulting from the program are expected to range between NOK 350 - 400 million. This follows the completion of improvement programs in 2003 generating estimated annual cost reductions of more than NOK 2.5 billion.

A solid financial position enabled Hydro to buy back shares and pay an extraordinarily high dividend for 2004. A total of 5 million shares, or approximately 2 percent of the Company's outstanding shares, were repurchased and cancelled during the year while a second buy back program covering up to 10 million shares was authorized by an extraordinary General Meeting of shareholders on 1 December 2004. The Board of Directors proposed to the 2004 annual General Meeting of shareholders a dividend of NOK 20 per share compared to dividends of NOK 11 per share in 2003.

### **Summary of operating results**

Hydro's income from continuing operations in 2004 was NOK 11,477 million (NOK 45.10 per share), compared with NOK 8,375 million (NOK 32.50 per share) for 2003 and NOK 7,100 million (NOK 27.50 per share) in 2002. On 24 March 2004, Hydro's agri business was transferred to Yara International ASA in a demerger transaction. Results of the transferred operations relating to periods prior to the demerger are reported under Income from discontinued operations. The following discussion excludes those activities.

Operating income (in NOK million)	2004	2003	2002
Hydro Oil & Energy	31,144	21,143	15,947
Hydro Aluminium	1,805	2,456	1,698
Other activities	312	(404)	48
Corporate and eliminations	(1,414)	(1,570)	(26)
Total operating income	31,847	21,625	17,667

The change in 2004 operating income compared to the prior year and the most important items affecting the change are included in the table below.

Amounts in NOK million

Operating income 2004	31,847
Operating income 2003	21,625
Change in Operating Income	10,222
Prices and currency, E & P <sup>2)</sup>	8,205
Margin including currency effects <sup>1)</sup>	1,085
Volume	5,915
Fixed costs	(1,035)
Depreciation	(1,045)
Production and exploration costs, E & P <sup>2)</sup>	(1,120)
Write downs, demanning, other	(2,080)
Trading and unrealized LME effects, Aluminium	(330)
New / disposed business	170
Restructuring costs	20
Other	437
Total change in operating income	10,222

1) Including negative variances for elimination of unrealized gain/loss on electricity contracts of NOK 94 million and a positive variance for elimination of the gain/loss on gas contracts of NOK 144 million for 2004.

2) Exploration and Production.

### Operating Income

Increased operating results for Oil & Energy reflected continued high oil prices and strong production growth during 2004. Measured in Norwegian kroner, realized average prices increased about 24 percent for oil and approximately 6 percent for gas in 2004. Realized average prices measured in Norwegian kroner increased during 2003 approximately 4 percent and 7 percent for oil and gas respectively. During 2004, oil and gas production reached record levels averaging 572,000 boe per day, compared with 530,000 boe per day in 2003 and 480,000 boe per day in 2002. However, unscheduled shutdowns of the partner operated fields Snorre and Vigdis on the Norwegian Continental Shelf (NCS) and the Terra Nova field in Canada resulted in a total average production loss of

approximately 20,000 boe per day for the fourth quarter of 2004. Exploration costs declined to NOK 1,264 million as a result of lower exploration activity in 2004. The decline also reflected higher cost capitalization due to successful wells and wells in progress. Exploration costs amounted to NOK 1,577 million in 2003, a substantial decline from NOK 3,558 million in 2002. The decline over the last two years resulted from lower exploration activity level and a substantially higher level of previously capitalized exploration and acquisition costs expensed in 2002. Total operating income for Energy and Oil Marketing for 2004 was relatively unchanged from the previous year. However, a decline in operating income, as a result of the divestment of Hydro's refining operations, Scanraff, in 2003, was offset by inventory gains resulting from the increase in oil prices in 2004. In addition, forward price developments resulted in unrealized gains on contracts for future deliveries of gas in particular, and long term purchase contract for power, which are valued at market prices at the end of the year. Operating income for Energy and Oil Marketing declined about 4 percent in 2003 compared to 2002 primarily as a result of lower power production.

Development activities relating to the Ormen Lange gas field proceeded according to plan and the project was 20 percent complete at the end of 2004.

Operating income for Aluminium declined in 2004 as a result of a write down relating to the Company's primary aluminium plants in Germany in the amount of NOK 2,042 million. In addition, NOK 268 million relating to the write down was included in results for non-consolidated investees. Operating income was also impacted by NOK 519 million of costs relating to manning reductions in Norway. Aluminium operating results were positively influenced by volume increases combined with strengthened London Metal Exchange (LME) prices. For 2004, Hydro realized average aluminium prices of US dollar 1,638 per tonne compared to US dollar 1,440 per tonne in the previous year and US dollar 1,372 in 2002. Average realized aluminium prices measured in Norwegian kroner increased 9.5 percent for 2004 and declined 7.3 percent in 2003 reflecting fluctuations in the US dollar/NOK exchange rate. Upstream volumes increased in 2004 mainly as a result of new capacity and improved capacity utilization. Volumes also increased in 2003 as a result of the inclusion of VAW for the entire year as well as new capacity. The implementation of the Aluimprover cost-reduction program progressed during 2004. The total estimated cost of the program was reduced by NOK 200 million to NOK 600 million of which NOK 432 million was charged to the results for 2004. Improvement programs initiated in 2001 and 2002 were completed in 2003 at an accumulated cost of NOK 1,116 million of which NOK 176 million impacted the results in 2003. These programs are generating estimated annual cost reductions of more than NOK 2.5 billion.

In December, Hydro signed a Heads of Agreement with Qatar Petroleum to evaluate the development of one of the world's largest aluminium plants in Qatar.

Results for Other activities reflected improved operating results in 2004 for Hydro's polymer business and positive developments within BioMar Holding AS (formerly Treka AS). Results for BioMar in 2003 included write downs relating to goodwill and intangible assets as well as significant losses on bad debts, in total amounting to around NOK 570 million. Results for Other activities was also impacted by an insurance loss provision of NOK 230 million relating to the Company's captive insurance company, Industriforsikring.

Corporate activities and eliminations operating losses increased in 2004 impacted by the elimination of unrealized gains on power purchase contracts. Net costs related to pensions and related social security charged to Corporate and eliminations amounted to NOK 1,001 million in 2004, relatively unchanged compared to NOK 1,111 million in 2003. Net costs relating to pensions and related social security costs amounted to NOK 312 million in 2002. The increase for 2003 primarily related to increased pension obligations and a reduction in plan assets during 2002.

Hydro Energy is responsible for ensuring the supply of electricity for the Company's own consumption, and has entered into sales contracts with other units in the Group. Certain of these sales contracts are recognized at market value by Hydro Energy while the related internal purchase contracts are regarded as normal purchase agreements and are not recognized at market value. The





elimination of the market value adjustment recorded by Hydro Energy resulted in a negative effect of NOK 235 million for 2004, compared to a negative effect of NOK 141 million for 2003 and a positive effect of NOK 588 million in 2002. The power purchase contracts have a duration of up to 10 years and can result in significant unrealized gains and losses, impacting the reported results in future periods. The magnitude of the reported effects depends on trends in forward prices for electricity and changes in the contract portfolio.

Restructuring costs included in operating income for 2004 amounted to a credit of NOK 22 million, representing the difference between an accrual of NOK 650 million charged in 2001, relating to the restructuring of the Company's magnesium operations in Norway and the final cost of the program, which ended in the fourth quarter of 2004. No amounts relating to restructuring costs were charged or credited to operating income in 2003.

### **Earnings from non-consolidated investees**

Earnings from non-consolidated investees for 2004 amounted to NOK 628 million, compared to earnings of NOK 620 million in 2003 and losses of NOK 24 million in 2002. Results for 2004 included NOK 268 million relating to the write down of the German plants described above. In addition, results for 2004 included unrealized currency gains relating to Alunorte of NOK 63 million, compared with a gain of NOK 218 million in 2003 and a currency loss of NOK 461 million in 2002. Improved operating results relating to non-consolidated investees mainly within Aluminium Metals, Extrusion and Automotive, and Polymers offset the effects of the lower unrealized currency gains in 2004.

### **Financial income (expense) net**

Net financial expenses for 2004 amounted to NOK 136 million, including foreign currency gains of NOK 1,350 million reflecting the significant weakening of the US dollar during the year and in the fourth quarter in particular. The amount for 2004 also included a charge of approximately NOK 860 million relating to the prepayment of bonds denominated in US dollars, Euro and British pounds totalling about NOK 5 billion in nominal value. Net interest expense declined approximately NOK 300 million for the year, mainly as a result of the repayment of debt and as a result of higher tax related interest earnings amounting to about NOK 235 million. Net financial income was NOK 154 million in 2003 including foreign currency gains of NOK 1,035 million. For 2002, net financial income amounted to NOK 1,806 including foreign currency gains of NOK 3,262 million.

### **Other income (loss)**

Other income (loss) for 2004 amounted to NOK 169 million reflecting a gain of NOK 110 million on the divestment of 80.1 percent of Pronova Biocare and NOK 59 million relating to the divestment of Skandinaviska Raffinaderi AB (Scanraff). For 2003, Other income (loss) resulted in a loss of NOK 1,253 million. The amount included a charge of NOK 2,207 million resulting from amended Norwegian tax regulations relating to the removal costs for oil and gas installations on the NCS. The change in regulations also resulted in a reduction to the tax provision for the second quarter of 2003 by NOK 2,380 million, for a net non-recurring effect of NOK 173 million. Other income for 2003 also included a gain of NOK 326 million from the sale of the Company's interest in the Sundsfjord power plant in exchange for shares in the acquiring power company. In addition, Other income in 2003 included a gain of NOK 490 million on the sale of Hydro's interest in Scanraff. The sale agreement included the possibility of a price adjustment depending on the development in refinery margins during 2004 and 2005. High refinery margins during 2004 have resulted in an additional gain of NOK 59 million being recognized in the fourth quarter of 2004. Other income amounted to NOK 77 million in 2002.

### **Income tax expense**

The provision for current and deferred taxes for 2004 amounted to NOK 21,197 million, approximately 65 percent of income from continuing operations before tax. Current taxes amounted to NOK 24,142 million in 2004. The total provision for current and deferred taxes for 2003 was NOK 12,922 million, approximately 61 percent of income from continuing operations before tax. For 2002, the total provision for current and deferred taxes amounted to NOK 12,452 million, approximately 64 percent of income from continuing operations before tax.

In the fourth quarter of 2004, Norwegian tax legislation was changed to eliminate tax on the sale of shares in companies registered within countries in the European Economic Area. As a result, Hydro has reversed deferred tax liabilities relating to such share holdings amounting to approximately NOK 900 million, reducing the tax rate by around 2.5 percentage points for 2004.

The tax rate for 2003 included the effect of the amended regulations relating to the tax treatment of expenses incurred in removing oil and gas installations from the NCS. As a result, Income from continuing operations before tax for the period included a negative non-recurring amount of NOK 2,207 million, offset by a positive non-recurring amount of NOK 2,380 million included in tax expense. Excluding the effect of the change in regulations, the tax rate was 66 percent of the pre-tax result for the period.

The high effective tax rate for Hydro results from oil and gas activities in Norway, which account for a relatively large part of earnings and are charged a marginal tax rate of 78 percent.

#### **Discontinued operations**

Income from discontinued operations amounted to NOK 1,083 million for 2004, all relating to the first quarter of the year, prior to the completion of the demerger of the agri activities. Income from discontinued operations amounted to NOK 2,312 million in 2003 and NOK 1,665 million for 2002. The amounts relate to activities transferred to Yara International ASA in the demerger transaction completed 24 March 2004. All results directly connected to the demerged operations as well as the demerger transaction costs and gains are included in Income from discontinued operations. The amounts include Yara's results for the period up to its listing on the Oslo Stock Exchange and the direct costs of the demerger. The amounts also include Hydro's gain from the sale of its remaining 20 percent shareholding in Yara, amounting to NOK 385 million after tax. The effects of internal transactions, including interest and currency gains and losses, are excluded from Income from discontinued operations. Previous periods have been adjusted in order to present the results on a comparable basis.

**Return on average Capital Employed** (RoaCE<sup>1</sup>) from continuing operations was 13 percent for 2004. RoaCE for the Segments and Hydro as a whole for the three years ending 31 December 2004 is presented in the table below:

	2004	2003	2002
Hydro Oil & Energy	23.4%	16.2%	11.6%
Hydro Aluminium <sup>2)</sup>	3.5%	4.7%	2.7%
Total Hydro <sup>2)</sup>	13.0%	8.4%	7.2%

- 1) RoaCE is defined as Earnings after tax divided by average Capital Employed. See discussion pertaining to Use of Non GAAP financial measures included this report.
- 2) RoaCE and normalized RoaCE for 2004 was negatively affected by the write down of the primary metal plants in Germany and change in tax regulations by 3.5 percent for Aluminium and 0.6 percent for Total Hydro.

Hydro also measures RoaCE based on long-term price assumptions, referred to as normalized prices. Normalized prices are used in order to avoid placing undue emphasis on such variables as historically high or low prices of its commodity products, and the effect of changes in currency exchange rates. RoaCE based on long term price assumptions of USD 25 per barrel of oil, USD 1,500 per tonne of Aluminium, NOK 7 per USD and NOK 8 per EUR and excluding other income and restructuring costs was 7.9 percent for 2004 representing a substantial improvement from 6.2 percent achieved in 2003. Normalized RoaCE for the Segments and Hydro as a whole for the three years ending 31 December 2004 is presented in the table below:

	2004	2003	2002
Hydro Oil & Energy	13.0%	11.4%	9.2%
Hydro Aluminium <sup>2)</sup>	1.5%	4.1%	2.9%
Total Hydro <sup>2)</sup>	7.9%	6.2%	6.6%

### Adjusted EBITDA <sup>3)</sup>

In the segment discussion below, Hydro refers to adjusted EBITDA which is an integral part of Hydro's steering model, Value Based Management, reflecting the Company's focus on cash flow based indicators.

A reconciliation of Operating income to adjusted EBITDA for 2004 for each of Hydro's operating segments is presented in the table below:

### Operating income - adjusted EBIT - adjusted EBITDA 2004

Amounts in NOK million	Operating income (loss)	Non-cons. Investees	Interest Income	Selected financial income	Other income	Adjusted EBIT	Depr. and amort.	Adjusted EBITDA
Exploration and Production	28,363	4	46	3		28,416	9,752	38,168
Energy and Oil Marketing	2,650	73	35	(3)	59	2,814	664	3,478
Eliminations	131	(2)		1		130	2	132

Hydro Oil & Energy	<b>31,144</b>	75	81	1	59	<b>31,360</b>	10,418	<b>41,778</b>
Metals	<b>830</b>	281	5	107		<b>1,223</b>	4,173	<b>5,396</b>
Rolled Products	<b>626</b>	(13)	3	(1)		<b>615</b>	746	<b>1,361</b>
Extrusion and Automotive	<b>277</b>	113	15	(5)		<b>400</b>	1,427	<b>1,827</b>
Other and eliminations	<b>72</b>					<b>72</b>		<b>72</b>
Hydro Aluminium	<b>1,805</b>	381	23	101		<b>2,310</b>	6,346	<b>8,656</b>
Other activities	<b>312</b>	170	130	108	110	<b>830</b>	533	<b>1,363</b>
Corporate and eliminations	<b>(1,414)</b>	2	739	(20)		<b>(693)</b>	13	<b>(680)</b>
Total	<b>31,847</b>	628	973	190	169	<b>33,807</b>	17,310	<b>51,117</b>

---

3) See discussion pertaining to Segment Measures included in footnote 5 Operating and geographic segment information to the Consolidated Financial Statements

NOK million	2004	2003	2002
Operating Revenues	<b>72,718</b>	59,959	55,845
Operating Costs	<b>41,574</b>	38,816	39,898
Operating Income	<b>31,144</b>	21,143	15,947
Adjusted EBITDA	<b>41,778</b>	31,826	25,340
RoaCE	<b>23.4%</b>	16.2%	11.6%
Number of employees	<b>3,527</b>	3,465	4,039

Hydro Oil & Energy consists of the sub segments Exploration and Production and Energy and Oil Marketing .

### Overview

As operator of 11 producing fields on the Norwegian Continental Shelf (NCS) with a total production of approximately 979,000 boe per day (boed) in 2004, Hydro is the second largest operator company in Norway. Hydro is among the world leaders offshore, and has strong competence over the entire exploration and production value chain. In terms of equity production, Hydro is the third-largest producer of oil and natural gas on the NCS. In 2004, the company's equity oil and gas production increased approximately 8 percent compared to the previous year, to an average of 572,000 boed. Fields on the NCS accounted for approximately 90 percent of the production. The remaining production came from fields in Canada, Angola, Libya and Russia. In addition, Hydro is involved in ongoing exploration activities in most of these areas and also in the United States (Gulf of Mexico), Iran, Denmark, Morocco and Madagascar.

Natural gas is becoming increasingly important to Hydro. The Company expects a strong increase in equity gas production, and is becoming a key gas supplier for a growing European market. In 2004, Hydro Oil & Energy's equity natural gas production from the NCS amounted to 8.8 billion cubic meters (bcm), an increase of 13 percent compared to the previous year. Hydro holds capacity rights in Gassled, the natural gas transportation infrastructure on the NCS, enabling access to five landing points for natural gas in Europe. Oil & Energy's natural gas export capacity together with its solid reserves, makes Hydro one of the most reliable suppliers to Northern Europe. Hydro is an active trader of oil and energy in Europe, and markets gasoline and energy products in Scandinavia and the Baltic countries. Oil & Energy is one of the largest producers of electric power in Norway, with a normal annual production from hydroelectric facilities of approximately 8.5 terrawatt hours (TWh). Oil & Energy has about 3,500 employees, and reached total operating revenues of close to NOK 73 billion in 2004.

Hydro Oil & Energy's results in 2004 were an all-time high, due to solid growth in production combined with favourable market conditions. Strong demand growth, in particular in China and the United States, combined with worldwide capacity constraints, were the key drivers underlying the high oil prices. However, it is uncertain if the economic growth underlying demand is sustainable and whether oil prices will remain at the present high levels or revert towards the lower longer-term trend indicated by forward prices.

The oil industry as a whole continues to experience reduced exploration results worldwide. The main challenge facing Oil & Energy is the replacement of existing reserves and the need to discover major new oil and gas resources. Hydro is continuously working towards improved oil recovery from its existing fields in addition to finding viable development solutions for exploiting smaller fields, including satellite fields which can be economically developed by optimal use of present infrastructure. However, in order to secure future production, exploration and acquisitions are important elements in Hydro's strategy. While the current high oil price level creates opportunities relating to optimal

development and exploitation of existing assets, the high oil price level is also a challenge in that the acquisition of technical resources is becoming increasingly expensive. Based on expectations of continued high oil price levels Oil & Energy has increased its price assumptions for oil and gas investment decisions from US dollar 16 per boe to US dollar 25 per boe. This decision is expected to result in new business opportunities that were previously deemed uneconomic. Hydro also intends to acquire technical resources where its competencies and expertise can add value to assets traded in the marketplace.

Hydro plans to continue its focus on new sources of energy, such as wind-power and hydrogen. The main factors driving the development of new energy include environmental concerns, rising energy demands, and the security of existing energy supply. The share of renewable energy is expected to grow in the years to come as OECD (Organization for Economic Cooperation and Development) countries increasingly depend on oil from OPEC countries and developing countries.

### **Summary of Oil & Energy s operating results**

Hydro Oil & Energy s operating income in 2004 was NOK 31,144 million, an increase of 47 percent compared to 2003. Operating income amounted to NOK 21,143 in 2003, increasing 33 percent compared to 2002. The change in 2004 operating income compared to the prior year and the most important items affecting the change are included in the table below.

## Amounts in NOK million

Operating income 2004	31,144
Operating income 2003	21,143
Change in Operating Income	10,001
Prices and currency for E&P	
- Oil	8,900
- Gas	700
- Currency	(1,395)
	8,205
Margin	(15)
Volume	3,490
Fixed costs	25
Depreciation	(750)
Production costs	(1,435)
Exploration costs	315
New / disposed business	(205)
Other	371
Total change in Operating income	10,001

- 
- 1) Defined as the cost of operating fields, including CO<sub>2</sub> emission tax, insurance, gas purchased for injection and lease costs for production installations (but excluding transportation and processing tariffs, operating cost transportation systems and depreciations).

The most significant developments that influenced Hydro Oil & Energy's operating income in 2004 were as follows:

Oil and gas prices were high throughout the year, reflecting continued high demand for crude oil with world oil production running close to full capacity. Oil prices increased in 2004 reaching an average realized oil price of US dollar 37.3, up 30 percent from US dollar 28.7 in 2003. However, part of the effect of the price increase was offset by the depreciation of the US dollar against NOK. Measured in Norwegian kroner, the oil prices in 2004 were about 24 percent higher than in 2003, and realized gas prices increased by approximately 6 percent. In 2003, oil prices and gas prices increased roughly 4 and 7 percent respectively, measured in Norwegian kroner.

Oil and gas production increased in 2004 by approximately 8 percent to an average of 572,000 boe per day (boed). The increase came from Norwegian fields, while international fields remained at the same production level as in 2003. In 2003, oil and gas production increased by about 10 percent to an average of 530,000 boed.

Prices in the Nordic electric power market were NOK 0.24 per kWh in 2004, compared to NOK 0.29 kWh in 2003 and NOK 0.20 kWh in 2002. Power production in 2004 was 8.1 TWh, 8 percent higher than in 2003. Power production declined by 27 percent in 2003 to 7.5 TWh compared to 2002 as a result of low reservoir levels. During 2004, Hydro has been engaged in a development project to expand the Tyin hydropower plant in Sogn, Norway. The

expansion was completed in the autumn resulting in a 15 percent increase in production capacity for the plant with no change in the existing water reservoir capacity.

Hydro's average oil and gas production cost<sup>1)</sup> was NOK 20.7 per boe in 2004, the same level as the previous year. Average production cost amounted to NOK 22.6 in 2002.

Total expensed exploration costs including appraisal costs of discoveries amounted to NOK 1,264 million in 2004, a reduction of about 20 percent compared to the previous year. The decline is the result of a larger proportion of capitalized exploration well costs as a result of successful wells and wells in progress, in addition to a 12 percent reduction in the level of exploration activity for 2004 compared to 2003. There were 17 exploration wells drilled and completed in 2004 resulting in 11 discoveries. In 2004, NOK 248 million relating to costs capitalized in previous years was expensed, compared to NOK 88 million in 2003. Exploration costs expensed in 2003 amounted to NOK 1,577 million, a substantial decline from NOK 3,558 million in 2002. The decline resulted from lower exploration activity level and a substantially higher level of previously capitalized exploration and acquisition costs expensed in 2002.

The sale of Hydro's interest in the Gjøa field, which is in the pre-development phase, was approved by the Norwegian authorities in January 2004 and resulted in a tax-free gain of NOK 285 million for the year. Hydro continued activities to optimize its oil and gas portfolio during 2004. In January 2004, Hydro signed an agreement to sell its 10 percent share in the Snøhvit field to Statoil. The sale was completed in December 2004, and resulted in a gain of approximately NOK 100 million after tax. Hydro completed a purchase of a two percent share in the Kristin field from Statoil at the same time. As a result, Hydro now owns 14 percent of the Kristin field and has improved its position in the Norwegian Sea area on the NCS.

Adjusted EBITDA for Oil & Energy for 2004 was NOK 41,778 million, an increase of 31 percent compared with 2003. Adjusted EBITDA increased 26 percent in 2003 compared to the previous year. The improvement in adjusted EBITDA resulted from the same factors underlying the improvement in operating income described above.

### **Eliminations Oil & Energy**

As part of its downstream activities, Hydro Energy enters into purchase contracts for natural gas with Exploration and Production for resale to external customers. Hydro Energy recognizes both the internal purchase and the external sales contracts at market value. As a result, Hydro Energy recognizes unrealized gains and losses on the internal contracts as a result of fluctuations in the forward price of gas. Exploration and Production regard the supply contracts to Hydro Energy as normal sales agreements and does not recognize unrealized gains and losses on the contracts. Eliminations of the internal sales and purchase contracts between Hydro Energy and Exploration and Production resulted in a positive effect on the operating income for Oil and Energy of NOK 144 million for 2004 as a result of declining forward prices.

### **Key development activities and other projects**

Hydro has extended its average compound annual growth rate for production of 8 percent for the 2001-2007 period to 2008. The growth target is based on Hydro's current portfolio of fields in production, fields under development or fields considered for development. The production target for 2005 is an average of 575,000 boed of which approximately 85 percent is expected to come from currently booked proved reserves. The partner operated Snorre and Vigdis fields have gradually regained production after being shut down from November to late January 2005 due to an underground gas leakage. In early February the fields were producing close to normal.

Hydro's proved oil and gas reserves were 2,076 million barrels of oil equivalents (mboe) at the end of 2004, compared to 2,288 mboe at the end of 2003 and 2,225 mboe at the end of 2002:





Reserves in mboe	2004	2003	2002
Proved reserves at beginning of year	2,288	2,225	2,073
New reserves	23	265	118
Revisions of reserves	39	(6)	23
Net purchase and sales	(65)	(2)	186
Production	(209)	(194)	(175)
Proved reserves at end of year	2,076	2,288	2,225

New reserves amounted to 23 mboe in 2004 including; Njord gas export, the Rosa field, and Gulltopp. Proved reserves are estimates and are expected to be revised as oil and gas are produced and additional data become available, and in 2004 revisions of reserves in producing fields increased reserves by 39 mboe. Revisions included a reduction of 9 mboe relating to production sharing agreements. Net purchases and sales decreased reserves by 65 mboe including the sale of Snøhvit. Production amounted to 209 mboe in 2004. Reserve life (defined as the number of years of production from proved reserves at the present production level) was 10 years at the end of 2004; comprised of 6 years for oil and 21 years for gas.

The Ormen Lange development will continue to be a main development project for Hydro in 2005. Hydro is the operator during the development phase of the field. Ormen Lange is the largest discovered undeveloped gas field on the NCS, at water depths of 850 to 1,100 meters. Production is scheduled to begin in the final quarter of 2007. The Ormen Lange project is proceeding according to plan, and was about 20 percent complete at year-end. The related Langed gas pipeline which is under development will transport gas from Ormen Lange approximately 1,200 kilometers from Nyhamna on the west coast of Norway via Sleipner in the North Sea to Easington in the UK. The Langed Gas Export system will have a transport capacity of around 25.5 billion Sm<sup>3</sup> gas per year and is expected to be completed in 2007. Langed will be merged with the Gassled pipeline joint venture after start up of operations. The United Kingdom is an attractive market for Norwegian gas due to the declining UK gas reserves. Hydro has established a UK gas marketing channel through a joint venture with Wingas GmbH called HydroWingas.

As a result of international business development during 2004, Hydro was awarded its first international operatorship, responsible for the development of the Telemark field (formerly called the Champlain field) in the Gulf of Mexico (GoM). A final development solution for the Telemark field is expected to be decided in 2005.

In 2005, Hydro plans to increase its exploration level to around NOK 2 billion including drilling approximately 30 exploration wells. Around 20 of the wells are planned for the NCS (including 3 wells in the Barents sea) with the remaining wells relating to the Company's international interests, mainly in Libya and Angola.

Hydro intends to maintain its position as an efficient operator on the NCS, and to contain cost levels on operated facilities despite the underlying maturing nature of the portfolio. Hydro has targeted a production cost of NOK 24 per boe for 2005, an increase from actual production cost of NOK 20.7 in 2004, reflecting among other things, costs for purchase and transportation of increased volumes of gas to be injected into the Grane field in order to increase oil recovery from Grane.

Naturkraft AS, a 50 percent Hydro owned company, is in process of developing a gas-fired power plant at Kårstø, located on the west coast of Norway. A final investment decision is scheduled for 2005. The power plant is planned to be in operation during fall 2007. Hydro's share of the expected annual production of the plant is roughly 1.5 TWh. The total investment cost of the project is estimated to be somewhat more than NOK 2 billion.

Hydro has a strong gas infrastructure position in Northern Europe, and a marketing system in place for the sale of uncommitted volumes. The European continental gas market continues to be dominated by long-term contracts indexed to oil products. However, the ongoing liberalization process of the European gas market is expected to lead to a more liquid market with contract prices influenced also by short-term gas market developments. Hydro intends to combine its role as a natural gas producer with that of a wholesaler and trader to increase its share in this emerging market. Liquidity within the UK market has increased, and is now considered well functioning short term market. While there is less liquidity on the European continent, it is increasing at several emerging hubs, in particular at Zeebrugge in Belgium.

## Outlook

The tight market fundamentals driving the oil price increases discussed above are reflected in the forward markets. In early February, the Brent forward price was several dollars above the average Brent spot price in 2004. Many analysts are predicting that growth in global oil demand will lead to higher demand for OPEC's oil in 2005, because of insufficient capacity in the non-OPEC countries to satisfy the growth in demand. Several analysts believe that Iraq will not be able to increase its average crude output from 2004 levels due to the mismanagement of wells and continuing sabotage of the oil infrastructure. The risk for supply interruptions in large oil producing countries is expected to persist in 2005. The main factor which could dampen prices is a decline in the high levels of demand experienced in 2004. If economic growth fades in China and the US, oil demand is expected to suffer as a consequence. Although high energy costs have not affected economic growth substantially in 2004, several analysts see the possibility of weaker economic growth in 2005.

The development of the US dollar against the NOK will impact Hydro's realized price in Norwegian kroner.

The negative price differential of the Grane oil, compared to the lighter and sweeter benchmark Brent crude, is expected to have a larger effect on Hydro's average realized oil price in 2005 than in 2004, mainly because the Grane field is expected to account for a larger part of Hydro's production in 2005.

Water reservoir levels were approximately on average at the end of 2004 for Hydro-owned power stations and for the Nordic market area in general. Further improvement in reservoir levels have occurred since the beginning of 2005. As a result, the Company's hydro electric power generation in 2005 is expected to be above normal. While the present reservoir levels in the Nordic market are close to normal, snow reservoirs are above normal, in particular in Norway which has surplus levels. This is expected to put downward pressure on prices during the summer of 2005. Beyond this temporary surplus situation, a tighter capacity balance is expected during the next several years as a result of demand growth.

The highly volatile markets with potential substantial impact on market valuation of Hydro's gas and power contracts are expected to continue in 2005.

## Exploration and Production

Amounts in NOK million	2004	2003	2002
Operating Revenues	<b>48,962</b>	37,904	32,970
Operating Costs	<b>20,599</b>	19,404	19,833
Operating Income	<b>28,363</b>	18,500	13,137
Adjusted EBITDA	<b>38,168</b>	27,624	21,593
Number of employees	<b>2,821</b>	2,800	3,372

Exploration and Production (E&P) includes Hydro's oil and gas exploration activities, field development activities and oil and gas production activities. Hydro currently has production of oil and gas in Norway, Canada, Angola, Libya and Russia. In addition, Hydro is conducting exploration activities in most of these areas and also in the USA (Gulf of Mexico), Iran, Denmark, Morocco and Madagascar.

## Market Conditions

Oil prices increased to exceptionally high levels in 2004. In addition to the increased demand described above, a shortage of global refining capacity has been driving price increases for light, sweet oil such as Brent and West Texas Intermediate (WTI). There has also been increasing political unrest in key oil producing countries, in particular Iraq and Saudi Arabia.

Hydro realized average oil prices of US dollar 37.3 in 2004, up 30 percent from US dollar 28.7 in 2003. This is approximately 0.9 US dollar below the average Brent price of US dollar 38.2. The lower realized prices resulted primarily from negative price differentials on oil from the Grane field, which is heavier than Brent blend and therefore sold at lower average prices.

Expressed in Norwegian kroner average oil prices went up from NOK 203 in 2003 to NOK 251 in 2004, an increase of 24 percent. Average realized gas prices in 2004 were NOK 1.09 per standard cubic meter, up 6 percent from NOK 1.03 per standard cubic meter in 2003. The increase primarily reflected higher prices of oil products (gas prices in long term contracts are, to a large extent, linked to the price of oil products with a lag of approximately six months). Realized average NOK prices increased during 2003 approximately 4 percent and 7 percent for oil and gas respectively.

## Revenues

Operating revenues for E&P in 2004 were NOK 48,962 million, an increase of 29 percent from the previous year. Operating revenues increased 15 percent in 2003 compared to 2002. In addition to the higher price levels experienced for oil and gas, in particular for 2004, the increase reflected substantial growth in total production volumes for both years. During 2004, average production increased from 530,000 boed in 2003 to 572,000 boed. Average production increased in 2003 from a level of 480,000 boed in 2002. The 2004 increase of approximately 8 percent was in line with the targeted 8 percent compound annual growth rate for the 2001-2007 period. Oil production in 2004 increased by 6 percent and accounted for 73 percent of the total production compared to 74 percent in 2003. Gas production increased to a total of 8.8 billion standard cubic meters, an increase of 13 percent compared to 7.8 billion standard cubic meters in 2003.

Hydro achieved production growth from Norwegian fields in 2004, while international fields remained at the same production level as in 2003. New fields coming on stream in 2004 were the Kvittebjørn field in Norway, and new fields in the Murzuq basin in Libya. In addition Hydro experienced production growth from fields coming on stream in the end of 2003, including the Grane, Fram and Mikkel fields in Norway, as well as the Jasmim field in Angola. The relative proportion of production outside the Norwegian Continental Shelf (NCS) was stable for the three-year period accounting for 10-11 percent of the total production. Maintenance stops and other shutdowns resulted in production losses (or delayed production) of 20,000 boed compared to 12,000 boed in 2003 and 9,000 boed in 2002. Approximately 5,000 boed of the production loss in 2004 related to the shutdown of partner operated Snorre and Vigdis fields in Norway due to gas leakage and the Terra Nova field in Canada due to an oil leak in the end of 2004. Terra Nova resumed production in mid-December.

## Operating Costs

Operating costs for E&P were NOK 20,599 million in 2004, an increase of 6 percent compared to the previous year. Operating costs declined slightly in 2003 compared to 2002.

Hydro's average production cost was NOK 20.7 per boe in 2004, the same level as in 2003. Average production costs amounted to NOK 22.6 per boe in 2002. Production costs per barrel in 2004 excluding gas injection cost relating to the Grane field fell by about 10 percent from the 2003 level. However, costs related to increased volumes of injection gas to the Grane field offset this reduction.

Depreciation, including write-downs and depreciation of capitalized costs relating to abandonment and well closure (but excluding depreciation on transportation systems), averaged NOK 46 per boe, the same level as in 2003 and 2002. Included in the amount for 2004 was an additional charge for depreciation relating to an increase in the estimate for abandonment and well closure on the Ekofisk and Frigg fields of approximately NOK 260 million (NOK 1 per boe). The Frigg field, operated by Total, ceased production in October 2004, and preparation for removal is under way. The estimate for abandonment on Frigg was increased after receiving tender offers from contractors. In general, there is little experience with removing large installations on the NCS, and cost estimates are uncertain. Total depreciation costs increased from NOK 9,052 million in 2003 to NOK 9,752 million in 2004 as a result of higher production levels.

Total exploration costs including appraisal costs of discoveries amounted to NOK 1,264 million in 2004 compared to NOK 1,577 million in 2003 and NOK 3,558 million in 2002 for the reasons described above. Capitalized exploration well costs amounted to NOK 397 million in 2004 compared to NOK 121 million in 2003 and NOK 429 million in 2002. Expenditures relating to exploration activity in 2004 were NOK 1,412 million, compared to NOK 1,609 million in 2003 and NOK 2,376 million in 2002. Roughly 66 percent of the exploration activity related to areas outside the NCS compared to about 73 percent in 2003. International exploration activities in 2004 occurred mainly in Angola, Canada, Iran and the Gulf of Mexico. Out of a total of 17 exploration wells drilled and completed during 2004, 11 discoveries were made. One discovery was made in Gulf of Mexico, one in Angola, 7 in Libya and 2 discoveries were made in Norway. Hydro also participated in drilling activity in connection with producing wells that resulted in three additional commercial discoveries on the NCS. In addition, three wells were in the process of being drilled at the end of 2004. Of total exploration costs, NOK 1,016 million was expensed relating to exploration activities in 2004, including about NOK 183 million related to unsuccessful efforts in Angola, Canada and Norway and NOK 248 million was expensed relating to costs capitalized in previous years.

For information pertaining to accounting for exploration costs please see **Oil and Gas Exploration Costs** in Hydro's Critical

Accounting Policies below. See also Note 1, of the Consolidated Financial Statements for additional disclosure information proposed by the Financial Accounting Standards Board relating to suspended well costs. Hydro does not expect any changes in amounts capitalized as a result of the proposed amendment to Statement of Financial Accounting Standard No. 19.

### Operating Income

Operating income in 2004 was NOK 28,363 million, a 53 percent increase from the previous year. As discussed above the main reasons underlying the increase were higher oil and gas prices, higher production volumes and lower exploration costs. Operating income increased 41 percent in 2003 compared to 2002 primarily driven by higher volumes and a substantially lower level of exploration costs.

### Adjusted EBITDA

Adjusted EBITDA in 2004 amounted to NOK 38,168 million, an increase of NOK 10,544 million compared to 2003. Adjusted EBITDA increased 28 percent in 2003 compared to 2002.

### Energy and Oil Marketing

Amounts in NOK million	2004	2003	2002
Operating Revenues	<b>60,788</b>	49,370	45,915
Operating Costs	<b>58,138</b>	46,702	43,131
Operating Income	<b>2,650</b>	2,668	2,784
Adjusted EBITDA	<b>3,478</b>	4,226	3,721
Number of employees	<b>706</b>	665	667

Energy and Oil Marketing includes Hydro's commercial operations in the oil, natural gas and power sectors, the gas transportation operations and the operation of Hydro's power stations in Norway. Energy and Oil Marketing markets and sells refined petroleum products (gasoline, diesel and heating oil) to customers in Scandinavia and the Baltic countries. Hydro owns 100 percent of the operating unit in Sweden and 50 percent of Hydro Texaco, an oil marketing company with retail outlets in Norway, Denmark and the Baltic countries. Energy and Oil Marketing is also responsible for developing Hydro's hydrogen and renewable energy business activities such as wind power.

Except for the operation of Hydro's own power stations, gas infrastructure activities and development activities, Energy and Oil Marketing's business mainly consists of margin-based sales and trading activities. As a result, operating revenues and costs in any given year are largely a function of volume traded and the level of prevailing market prices for crude oil, natural gas and electricity. As part of the commercial operations in the oil, natural gas and power sectors, Energy and Oil Marketing enters into both short term and long term buying and selling contracts. Many of the contracts are valued at market price at reporting period ended. Some of the power and gas contracts may have several years of duration. The market value is calculated based on forward prices, and changes in forward prices may therefore affect the operating income in Energy and Oil Marketing.

### Market Conditions

As described under the section "Market Conditions" for the Exploration and Production sub-segment, the price level for oil, oil products and gas has been high during 2004 and higher than in 2003.

Nordic electricity prices have been lower in 2004 than last year. Average spot prices for 2004 were NOK 0.24 per kWh, compared to NOK 0.29 per kWh in the prior year and NOK 0.20 kWh in 2002. The decline in prices reflected reservoir levels approaching almost normal levels at the end of 2004. Water reservoir levels in Norway and Sweden were close to normal by the end of 2004, and considerably higher than in 2003.

The forward prices for gas for 2005 and onwards have increased since the end of 2003, but the forward prices have been very volatile during 2004.

### Operating Revenue

Energy and Oil Marketing's operating revenues for 2004 were NOK 60,788 million, up NOK 11,418 million or 23 percent from the prior year. Operating revenues were relatively unchanged in 2003 compared to 2002. Power production in 2004 was 8.1 TWh compared with 7.5 TWh in 2003 and 10.3 TWh in 2002. The fluctuations in power production resulted from changes in reservoir levels due to variation in weather conditions.

In 2004, internal sales to other business areas within Hydro amounted to NOK 6,159 million. Internal sales in 2003 were NOK 5,062 million and NOK 3,986 in 2002. All internal sales are at market prices.

### Operating costs

Energy and Oil Marketing's operating costs of NOK 58,138 million in 2004 were 24 percent higher than the prior year. Operating costs increased about 8 percent in 2003 compared to 2002. As described above, Energy and Oil Marketing's operating costs are mainly comprised of purchases of crude oil, natural gas and electricity. Operating cost also includes process costs relating to the operations of power stations, the gas infrastructure and other fixed costs. There were no substantial changes in these fixed costs in 2004 compared to the previous year.

### Operating income

Energy and Oil Marketing's operating income in 2004 was NOK 2,650 million, almost the same level as the operating income of NOK 2,668 million in 2003. Operating income was somewhat higher in 2002. Increased power production and unrealized gains relating to market value adjustments on gas and power contracts had a positive effect on operating income in 2004, while the loss of refinery income following the sale of the Scanraff refinery in December 2003 had a negative impact on income from operations.

Operating income (in NOK million)	2004	2003	2002
Power activities	732	664	1,184
Gas activities	1,833	1,795	1,255
Oil trading activities	188	406	388
Oil marketing	104	(16)	68
Other <sup>1)</sup>	(207)	(181)	(111)
Operating income	2,650	2,668	2,784

1) Other mainly consists of new energy activities

Operating income from power activities was NOK 732 million in 2004, up NOK 68 million or 10 percent from the prior year. The increase in operating income resulted primarily from higher power production. Energy and Oil Marketing secures electricity in the market for Hydro's own consumption, and to exploit commercial opportunities in the external market. The new Tyin hydropower plant in Sogn in Norway commenced commercial production in the

beginning of October 2004. The project was completed according to plan and below original cost estimates and resulted in an increase of 15 percent compared to the earlier production capacity



at the site. The decline in operating income from power activities in 2003, compared to 2002, resulted from lower production offset somewhat by higher prices.

Operating income from gas activities was NOK 1,833 million in 2004, slightly higher than the previous year. Gas activities consist of gas transportation and gas trading activities. Operating income for gas transportation has been relatively stable during the year amounting to NOK 1,496 million in 2004 compared to NOK 1,525 million in 2003. Operating income for gas trading activities has been very volatile during 2004. During the fourth quarter of 2004, forward price developments resulted in substantial unrealized gains on contracts for future deliveries, which are valued at market prices at the end of the quarter. The magnitude of the unrealized gains and losses for the year has been influenced by exceptionally large geographic price differentials and spreads on various gas contract indices. Operating income from gas activities increased 43 percent in 2003 compared to 2002. Approximately NOK 350 million of the increase related to gas transportation and was mainly due to lower depreciation charges resulting from the extension of license periods for a number of gas pipelines following the establishment of Gassled in January of 2003.

Operating income from oil trading activities was NOK 188 million in 2004, a decrease of 54 percent from the prior year. The decline resulted primarily from the divestment of Skandinaviska Raffinaderi AB, the Scanraff oil refinery, in the fourth quarter of 2003. The activities include crude oil trading, gas liquids trading and shipping. Operating income from oil trading activities increased slightly 2003 compared to 2002.

Operating income for Oil Marketing amounted to NOK 104 million, compared to an operating loss of NOK 16 million in 2003 and operating income of NOK 68 million in 2002. The improved result for 2004 primarily resulted from inventory gains, compared to inventory losses in the previous year.

### Adjusted EBITDA

Adjusted EBITDA for 2004 was NOK 3,478 million, a decrease of 18 percent compared to the prior year. In 2003, adjusted EBITDA was 14 percent higher than 2002. In the fourth quarter of 2003, Hydro sold its interest in Skandinaviska Raffinaderi AB, Scanraff, recognizing a gain of NOK 490 million. The sale agreement included the possibility of a price adjustment depending on the development in refinery margins during 2004 and 2005. High refinery margins during 2004 have resulted in an additional gain of NOK 59 million being recognized in the fourth quarter of 2004. In addition, Hydro transferred its interest in Sundsfjord Kraft ANS in return for 20.2 percent of the shares of SKS Produksjon AS resulting in a gain of NOK 326 million reflected in the EBITDA in 2003.

Adjusted EBITDA also included Hydro's share of net income from Hydro Texaco of NOK 39 million in 2004, a decrease of 78 million compared to last year. The result from Hydro Texaco was negatively impacted by intense gasoline price competition in Denmark.

Amounts in NOK million	2004	2003	2002
Operating Revenues	<b>79,674</b>	69,152	65,051
Operating Costs	<b>77,869</b>	66,696	63,353
Operating Income	<b>1,805</b>	2,456	1,698
Adjusted EBITDA	<b>8,656</b>	6,498	4,334
RoaCE <sup>1)</sup>	<b>3.5%</b>	4.7%	2.7%
Number of employees	<b>25,967</b>	26,728	27,110

- 
- 1) RoaCE for 2004 was negatively affected by the write down of the primary metal plants in Germany by 3.5 percent.

**Overview**

Hydro Aluminium is one of the world's largest integrated global aluminium suppliers in terms of sales volume with activities in 28 countries, 2004 revenues of approximately NOK 80 billion and around 26,000 employees. The company is an industry leader for a range of products and markets, in particular deliveries to the transportation, building, packaging and lithographic market sectors. In 2004 Hydro Aluminium produced approximately 1.7 million tonnes of primary metal. A total of 3.4 million tonnes was delivered to the market.

Hydro's Aluminium business is integrated from the alumina to finished products. The Company has ownership interests in alumina refineries providing approximately 45 percent of its alumina requirements. The remaining needs are covered through medium to long-term contracts. Virgin primary aluminium is produced in Australia, Canada, Norway, Germany and Slovakia. In addition, Hydro has developed a multi-sourcing strategy with a focus on building strong market positions in the metal products market (extrusion billet, sheet ingot and product foundry alloys), the mid-stream part of the value chain. Aluminium is further processed to meet customers' needs in casthouses integrated with the Company's primary aluminium plants and in specialized remelters located close to customers in Europe and the US. Components for the automotive industry are produced in several countries in Europe as well as in the US, Mexico, Brazil and China. Through a global extrusion system Hydro serves customers with tailor made profiles and building systems. Hydro Aluminium also produces aluminium strip, sheet and foil in rolling mills located in Europe and Malaysia.

During 2004 there has been a continued increase in the world's consumption of aluminium, most notably in China. Western world shipments grew an estimated 7.5 percent while consumption in

China increased an estimated 17 percent. China increased its net primary exports to the Western World by an estimated 300,000 tonnes in 2004 to a total of about 650,000 tonnes. This development was apparently enhanced by an announcement of the abolition of the eight percent export subsidy from year-end, which was replaced by a five percent export tax. However, with scrap, semi-fabricated and other aluminium products taken into account, China imported an estimated 350,000 tonnes of aluminium on a net basis in 2004.

Market prices increased during the year by 20 percent (LME three months average). Volume increases made possible by expanded capacity combined with the higher prices made a solid contribution to Hydro's results for the year. However, the depreciation of the US dollar offset more than half of the aluminium price increase measured in Norwegian kroner. In addition, the soft dollar weakened the competitiveness of Aluminium's European operations. Increasing energy costs combined with the decline in the dollar led to a write-down of Hydro's German primary aluminium plants by approximately NOK 2.3 billion in December of 2004. The write down impacted operating income by roughly NOK 2.0 billion and results from Non-consolidated investees by about NOK 0.3 billion.

Results for Hydro Aluminium's downstream operations improved significantly in 2004. Market developments resulted in increased volumes, however, margins are under continuous pressure particularly for the more standardized products.

To boost the Company's competitive position, Hydro Aluminium's strategy is to continuously improve the relative cost position of its primary metal production. To execute this strategy, Hydro is focused on increasing the share of its production being produced in larger primary metal plants located in regions with competitive energy costs. Expansions of primary production are completed or underway in plants where existing infrastructure supports a larger capacity. Hydro is in the initial phase of planning a major new greenfield project in Qatar which has abundant energy resources in the form of natural gas. Hydro has also taken steps to improve its relative cost position of alumina, the primary raw material for aluminium.

Hydro has a history of improvement programs generating substantial cost reductions. Improvement programs completed in 2003 are generating estimated annual cost reductions of NOK 2.5 billion. Further programs were initiated in 2004, and cost reduction activities are expected to continue into 2005 and beyond.

### **Summary of Aluminium's operating results**

Aluminium's operating income for 2004 was NOK 1,805 million compared to NOK 2,456 million in the prior year and NOK 1,698 in 2002. The lower result in 2004 was due to the write down of German primary metal plants of NOK 2,042 million and costs relating to manning reductions amounting to NOK 519 million. Positive contribution from increased volumes and higher prices offset a large part of the negative effects.

The change in 2004 operating income compared to the prior year and the most important items affecting the change are included in the table below:

Amounts in NOK million

Operating income 2004	1,805
Operating income 2003	2,456
Change in Operating Income	(651)

Margin	980
Volume	2,295
Fixed costs	(835)
Depreciation	(325)
Write downs, demanning, other	(2,650)
Trading	(560)
Unrealized LME-effects	230
New/disposed business	305
Restructuring costs	20
Other	(111)
Total change in Operating income	(651)

Margins, excluding the effect of hedge programs, were higher and positively impacted operating results by approximately NOK 980 million compared with 2003. Margins improved for the Metals, Rolled Products and Extrusion but were slightly weaker for Automotive. During 2004, aluminium prices measured in Norwegian kroner increased by slightly more than nine percent compared with 2003 as a result of the increased LME price but with a lower average US dollar to NOK exchange rate. In 2003, aluminium prices measured in Norwegian kroner declined somewhat more than 7 percent due to the fluctuating US dollar exchange rate. Realized gains on hedge programs in Metals declined by NOK 203 million from NOK 476 million in 2003. In 2002, realized gains related to hedge programs amounted to NOK 153 million.

Higher volumes contributed an additional NOK 2,295 million to operating income compared to 2003. Volumes increased for all sub-segments. The ramp up of new capacity in all sectors and increased capacity utilization were the main factors underlying the improvement. Volumes increases in 2003 relating to all sectors except North America, contributed NOK 860 million to operating income compared to 2002.

New production capacity was a significant reason for the increase in fixed costs and depreciation. In addition, fixed costs measured in NOK for European subsidiaries were negatively impacted by a stronger Euro/NOK exchange rate. However, for operating income as a whole this currency translation effect was positive by about NOK 75 million. Total fixed costs and depreciation increased in 2003 compared to 2002 primarily as a result of new production capacity as well as translation effects resulting from a stronger Euro/NOK exchange rate.

Write downs, demanning and other consisted primarily of the impairment loss on the German primary metal plants of NOK 2,042 million and manning reduction costs related to the Aluimprover project, together with charges for the transfer of employees relating to magnesium operations, in total amounting NOK 519 million.

Metals results of trading activities were lower mainly due to reduced currency gains impacting operating income by NOK 350 million. Results for Metals trading activities improved by approximately NOK 460 million in 2003 compared to 2002 mainly due to currency gains. The currency effects impacting results for trading activities are largely offset by currency gains and losses on forward currency contracts reported in financial items.

The variance relating to new/disposed business relates primarily to the effect on operating income resulting from the consolidation of Slovalco. See Hydro's Critical Accounting Policies Change in Accounting Principles - Consolidation of Variable Interest Entities

in this Financial Review for further information pertaining to the consolidation of Slovalco.

Adjusted EBITDA for 2004 was NOK 2,158 million higher than in the previous year largely due to positive factors underlying the developments in operating results for the year, but excluding the non-cash effects of the write downs and charges described above. Results for non-consolidated investees decreased by NOK 52 million primarily due to the write down of NOK 268 million of the share in Hamburger Aluminium-Werke GmbH where Hydro holds a 33.33 percent interest. Results from non-consolidated investees included unrealized currency gains on US dollar denominated loans held by Alunorte, of NOK 63 million for 2004 compared to NOK 218 million for 2003. The remaining variance in results from non-consolidated investees resulted from improved operating results relating to Sørø, Alunorte and other investees. Adjusted EBITDA increased in 2003 compared to 2002 as a result of the inclusion of VAW and Technal in the first quarter of 2003, and unrealized currency gains of NOK 218 million relating to Alunorte compared to unrealized losses of NOK 461 million in 2002. During the first quarter of 2002, Hydro acquired VAW Aluminium AG (VAW) and the French building systems company, Technal. Hydro's consolidated results include the operating results of VAW as of 15 March 2002 and Technal, as of 26 January 2002. The effect or variance resulting from the inclusion of VAW and Technal for a full year in 2003 compared to less than a full year in 2002 is described in the discussion on Operating revenues, Operating costs and Operating income below.

### **Key development projects and other activities**

In December of 2004, Hydro signed Heads of Agreement with Qatar Petroleum to evaluate the development of a 570,000 tonnes capacity aluminium plant in Qatar with approximately 49 percent Hydro participation. If realized, the project will consist of power generation, primary aluminium production and anode production, as well as a casthouse producing value added aluminium metal products. The plant site is suitable for more than doubling of the initial primary aluminium production capacity, up to 1.2 million tonnes per year.

The expansion of the aluminium plant at Sunndal, Norway, has been completed with full production achieved during 2004. The expansion has more than doubled capacity to 360,000 tonnes. Amperage exceeding design by ten percent was achieved, resulting in 20,000 additional tonnes of primary capacity per year at only incremental operating cost and no additional investment cost. In addition, an accelerated startup resulted in 18,000 additional tonnes for 2004. The total investment amount is expected to be NOK 150 – 200 million lower than originally budgeted. The expansion project in Alouette, Canada, in which Hydro has a 20 percent ownership, is progressing well. The first phase commenced production in December, two months ahead of plan.

Hydro Aluminium's major alumina investment is its 34 percent participation in Alunorte, a Brazilian alumina refinery. In 2003, Hydro decided to participate in a further expansion of Alunorte. This planned expansion will increase capacity to approximately 4.2 million tonnes in 2006, providing Hydro Aluminium with a total of approximately 1.4 million tonnes of alumina annually. Hydro Aluminium believes that Alunorte's cash operating costs are significantly below the alumina industry's world average.

Hydro Aluminium also has a 35 percent equity interest in the Alpart alumina refinery in Jamaica, which has an annual production capacity of approximately 1.5 million tonnes. The remaining 65 percent was owned by Kaiser Aluminium. As part of bankruptcy proceedings, Kaiser initiated a process to dispose of its interest in Alpart. In May of 2004, Hydro decided to exercise its right of first refusal to acquire the 65 percent interest and then transferred the interest to Swiss-based Glencore AG. No gain or loss resulted from the transaction. Hydro expects the new ownership arrangement will result in improved operations and potential cost synergies.

In 2004, Hydro sold its German based alumina business for approximately NOK 700 million. The operations sold consisted of a 50 percent share in Aluminium Oxid Stade GmbH (AOS), the related chemical grade alumina business and the dedicated bauxite source represented by Hydro's 10 percent share in Halco (Mining) Inc. AOS was sold

primarily because the chemical grade alumina is not used in Hydro Aluminium's production process. The sale did not result in any significant gain or loss.

## Outlook

Economic indicators are signaling lower global growth in 2005 compared to 2004, but growth is expected to continue at a healthy level. Economic development in the US is expected to slow, but from a high level in 2004. Conditions in Europe are expected to remain fairly stable, while the major Asian economies are forecast to show a somewhat reduced growth in activity level.

Hydro expects Western World shipments of primary aluminium to increase about three percent, equivalent to 600,000 - 700,000 tonnes in 2005 compared to 2004. Western World production, including closures and restarts, is expected to increase by 800,000 - 900,000 tonnes in 2005. Through 2004 and into 2005, LME prices have increased significantly, and some idle capacity in the US North West has been restarted. If LME prices remain at levels experienced early in 2005, or increase, some additional restart of idle capacity in this region may take place. Chinese export subsidies for primary aluminium have been replaced by an export tax effective 1 January 2005. As a result, incentives for developing new aluminium capacity for export have been reduced. The global market for primary aluminium is expected to remain favorable in 2005, with inventory reductions possibly of the same magnitude as in 2004.

In 2004, there has been a tight supply relative to demand for alumina which has resulted in a substantial increase in alumina prices in the spot market. For 2005 the prices are expected to stay at a fairly high level. In addition, electricity prices in the North Western US are expected to remain relatively high.

According to CRU International Ltd. (CRU), consumption of flat rolled products, extruded and automotive products is expected to continue to grow compared to 2004. Growth projections for 2005 vary by product and market, but are in the range of 3-3.5 percent in the US and Western Europe.

Hydro's Board of Directors approved the Aluimprover manning and cost reduction program relating to the Company's Norwegian primary metal plants in May 2004. The program has targeted annual cost savings of NOK 350-400 million, equivalent to approximately 800 man-years. All cost reduction initiatives related to the project are expected to be concluded by the end of the first quarter of 2005. Total implementation costs of the program are expected to be NOK 600 million, which is NOK 200 million lower than initial cost estimates. Of this amount, NOK 432 million was charged to results in 2004. Approximately NOK 170 million is expected to be charged in 2005.

Due to environmental legislation, Hydro will close the S oderberg production lines at the Company's H oyanger and  rdal primary metal plants in Norway. Total related costs are estimated at NOK 300 - 350 million and are expected to be incurred at the latest by the end of 2006. Hydro is working actively with business development projects in  rdal and H oyanger in order to facilitate job creation in these areas, and ultimately to assist affected employees in

their search for new employment. New, lower cost capacity coming on stream resulting from the expansions described above will replace the production at these primary metal plants.

As a result of low volume and declining profitability, a decision was made in June 2004 to close Hydro Aluminium Motorcast Ltd. located in Leeds, UK, in early 2005. Costs relating to the closure impacted operating income by NOK 147 million in 2004. Estimated remaining charges relating to the closure of around NOK 135 million are expected to be recorded in 2005.

## Metals

Amounts in NOK million	2004	2003	2002
Operating Revenues	<b>49,159</b>	39,923	39,646
Operating Costs	<b>48,329</b>	37,630	37,956
Operating Income	<b>830</b>	2,293	1,690
Adjusted EBITDA	<b>5,396</b>	4,298	2,703
Number of employees	<b>6,161</b>	6,276	6,284

## Market conditions

Western World shipments of primary metal grew an estimated 7.5 percent for 2004 compared to the prior year. China's internal consumption continued to grow rapidly in 2004 with an estimated increase of about 17 percent. China increased its net primary exports to the Western World by an estimated 300,000 tonnes in 2004 to a total of about 650,000 tonnes. This development was apparently triggered by an announcement of the abolition of the eight percent export subsidy from the end of 2004, which was replaced by a five percent export tax. However, with scrap, semi-fabricated and other aluminium products taken into account, China imported an estimated 350,000 tonnes of aluminium on a net basis in 2004.

Western World production increased approximately 3.5 percent, or 480,000 tonnes, as a result of new capacity net of closures.

Reported inventories, including producers' inventories (reported from the International Aluminium Institute) and LME inventories, declined by about 20 percent, or approximately 700,000 tonnes, during 2004. Roughly 200,000 tonnes are believed to be offset by an increase in unreported inventories within the new European Union member states, countries acceding 1 May 2004.

The average market price for aluminium (LME three months average) was USD 1,721 per tonne for 2004, an increase of 20 percent.

## Revenues

Operating revenues increased approximately 23 percent or NOK 9 billion. The increase reflected the higher realized prices measured in Norwegian kroner combined with higher volumes. Operating revenues declined approximately 10 percent in 2003 compared to 2002, (which was offset by the variance relating to VAW in the first quarter of the year), primarily as a result of lower realized aluminium prices measured in Norwegian kroner. Volumes for Hydro Aluminium's primary metal increased 17 percent to a total of 1,720,000 tonnes in 2004 from 1,473,000 tonnes in 2003. The increase in primary metal volumes included new capacity relating to the Sunndal expansion of approximately

94,000 tonnes as well as about 130,000 tonnes relating to the consolidation of Slovalco. The remaining increase resulted from smaller expansions and better capacity utilization. New commercial contracts also influenced total sales volumes for 2004. Primary metal volumes increased 18 percent in 2003 compared to 2002 as a result of the inclusion of VAW for the first quarter of 2003 as well as new capacity from Sunndal.

Hydro realized average aluminium prices of US dollar 1,638 per tonne for 2004 compared to USD 1,440 per tonne for the same period of 2003. Measured in Norwegian kroner the realized aluminium price increased by slightly over nine percent. The realized NOK to US dollar exchange rate was NOK 6.98 for 2004 compared to NOK 7.25 in 2003. The realized price includes the effect of hedges.

Realized effects of the Sunndal hedge programs <sup>3)</sup>, which are comprised of LME future contracts and US dollar forward contracts, positively impacted the results by about NOK 273 million in 2004 compared to NOK 476 million in 2003.

Product premiums increased both in USD and in Norwegian kroner in 2004. For 2003, product premiums increased in US dollars but to a lesser extent measured in Norwegian kroner.

- 
- 3) Both the LME and currency hedges related to the Sunndal program are designated as cash flow hedges against production. Changes in the fair value of the contracts are included in Other Comprehensive Income while the realized amounts are included in revenues. In addition, Metals economically hedges certain revenues and raw materials in terms of LME prices with the purpose of locking in margins on such transactions. These positions referred to as price hedges are not designated for hedge accounting. Realized aluminium price hedges are included in revenues or raw material costs while unrealized effects are included at the Hydro Aluminium level under Other and eliminations. Related currency effects are classified as financial items and excluded from operating income. Price hedges are excluded from the numbers for the hedge programs disclosed above.

### **Operating costs**

Operating costs increased by NOK 10,699 million in 2004, mainly due to higher volumes from new capacity. However, the increase also included NOK 519 million relating to the manning reduction described above, and the write down of the German smelters of NOK 2,042 million. The strengthening of the Euro to the US dollar has placed European aluminium producers at a cost disadvantage in the global aluminium market. In addition, the existing power contracts for Hydro's German primary aluminium plants will expire at the end of 2005. Current power prices in Germany are significantly higher than in 2002, when these plants were acquired. At the time of acquisition Hydro anticipated a significant increase in future power costs. However, based on ongoing negotiations for renewal of the contracts, expected costs are now higher than earlier estimates. As a result, the Company recognized an impairment loss relating to its German primary aluminium plants in December of 2004. The write down impacted operating income by roughly NOK 2.0 billion and results from Non-consolidated investees by about NOK 0.3 billion. Operating costs in 2003 were relatively unchanged compared to 2002, however, a decline in operating costs was offset by the effect of VAW in the first quarter of 2003.

### **Operating income**

Operating income for 2004 amounted to NOK 830 million compared to NOK 2,293 million in the prior year and NOK 1,690 million in 2002. Higher margins resulting from the price and currency developments in 2004 contributed about NOK 635 million compared with 2003. Higher volumes contributed NOK 1.9 billion. However, the positive developments were offset by the increased fixed costs, depreciation and write-downs as described above. In addition, results for Sourcing and Trading activities declined NOK 350 million mainly as a result of reduced currency gains. Realized effects of hedge programs declined NOK 200 million compared to 2003. Operating income in 2003 was negatively impacted by lower margins in the amount of NOK 760 million, offset by positive effects





from hedge programs amounting to NOK 323 million and higher trading results of NOK 460 million.

### Adjusted EBITDA

Adjusted EBITDA for 2004 was NOK 5,396 million, an increase of NOK 1,098 million compared to 2003. The increase in 2004 was largely due to the positive factors underlying the developments in operating results for the year, but excluding the non-cash effects of the write-downs and charges described above. In addition, better results from non-consolidated investees also contributed to the improvement. Adjusted EBITDA amounted to NOK 4,298 million in 2003, an increase of NOK 1,595 million compared to 2002.

### Rolled Products

Amounts in NOK million	2004	2003	2002
Operating Revenues	20,373	18,377	14,790
Operating Costs	19,747	18,245	15,085
Operating Income	626	132	(295)
Adjusted EBITDA	1,361	835	258
Number of employees	4,013	4,259	4,306

### Market conditions

Consumption of flat rolled products in Europe increased by an estimated (CRU International) two percent compared to 2003. Average capacity utilization for the European industry improved marginally but remained relatively low at an estimated 84 percent.

The North American market had an increase in consumption of about seven percent for the year as a whole compared to 2003. Capacity utilization for the US industry improved about seven percent to an estimated 79 percent. The stronger Euro compared to the US dollar placed a disadvantage on producers outside the US for export sales. The Euro/US dollar exchange rate impacted export pricing of flat rolled products to Asia, South and North America, which are typically based on a US dollar price formula and put pressure on margins.

Foil and lithographic sheet are higher margin products. Automotive flat rolled products are important to the industry as these products are expected to have attractive growth rates. Many flat rolled products are relatively mature in European and North American markets.

### Revenues

Operating revenues increased approximately 10 percent or about NOK 2,000 million in 2004 compared to the previous year. The increase was mainly due to the higher volumes and higher metal prices partly offset by the effect of lower Euro revenues relating to US dollar denominated export sales. Rolled Products exports about 21 percent of its sales to Asia, South and North America. The Euro strengthened 10 percent to the US dollar in 2004. Operating revenues increased approximately 24 percent in 2003 compared to 2002. Operating revenues increased by about 3 percent in addition to increases relating to the VAW effect.

Shipments increased around five percent to 941,000 tonnes in 2004 and about seven percent to 893,000 tonnes in 2003 including comparable VAW figures on an annual basis. The total growth in shipments for 2004 over 2003 was

distributed between Hydro's product groups as follows: lithographic sheet (15 percent), foil (7 percent) and strip (2 percent).

Rolled Products activities are primarily denominated in Euro. All sales revenues are hedged in terms of aluminium prices and foreign currency exchange rates utilizing commodity and financial instruments. Realized gains related to aluminium price hedges are included in revenues while currency effects are included in financial items. Unrealized effects of aluminium price hedges are included as part of Other and Eliminations at the Hydro Aluminium consolidation level.

### Operating costs

Rolled Products operating cost increased in 2004 and 2003 (in addition to the effect of VAW) primarily as a result of increased volumes. Higher metal prices also impacted operating costs in 2004. Operating costs were positively influenced by inventory gains of approximately NOK 155 million in 2004 compared with inventory losses of approximately NOK 117 million in 2003. Rolled Products sales prices are based on a margin over the metal price. The production process requires a lead-time of between two to three months. Therefore, cost of goods sold (and margins) is impacted by variances in inventory values resulting from changing aluminium prices. Falling prices in Euro increase cost (reduce margins) while increasing prices have the opposite effect.

Operating costs also increased as a result of currency translation effects resulting from the stronger Euro/NOK exchange rate amounting to about NOK 230 million. Savings from improvement programs offset this increase by about NOK 100 million.

### Operating income

Operating income for 2004 was NOK 626 million compared to NOK 132 million in the previous year and an operating loss of NOK 295 million in 2002. Higher contribution from margins impacted the results for 2004 by approximately NOK 285 million compared with 2003. The change in the margin primarily resulted from the inventory gains described above. In addition, a positive translation effect from the stronger Euro contributed around NOK 250 million but was offset by lower margins as a result of the declining US dollar by about the same amount. Increased shipments contributed around NOK 260 million to results.

Rolled Products operating income in 2004 was distributed between the product groups as follows: Litho 32 percent, Foil 22 percent and Strip 46 percent.

### Adjusted EBITDA

Adjusted EBITDA for Rolled Products for 2004 was NOK 1,361 million compared to NOK 835 million for 2003 and NOK 258 million for 2002. The improvement was primarily influenced by the factors described above.

### Extrusion and Automotive

Amounts in NOK million	2004	2003	2002
Operating Revenues	<b>27,600</b>	24,529	24,245
Operating Costs	<b>27,323</b>	24,431	24,231
Operating Income	<b>277</b>	98	14
Adjusted EBITDA	<b>1,827</b>	1,432	1,084
Number of employees	<b>15,793</b>	16,193	16,520

**Market conditions**

The overall market for general extrusion in Europe improved during the first three quarters of 2004, but slowed markedly in the fourth quarter. According to CRU, general extrusion shipments increased by about four percent in 2004 compared to 2003. Hydro's ship-

ments of general extrusions grew at a rate higher than market average in 2004, about seven percent. For extruded products in North America, CRU reported a growth rate in 2004 of about eleven percent. The market showed signs of slowing towards year end. Global light vehicle sales were reported to be approximately 3.6 percent higher than in 2003. Western European and North American automotive markets, which are the most relevant to Hydro, lagged behind the global growth averages with an increase in light vehicle sales of 2.2 and 1.5 percent, respectively.

## Revenues

Revenues increased about 13 percent or NOK 3,071 million in 2004 compared to the previous year. A decline in revenues of about NOK 700 million or 3 percent in 2003 was more than offset by the effects of the VAW and Technal building systems acquisitions in 2002. Automotive revenues and sales volumes increased in 2004 compared to 2003, principally due to the ramp up of shipments on new contracts. Higher volumes offset lower revenues resulting from price pressure on motor block castings and crash management systems although margins were negatively affected. Extrusion's revenues increased by around eleven percent. Both European extrusion and Building systems shipments were higher. Revenues increased for both Extrusion and Automotive as a result of translation effects relating to the stronger Euro/NOK exchange rate. In North America, revenues increased significantly as a result of increased shipment volumes relating to extrusion and remelt activities following production capacity increases.

## Operating costs

Operating costs increased by NOK 2,892 million in 2004, primarily due to higher activity levels in all sectors resulting in increased volumes. The increases were partly offset by cost reductions from improvement programs. Depreciation expense increased due to start up of new automotive production lines and North American remelt operations. The increase in operating costs also reflected write downs of NOK 125 million relating to Automotive plants in addition to the costs relating to the closure of Hydro Aluminium Motorcast Ltd in Leeds amounting to NOK 147 million in 2004. A small decline in operating costs in 2003 compared to 2002, primarily resulting from currency translation effects, was offset by the effects of VAW and Technal.

## Operating income

Operating income for 2004 was NOK 277 million compared to NOK 98 million in the prior year and NOK 14 million in 2002.

Operating income (loss) for the three sectors included in Extrusion and Automotive for the three years ending 31 December 2004 is included in the following table:

Amounts in NOK million	2004	2003	2002
Extrusion	634	500	399
Automotive	(314)	(192)	(94)
North America	(35)	(211)	(291)
Eliminations	(8)		
Total	277	98	14

Slightly higher margins contributed about NOK 152 million to the result in 2004 and improved volumes contributed about NOK 1,000 million. The positive effects were partly offset by the higher fixed costs and depreciation expense

discussed above. Operating income was also negatively impacted by translation effects in the amount of around NOK 65 million. Operating income was stable in 2003 compared to 2002 but improved from the effects of VAW and Technal acquisitions.

In 2004, operating income for Extrusion, increased as a result of the currency translation effect on margins, partially offset by declining margins in local currencies. Results for North American operations were positively influenced by substantial improvements in press productivity (nine percent compared to the previous year), on time delivery and cost control measures. Automotive's operating income declined in 2004 as a result of costs relating to the Leeds closure and write-downs relating to plants in China, the US, and the UK described above.

### **Adjusted EBITDA**

Adjusted EBITDA for Extrusion and Automotive for 2004 was NOK 1,827 million compared to NOK 1,432 million for 2003 and NOK 1,084 million in 2002. The increase in 2004 was largely due to the factors underlying the improvements in operating income excluding the non-cash effects of the write-downs and charges described above.

### **Other Activities**

Other activities consists of Polymers (formerly Petrochemicals), Bio-Mar Holding A/S (formerly Treka AS), Hydro Business, IS and Production Partners, the Company's internal service operations, and Industriforsikring, the Company's captive insurance company.

### **Polymers**

Operating income for Polymers amounted to NOK 254 million in 2004 while adjusted EBITDA was NOK 774 million, an increase of NOK 262 million and NOK 373 million respectively compared with last year. The improvement was mainly due to higher PVC prices, partly offset by higher raw material costs. Operating income also included insurance proceeds amounting to NOK 58 million relating to the explosion at Stenungsund site in Sweden in 2003. The improvement in adjusted EBITDA also reflected an increase in results from non-consolidated investees amounting to NOK 88 million, mainly due to better product prices in Asia, which is the main market for Qatar Vinyl Company.

The construction of the new chlorine plant at Rafnes, which was started in 2003, is progressing well and within the total estimated investment cost of NOK 1,000 million. The plant is expected to start production ahead of schedule in the summer of 2005. In January 2005, Hydro also decided to convert the existing chlorine plant at Rafnes from diaphragm to membrane technology. The total cost of the upgrade is expected to be about NOK 700 million, with start-up of production scheduled for 2006. In June 2004 Noretyl AS, owned 50 percent by Hydro, announced an expansion of its production of ethylene by 100,000 tonnes. The expansion is expected to be completed in the second half of 2005 at a total investment cost to Noretyl of approximately NOK 700 million. These projects are expected to make a strong contribution to Hydro Polymers' competitive position.

### **BioMar**

Operating income for BioMar amounted to NOK 91 million for 2004, compared to an operating loss of NOK 529 million in 2003. BioMar's results improved significantly compared to 2003, which was impacted by the write down of goodwill and intangible assets as well as significant losses on bad debts, in total around NOK 570 million.

## **Industriforsikring**

During the year, Industriforsikring, Hydro's captive insurance company, made provisions of around NOK 230 million for losses incurred within a mutual insurance pool of which it is a member. The pool incurred significant damage claims during the autumn of 2004, which will be covered by the members of the pool over the coming five years, or upon withdrawal from the pool.

## **Hydro's Critical Accounting Policies**

Hydro's Consolidated Financial Statements and supplementary information were prepared in accordance with generally accepted accounting principles in the US (US GAAP). Note 1 in the Notes to the Consolidated Financial Statements describes Hydro's significant accounting policies. Inherent in many of the accounting policies is the need for management to make estimates and judgments in the determination of certain revenues, expenses, assets, and liabilities. The following accounting policies represent the more critical areas that involve a higher degree of judgment and complexity which, in turn, could materially impact Hydro's financial statements if various assumptions were changed significantly. Hydro's senior management has discussed estimates underlying certain of its critical accounting policies with its independent auditors.

## **Oil and Gas Exploration Costs**

Hydro uses the successful efforts method of accounting for oil and gas exploration and development costs. All expenditures related to exploration, with the exception of the costs of drilling exploratory wells, are charged to expense as incurred. The costs of drilling exploratory wells are capitalized on the balance sheet pending determination of whether commercially producible oil and gas reserves have been discovered. If the determination is made that a well did not encounter potentially economic oil and gas quantities, the well costs are charged to expense.

Almost all of our wells capitalized on the balance sheet at 31 December 2004, 2003 and 2002 are in offshore areas where a major capital expenditure (e.g., offshore installation) would be required before production could begin. In such areas, the economic viability might depend on the completion of additional exploratory drilling and the discovery of sufficient commercially producible reserves. Once the additional exploration drilling demonstrates that sufficient quantities of reserves have been discovered, continued capitalization is dependent on project reviews, which take place periodically and no less frequently than every quarter, to ensure that satisfactory progress toward ultimate development of the reserves is being achieved.

For complicated offshore exploratory discoveries, it is not unusual to have exploratory well costs remain suspended on the balance sheet for more than one year while additional appraisal work on the potential oil and gas field is performed and regulatory approvals for development are sought. In all the areas in which we operate, plans for development are subject to governmental approval. The wells are transferred to development when the Plan for Development and Operation (PDO) has been submitted to the Ministry of Petroleum and Energy (Norway) or matured to a level corresponding to a PDO submittal (International).

Costs related to acquisition of exploration rights are allocated to the relevant geographic areas and are charged to operating expense if no proved reserves are determined to exist. If proved reserves are determined to exist, the acquisition costs are transferred to development cost, and subsequently amortized to become part of the cost of the oil and gas produced.

A determination that proved reserves do not exist can result in a reduction of long-term assets and an increase in operating costs. Each block or area is assessed separately. The amount of the impact depends on the level of current drilling activity and the amount of exploration costs currently capitalized. During 2004, exploration activity

(expenditures) totaled NOK 1,412 million, of which NOK 397 million was capitalized during the year. Including capitalized exploration costs and acquisition costs from prior periods, NOK 1,263 million was expensed during the year. At the end of 2004, NOK 1,180 million of such costs were capitalized pending the evaluation of drilling results and planned development, of which NOK 213 million related to acquisition costs.

In February 2005 the FASB issued a Proposed FASB Staff Position No FAS 19-a, to provide guidance in the accounting for exploratory well costs. Paragraph 19 of FASB Statement No. 19, Financial Accounting and Reporting by Oil and Gas Producing Companies (FAS 19), requires costs of drilling exploratory wells to be capitalized pending determination of whether the well has found proved reserves. Questions have arisen in practice about the application of this guidance due to changes in oil- and gas-exploration processes and lifecycles. The issue is whether there are circumstances that would permit the continued capitalization of exploratory well costs if reserves cannot be classified as proved within one year following the completion of drilling other than when additional exploration wells are necessary to justify major capital expenditures and those wells are underway or firmly planned for the near future. The FSP would amend FAS 19 and allow suspended well costs to remain capitalized beyond one year from drilling if certain specific criteria are met, and certain disclosures are provided. Should the FSP be issued as proposed, Hydro does not expect any changes to the capitalized amounts.

### **Proved Oil and Gas Reserves**

Proved reserves are the estimated quantities of crude oil, natural gas, and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Proved reserves are related to developed fields (proved developed reserves), and to undeveloped fields (proved undeveloped reserves). The estimation of proved reserves is based on technical evaluations using all available reservoir, well and production data. Proved reserves do not include volumes after license expiry or volumes that are not commercially producible with known technology and prices at year-end.

Reserves are revised upwards or downwards as oil and gas are produced and additional data become available. Revisions can result from evaluation of already available geologic, reservoir or production data, or from new geologic or reservoir data obtained from wells. Revisions can also include changes resulting from performance of improved recovery projects, production facility capacity, significant changes in development strategy, oil and gas prices or changing regulatory environment.

Proved developed reserves are the basis for calculating unit-of production depreciation. Future changes in proved oil and gas reserves can materially impact unit-of-production rates for depreciation, depletion and amortization. Downward revisions in reserve estimates can result in higher per unit depreciation and depletion expense in future periods. Conversely, upward revisions in reserve estimates can result in lower future per unit depreciation, depletion and amortization. Depreciation, depletion and amortization related to



oil and gas producing activities in 2004, 2003 and 2002 were NOK 9,825 million, NOK 9,114 million and NOK 8,553 million respectively.

### **Commodity Instruments and Risk Management Activities**

Hydro's revenues, operating results, financial condition and ability to borrow funds or obtain additional capital depend substantially on prevailing commodity prices for oil, aluminium and the US dollar exchange rate. Volatility in these commodity prices and currency rates materially affect Hydro's financial condition, liquidity, ability to obtain financing, and operating results. Depressed prices can have a negative impact on Hydro's financial results. The majority of Hydro's oil and aluminium production is sold at market prices. To mitigate unwanted price exposure and to protect against undesirable price developments, Hydro utilizes physical and financial commodity instruments on a limited basis. Entering into such positions requires management to make judgments about market conditions and future price expectations.

Certain commodity contracts are deemed to be derivatives under US GAAP and are required to be recognized at fair value, with changes in the fair value impacting earnings. Determining whether contracts qualify as derivative instruments involves evaluation of market liquidity, traded volumes and transportation cost for physical products from contract delivery points to a liquid market for the product. When market prices are not directly observable through market quotes, the estimated fair value must be calculated using valuation models, relying on internal assumptions as well as observable market information. Such assumptions includes forward curves, yield curves and interest rates. The use of models and assumptions are in accordance with prevailing guidance from the FASB and valuations are based on the Company's best estimates. However, changes in valuations will likely occur and such changes may have a material impact on the estimated fair value of derivative contracts, in particular long-term contracts, resulting in corresponding gains and losses affecting future periods' income statements. It is important to note that use of such instruments and other commodity contracts may preclude or limit Hydro's ability to realize the full benefit of a market improvement. To further understand Hydro's sensitivity to these factors please refer above to the Indicative income statement sensitivities table included in the Risk Management section of this Financial Review.

### **Asset Retirement Obligations**

Effective 1 January 2003, Hydro adopted SFAS 143, Accounting for Asset Retirement Obligations which prescribes the accounting for obligations associated with the retirement of long-lived assets such as abandonment of oil and gas production platforms, facilities and pipelines. The fair value of liabilities for asset retirement is recognized as liabilities when they are incurred and added to the carrying amount of the long-lived asset. The effect of the passage of time on the liability is recognized as an accretion expense, included in Depreciation, depletion and amortization, and the costs added to the carrying value of the asset are subsequently expensed over the asset's useful life.

Hydro's asset retirement obligations consist mainly of accruals for the dismantlement and removal of oil and gas installations on the Norwegian Continental Shelf. Norwegian regulations and the OSPAR convention (convention for the protection of the marine environment of the north-east Atlantic) regulate which installations must be disposed of and which can be abandoned. The OSPAR convention has imposed a general ban on sea disposal of offshore installations and requires removal and recycling unless exceptions are made which allow abandonment of specific installations. The OSPAR convention does not cover pipelines and cables. Report No. 47 (1999-2000) to Stortinget (the Norwegian Parliament) on the disposal of pipelines and cables that have ceased to be used includes general guidelines permitting such facilities to be left in place if they do not result in any inconvenience or safety hazards. A termination and removal plan for each field must be approved by the Norwegian authorities.

The asset retirement obligation is estimated as the present value of the future expected dismantlement and removal costs based on an expected retirement concept and timing and current prices for goods and services. The timing of

retirement activities is normally assumed to be at the end of production. Retirement activities relating to most fields where Hydro has an ownership interest are expected to begin relatively far into the future. There is substantial uncertainty in the scope and timing of future termination and removal activities both from the fact that the activities will take place relatively far into the future, and because very limited removal activities have occurred on the NCS in the past. Changes to technology, Norwegian regulations, prices for necessary goods and services and other factors may affect the timing and scope of retirement activities. In 2004, estimates of future asset retirement obligations related to producing fields were increased by around NOK 560 million. The major part of the increase was attributable to higher rates relating to floating rigs used in retirement activities. Future changes in rig rate levels or other relevant prices may substantially alter the book value of property, plant and equipment, asset retirement obligations and future operating costs.

Hydro accounts for asset retirement obligations that are conditional on a future event in the period that the conditional event has been satisfied. In June 2004, the FASB issued an exposure draft entitled Accounting for Conditional Asset Retirement Obligations -an interpretation of FASB Statement No. 143, which would require conditional asset retirement obligations to be recognized when incurred. Should the exposure draft be issued as proposed, Hydro would accrue for the removal and disposal of certain additional assets including lining material of the cells used in the smelting of aluminium at the time the lining material is put into use. Currently, these costs are accrued at the time the lining material is removed.

### **Impairment of Long-Lived Assets**

Hydro adopted as of January 1, 2002 SFAS 144, Accounting for Impairment or Disposal of Long-Lived Assets. Under SFAS 144, management is required to assess the conditions that could cause an asset to become impaired and to perform a recoverability test for potentially impaired long-lived assets held by the Company. These conditions include whether a significant decrease in the fair value of the asset(s) has occurred, changes in the Company's business plan for the asset(s) have been made, or whether a significant adverse change in the local business and legal climate has arisen. The amount of such an impairment charge is based on the estimated fair value of the asset compared to its carrying value. Fair value measurements include assumptions made regarding future cash flows associated with the asset under evaluation. The company uses internal business plans, quoted forward prices and its best estimate of commodity prices, currency rates, discount rates and other input. Such estimates may vary with business cycles and other changes.

Impairment charges result in a decrease to Property, Plant and Equipment on the balance sheet and an increase in operating costs. Increasing energy costs combined with the decline in the dollar led to a write-down of Hydro's German primary aluminium plants by approximately NOK 2.3 billion in December of 2004.

## **Contingencies and Environmental Liabilities**

Contingencies and environmental liabilities are recorded when such items are asserted, or are probable of assertion, and a loss is probable and can be reasonably estimated. Evaluation of contingencies requires management to make assumptions about the probability that contingencies will be realized and the amount or range of amounts that may ultimately be incurred. The measurement of environmental liabilities is based on an evaluation of currently available facts with respect to each site, and considers factors such as present laws and regulations, prior experience in remediation of contaminated material and existing technology. Environmental liabilities require interpretation of scientific and legal data, in addition to assumptions about probability and future costs. The liabilities are reviewed periodically and adjusted to reflect updated information as it becomes available. Actual costs to be incurred may vary from the estimates following the inherent uncertainties in the evaluation of such exposures. Accruals for contingencies and environmental liabilities are included in Other current liabilities and Other long-term liabilities in the balance sheet.

## **Business Combinations**

In accounting for the acquisition of businesses, Hydro is required to determine the fair value of assets, liabilities, and intangible assets at the time of acquisition. In the businesses Hydro operates, fair values of individual assets and liabilities are normally not readily observable in active markets, which requires the Company to estimate the fair value of acquired assets and liabilities through valuation techniques. Such valuations are subject to a number of assumptions including useful lives of assets, replacement costs and timing and amounts of certain future cash flows, which may be dependent of future commodity prices, currency rates, discount rates and other input.

Hydro's most recent significant acquisition was the purchase of VAW for a purchase price of EUR 1,911 million (NOK 14.9 billion) in 2002. A specification of the allocation of this purchase price to assets and liabilities acquired can be found in Note 2 in Notes to the Consolidated Financial Statements.

## **Goodwill**

Under SFAS 142, Goodwill and Other Intangible Assets, goodwill and certain intangible assets are reviewed at least annually for impairment.

The largest portion of goodwill was recorded in the North America sector of the Extrusion and Automotive sub-segment. Management annually assesses the fair value of the sector's goodwill in relation to the carrying value of the sector's net assets. Assumptions related to certain cash flow forecasts and the discount rate are made reflecting the sector's industry. Total goodwill evaluated for impairment during 2004 was approximately NOK 1,000 million. Goodwill is included in prepaid pension, investments, and other non-current assets.

## **Income Taxes**

Hydro calculates deferred income tax expense based on the difference between the tax assets' carrying value for financial reporting purposes and their respective tax basis that are considered temporary in nature. This computation requires management's interpretation of complex tax laws and regulations in many tax jurisdictions where Hydro operates. Valuation of deferred tax assets is dependent on management's assessment of future recoverability of the deferred benefit. Expected recoverability may result from expected taxable income in the near future, planned transactions or planned tax optimizing measures. Economic conditions may change and lead to a different conclusion regarding recoverability, and such change may affect the results for each reporting period.

## **Employee Retirement Plans**

Hydro's employee retirement plans consist primarily of defined benefit pension plans. Measurement of pension cost and obligations under the plans requires a number of assumptions and estimates to be made by management. These include future salary levels, discount rates, turnover rate, and rate of return on plan assets. The discount rate used for determining pension obligations and pension cost is based on the yield from a portfolio of long-term corporate bonds having one of the two highest ratings given by a recognized rating agency. Hydro provides defined benefit plans in several countries and in various economic environments that will affect the actual discount rate applied. Almost three-quarters of Hydro's projected benefit obligation relates to Norway. The discount rate applied for Norwegian plans as of 31 December 2004 is 5.25 percent. The expected rate of return on plan assets is, based on the current portfolio of plan assets, determined to be approximately one percentage point above the yield on a portfolio of long-term corporate bonds that receive one of the two highest ratings given by a recognized rating agency.

Changes in these assumptions can influence the funded status of the plan as well as the net periodic pension expense. The PBO is sensitive to changes in assumed discount rates and assumed compensation rates. Based on indicative sensitivities, a one percentage point reduction or increase in the discount rate will increase or decrease the PBO in the range of 15 to 20 percent. A one percentage point reduction or increase in compensation rates for all plan member categories will decrease or increase the PBO in the range of 15 to 20 percent. It should be noted that changes in the aforementioned parameters and changes in the PBO will affect net periodic pension cost in subsequent periods, both the service cost and interest cost components, in addition to amortization of unrecognized net gains or losses, if any.

#### **Change in Accounting Principles Consolidation of Variable Interest Entities**

Effective 1 January 2004, Hydro adopted FASB Interpretation 46 Consolidation of Variable Interest Entities (FIN 46R), which clarifies the application of Accounting Research Bulletin No. 51, Consolidated Financial Statements, relating to certain entities in which equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support (variable interest entities or VIEs). The Interpretation provides guidance for determining which party retains the controlling financial interest in VIEs when such interest is achieved through arrangements other than voting rights. Implementation of the new requirements depended on when a company became involved with such entities. Because Hydro did not become involved with any new Variable Interest Entities (VIEs) during the period 31 January to 31 December 2003 or have any interests in Special Purpose Entities (SPEs) as of 31 December 2003, implementation of the Interpretation was required as of 31 March 2004.

Hydro has identified one pre-existing arrangement that meets the requirements of FIN 46R to be classified as a VIE. Hydro has equity interest in Slovalco, an aluminium smelter in Slovakia. Hydro also has an agreement to supply Slovalco with alumina and a right and obligation to purchase approximately 60 percent of Slovalco's total aluminium production at market based prices. Hydro owns 20 percent of the shares of Slovalco representing 40 percent of the voting rights. In 2001, Hydro entered into a put and call option

arrangement with another shareholder that could increase Hydro's interest up to 65 percent. This arrangement, which expires in the period 2005 to 2006, is the primary reason requiring Hydro to consolidate Slovalco in accordance with the new VIE regulations.

Hydro has consolidated Slovalco in accordance with the new requirements effective from 1 January 2004. Related assets, liabilities and the 80 percent non-controlling interests have been measured based on their fair values at the time the option arrangement was entered into in 2001 and recorded based on such values carried forward to 1 January 2004. As of 1 January 2004, total assets, liabilities and non-controlling interests were NOK 2,182 million, NOK 725 million and NOK 1,165 million respectively. At the end of 2003, the difference between Hydro's interest in Slovalco consolidated based on the new requirements compared to the equity method was immaterial.

### Liquidity and Capital resources

Amounts in NOK million	2004	2003	2002
Cash flow provided by (used for):			
Operations	27,724	22,773	19,080
Investments	(23,962)	(7,054)	(35,492)
Financing	(13,579)	(8,092)	(5,926)
Increase (decrease) in cash and cash equivalents	(507)	9,326	(20,741)
Return on Shareholders' equity	14.4%	13.4%	11.6%
RoaCE	13.0%	8.4%	7.2%
Adjusted net debt/equity ratio <sup>1)</sup>	0.11	0.38	0.60

1) Adjusted net interest-bearing debt divided by shareholders' equity plus minority interest, adjusted for unfunded pension obligation (after tax) and present value of future obligations on operating leases.

### Cash flow

Hydro has historically financed its operations primarily through cash generated by operating activities. In 2004, net cash generated by the Company's operations of approximately NOK 27.7 billion was sufficient to fund the net cash used in investing activities of approximately NOK 24 billion including investments in bank term deposits of NOK 9.2 billion (see Investments Activities below). Cash provided by discontinued operations, consisting of proceeds from the sale of shares in Yara, following the demerger of the agri operations, and Yara's repayment of debt to Hydro, added another NOK 9.6 billion. Approximately NOK 9.3 billion was used to repay interest bearing debt and approximately NOK 4.5 billion was used for dividends and share repurchases, reducing the Company's cash balance by approximately NOK 0.5 billion.

### Cash from Operations

In 2004, net cash provided by operating activities amounted to NOK 27.7 billion in 2004, and increase of NOK 5 billion, or 22 percent compared to 2003.

Cash from operations improved as a result of increased production and strong market fundamentals as described above in this Financial Review. The improvement was reflected in an increase of NOK 1.6 billion in net income for the year.

Significant charges impacting income but not affecting operating cash for the year included the write-down of the German primary metal plant amounting to approximately NOK 2.3 billion. Deferred tax expense declined approximately NOK 900 million as a result of amended tax regulations improving net income. The decline in net working capital compared to 2003, provided approximately NOK 1.4 billion of the increase in cash provided by operations. The effects of changes in other non-cash incomes and charges such as gains and losses on asset disposals, unrealized gains and losses on foreign currencies, and other items were largely offsetting.

### **Investing Activities**

Cash payments for investing activities in 2004 were NOK 24 billion, an increase of NOK 16.9 billion compared to 2003. This increase was primarily due to a significant increase of spending on purchases of short-term investments reflecting a change in investment policy during 2004. Hydro's previous policy required that all cash should be deposited with a maximum maturity of 3 months. However, to take advantage of somewhat higher interest rates, as well as having the opportunity of matching maturities with specified and known large cash outflows (e.g. oil tax payments, dividend payments, etc.), the maximum maturity for the cash deposits has been increased to 12 months. At the end of 2004, NOK 9.2 billion of the Group's liquidity was deposited on bank term deposits with original maturities beyond 3 months. As a result, such amounts are classified as net cash used in investing activities and included with other liquid assets on the balance sheet. At the end of 2003, no bank deposits had an original maturity over 3 months. In addition, there was a significant reduction of proceeds from sales of other long-term investments, NOK 1.4 billion in 2004 compared to 6.4 billion in 2003.

See Capital Expenditures section below for an analysis of expenditure for property, plant and equipment and long-term investments.

### **Financing Activities**

In 2004, NOK 13.6 billion was used in financing activities, compared to NOK 8.1 billion in 2003. Principal repayments of NOK 9.3 billion in 2004, were NOK 4.1 billion higher than in 2003. Principal repayments included prepayments of long-term debt of NOK 6.7 billion following the agri demerger. In addition, repurchase of ordinary shares of NOK 1.7 billion and dividends of NOK 2.8 billion, together amounting to NOK 4.5 billion, were NOK 1.2 billion higher than share repurchases and dividends in 2003. In December 2004, an extraordinary General Meeting of shareholders approved a capital reduction by cancellation of 2,808,810 treasury shares acquired in 2004 as part of a share buyback program approved by the 2004 Annual General Meeting. The extraordinary General Meeting also authorized the redemption of 2,191,190 shares owned by the Norwegian State for an amount of NOK 981 million that was paid in February 2005.

### **Discontinued Operations**

As indicated above, the cash flow effect from the agri demerger amounted to NOK 9.6 billion. As part of the demerger, Yara had assumed a liability to pay to Hydro a net interest bearing debt which on completion of the demerger amounted to approximately NOK 7.1 billion. Yara's repayment of this debt resulted from the proceeds of debt financing arranged through financial institutions prior to the consummation of the demerger. In addition, Hydro sold its 20 percent share holding in Yara for NOK 2.6 billion as part of the demerger process.

### **Liquidity**

Cash and cash equivalents were NOK 14.4 billion at the end of 2004 compared to NOK 14.9 billion for 2003. However, following the change in investment policy mentioned above, NOK 9.2 billion of the group's liquidity generated in 2004 was deposited on bank



term deposits with maturities beyond 3 months at the end of 2004, and included with other liquid assets on the balance sheet. Including these deposits, Hydro's total cash, cash equivalents and other liquid assets amounted to NOK 25.3 billion at year end 2004 compared with NOK 16.4 billion at year end 2003.

Hydro believes that cash from continuing operations, together with the liquid holdings and available credit facilities will be more than sufficient to meet its planned capital expenditures, operational requirements, dividends and debt repayments in 2005. Hydro's capital expenditures are estimated to be approximately NOK 24 billion (including exploration activities) for 2005.

### **Short and long-term borrowings**

At year-end 2004, short-term bank loans and the current portion of long-term debt in Hydro amounted to NOK 4.4 billion, down from 6.5 billion year-end 2003.

Hydro's long-term interest bearing debt at the end of 2004 was NOK 19.5 billion, a reduction of NOK 8.9 billion from NOK 28.4 billion at the end of 2003. During 2004, a total of NOK 6.7 billion of long-term debt was prepaid and NOK 0.6 billion became current and was reclassified to short-term liabilities. The remaining NOK 1.6 billion of the decline in long-term debt was primarily attributable to a lower USD/NOK exchange rate at year-end 2004 compared to year-end 2003. Hydro repaid maturing loans of NOK 1.2 billion in 2004, and no new loans were issued during the year. As of 31 December 2004 the fair value of Hydro's long-term debt, including the current portion, was NOK 23.6 billion, and the carrying value was NOK 20.1 billion.

As a means of adjusting the debt portfolio following the agri demerger, Hydro prepaid during the year bank debt of SEK 944 million and EUR 51 million and repurchased outstanding bonds of USD 253 million, NOK 473 million, GBP 209 million and EUR 100 million, aggregating to a total extraordinary nominal value debt reduction of NOK 6.7 billion in 2004. Following this debt reduction, more than 80 percent of Hydro's long-term debt was denominated in US dollars at the end of 2004. The weighted average interest rate on all long-term debt was approximately 7.1 percent, and substantially all long-term debt carried fixed interest rates. The average maturity of the Company's outstanding long-term debt was approximately 14.7 years, with approximately 16 percent of the long-term debt falling due within the next five years and the remainder thereafter. (See Note 19 in Notes to the Consolidated Financial Statements for more comprehensive information on the composition of long-term debt).

Substantially all of Hydro's indebtedness is situated in the parent company, Norsk Hydro ASA. In general, the terms of each of the debt agreements and indentures governing the indebtedness contain cross-default provisions under which a default under any other loan, indebtedness or other obligation for borrowed money on the part of Hydro would trigger a default under that debt agreement or indenture. The cross-default provisions are generally limited to borrowing obligations of Norsk Hydro ASA or any of its Principal Subsidiaries (defined to mean a company or other entity (i) which is fully consolidated in the consolidated balance sheet of the Company or in which the Company owns more than 50 percent of the issued share capital, (ii) the gross assets of which represent more than 10 percent of the consolidated gross assets of the Company and its subsidiaries (taken as a whole) and (iii) which is incorporated in the Kingdom of Norway, and require that the indebtedness in default under another agreement or indenture be greater than USD 25 million).

Substantially all of Hydro's debt is unsecured. However, the agreements and indentures contain provisions restricting the pledging of assets in Norsk Hydro ASA to secure future borrowings without granting equivalent status to existing lenders. The debt agreements and indentures contain no financial ratio covenants and no provisions connected to Hydro's credit rating or value of underlying assets. None of the agreements give the lenders a right to put the loan and demand repayment prior to its scheduled maturity. However, certain agreements allow for Hydro's early redemption or repayment of the indebtedness at certain specified premiums, plus accrued and unpaid interest.



At 31 December 2004, Hydro's senior unsecured debt was rated A2 by Moody's and A with negative outlook from Standard & Poors. In determining the rating, the rating agencies have not factored in the Norwegian State's 43.8 percent equity interest in the Company. The factors given significant weight in determining Hydro's current credit rating include: the diversification of the Company's portfolio; the cash flow generated from the oil and gas activities; the strong position in aluminium products; and a sound financial profile. The ratings also, however, reflect the commodity characteristics of most of the Company's products, and consequently, the exposure to market price fluctuations and economic cyclicality. None of the rating agencies changed Hydro's rating as a consequence of the agri demerger.

Net interest bearing debt (short- and long-term interest bearing debt, including the current portion of long-term debt, less cash and cash equivalents and other liquid assets) at the end of 2004 was NOK 1.5 billion negative (i.e. a net cash position), compared to NOK 18.5 billion in net interest bearing debt at the end of 2003. Including net unfunded pension obligations, after tax, and the present value of operating lease obligations, the adjusted net interest-bearing debt divided by adjusted equity was 0.11 by the end of 2004, which was well within the stated target of 0.5. See Use of Non-GAAP Financial Measures later in this report for further discussion on adjusted net interest bearing debt and adjusted equity.

As of 31 December 2004, Hydro had unused short-term credit facilities totaling approximately NOK 2.6 billion. The Company also had agreements with banks for committed long-term stand-by credit facilities totaling approximately USD 2 billion (NOK 12.2 billion). Hydro has also entered into a long-term loan facility of EUR 300 million (NOK 2.5 billion) with the European Investment Bank (EIB) in connection with the Ormen Lange & Langede developments. There were no borrowings under any of these agreements as of 31 December 2004. Hydro also has in place a shelf registration in the US under which it may raise up to an aggregate of USD 1.5 billion in debt securities. There are no substantial restrictions on the use of borrowed funds under Hydro's material credit and debt facilities except for the EIB facility mentioned above where any drawings are subject to ownership and investments in the Ormen Lange and Langede projects.

### **Employee Retirement Plans**

Hydro's employee retirement plans consist primarily of defined benefit pension plans. As of 31 December 2004, the projected benefit obligation (PBO) associated with Hydro's defined benefit plans was NOK 25.4 billion. The fair value of pension plan assets was NOK 16.5 billion, resulting in a net unfunded obligation relating to the plans of NOK 8.9 billion. In addition, termination benefit obligations and other pension obligations amounted to NOK 1.2 billion, resulting in a total net unfunded pension obligation of NOK 10.1 billion. Hydro's net pension cost for 2004 amounted to NOK 2.1 billion. Cash outflows from operating activities in 2004 regarding pensions amounted to NOK 1.6 billion. The discount rate used for determining pension obligations and pension cost is based on the yield from a portfolio of long-term corporate bonds having one of the two highest ratings given by a recognized rating agency. Hydro provides defined benefit plans in several countries and in various economic environments that will affect the actual discount rate applied. Almost three-quarters of Hydro's project-

ed benefit obligation relates to Norway. The discount rate applied for Norwegian plans as of 31 December 2004 was 5.25 percent. Measurement of pension cost and obligations under the plans requires a number of assumptions and estimates to be made by management. These include future salary levels, discount rates, turnover rate, years of future service, and rate of return on plan assets.

### Contractual Obligations, Commitments and Off Balance Sheet Arrangements

A summary of Hydro's total contractual obligations and commercial commitments to make future payments is presented below. For further details see Notes 7, 19, 22 and 23 in the Notes to the Consolidated Financial Statements.

#### Contractual Obligations

Amounts in NOK million	Total	Payments due by Period			
		Less than 1 year	1-3 years	3-5 years	There- after
Long-term debt	19,952	546	793	1,870	16,743
Interest related to long-term debt	19,896	1,382	2,652	2,548	13,314
Finance lease obligations	103	22	34	6	41
Operating lease obligations	4,736	1,171	1,561	1,011	993
Unconditional purchase obligations	47,523	5,271	7,962	6,159	28,131
Contractual commitments for:					
PP&E	20,499	8,254	7,483	1,080	3,682
Other future investments	342	325	17		
Benefit payments unfunded defined benefit plans	1,582	275	613	694	See <sup>1)</sup>
Termination benefits	720	220	296	172	32
Other long-term liabilities	1,489	344	726	304	115
Total contractual cash obligations		17,810	22,137	13,844	63,051

1) Annual payments are expected to continue into the foreseeable future in the range of NOK 400 to 500 million.

The Company also has other obligations connected with pension plans that are not contractually fixed to timing and amount.

In addition, Hydro is contingently liable for guarantees made directly by the parent company or made on behalf of subsidiaries in the normal course of business (see note 22 to the Consolidated Financial Statements). Hydro grants guarantees at market based fees to enable subsidiary companies to obtain credit or engage in contracts of a greater magnitude than would otherwise be possible without such guarantees. Hydro makes such guarantees to facilitate transactions, which are considered necessary to reach its business objectives.

The following describes guarantees outstanding as of 31 December 2004:

Hydro has guaranteed NOK 86 million of debt issued on behalf of non-consolidated investees and is contingently liable for NOK 92 million of discounted bills.

Hydro is also contingently liable to various tax authorities for NOK 1,354 million relating to the non-taxable treatment of gains on internal sales of non-current assets and subsidiaries. Gains on such sales could become taxable if

certain assets were sold outside the Group. Hydro controls whether such assets are offered for sale outside of the Group.

Guarantees in connection with the sale or divestment of companies amounted to NOK 8,200 million. The amount reflects the maximum contractual amount that Hydro could be liable for in the event of certain defaults or the realization of specific uncertainties. Hydro has, in addition to this amount, certain guarantees relating to sales or divestment of companies that are unspecified in amount. Hydro believes that the likelihood of any material liability arising from guarantees relating to sales of companies is remote. Historically, we have not made any significant indemnification payments under such guarantees and no amount has been accrued in the accompanying Consolidated Financial Statements.

In addition to guarantees relating to the sale or divestment of companies, Hydro has guaranteed certain recoverable reserves of crude oil in the Veslefrikk field as part of an asset exchange between Hydro and Petro Canada. In 1996, Hydro entered into a strategic alliance with Petro-Canada that entailed a swap of certain Hydro interests in licenses on the NCS in exchange for the right to participate in oil production from proven fields and explore for further oil discoveries on the Grand Bank.

Under the guarantee, Hydro is obligated to deliver indemnity reserves to Petro Canada in the event that recoverable reserves are evaluated to be lower than a specified amount. An evaluation of the recoverable reserves was completed in 2002 in accordance with the agreement which resulted in compensation by Hydro to Petro Canada. The agreement with Petro Canada was renegotiated in 2002 with the possibility of making a new evaluation of the reserves in 2008, 2014 and the end of the field's productive lifetime. The agreement includes the possibility of recovery by Hydro of earlier compensation if new evaluations indicate improvements in the estimated recoverability. The guarantee is not applicable in cases of force majeure, the failure of the field operator to comply with appropriate field practices and other instances. As of 31 December 2004, the remaining volume covered under the guarantee was 1.02 million Sm<sup>3</sup> of crude oil, equivalent to approximately NOK 1,569 million calculated at current market prices.

Outstanding commercial guarantees made on behalf of subsidiaries amounted to NOK 9,390 million. Such guarantees include advance payment guarantees, bid bonds, performance bonds, stand-by letters of credit and payment guarantees. Certain of these guarantees are obtained from external banks and covered by Hydro by a counter indemnity to such banks. Hydro's contingent liability relating to commercial guarantees is linked to the perform-

ance of its subsidiaries under various contracts. However, a certain portion of the guarantees are payable on demand. Therefore, there is a certain amount of litigation risk in the event of unfair calls relating to such guarantees.

Because the payment of commercial guarantees is related to events directly or indirectly controlled by Hydro, the Company considers its risk related to such instruments to be limited. As a result, these guarantees do not pose material risk to the Company's future liquidity, capital resources and results of operations. Since Hydro is, in effect, guaranteeing its own performance relating to commercial guarantees, they are not considered off balance sheet arrangements as defined by SEC regulations.

None of the contingent amounts described above are recorded on the balance sheet as of 31 December 2004.

### Minority interest and Shareholders' equity

Minority interest was NOK 1,571 million as of 31 December 2004 compared to NOK 660 million for the prior year. The increase resulted from the consolidation of Solvalco amounting to approximately NOK 1,026 million offset by approximately NOK 96 million relating to the demerged Agri operations. Shareholders' equity was NOK 85,890 million at the end of 2004, a decrease of NOK 2,190 million. In addition to net income, the main items impacting shareholders' equity included dividends, purchases of treasury stock, redemption of shares from the Norwegian state, foreign currency translation losses and a reduction related to the demerged Agri operations. See note 3 to the Consolidated Financial Statements for a detailed reconciliation of shareholders' equity.

### Investments

Investments in 2004 amounted to NOK 19.5 billion. The amount contains certain items that have no cash effect in the near term. The most significant of these include NOK 1,275 million relating to the consolidation of the aluminium producer Slovalco and NOK 922 million relating to future assets retirement obligations for oil and gas installations. Excluding these items, investments were approximately NOK 17 billion for 2004. Just over half of the investment amount related to oil and gas operations.

### Investments <sup>1)</sup>

Amounts in NOK million	2004 <sup>2)</sup>	%	2003 <sup>3)</sup>	%	2002	%
Exploration and Production	<b>10,607</b>	<b>54</b>	10,270	58	14,073	32
Energy and Oil Marketing	<b>1,460</b>	<b>8</b>	989	6	622	1
Eliminations						
Hydro Oil & Energy	<b>12,067</b>	<b>62</b>	11,259	64	14,696	33
Metals	<b>4,199</b>	<b>22</b>	3,572	20	12,728	29
Rolled Products	<b>553</b>	<b>3</b>	466	3	7,437	17
Extrusion and Automotive	<b>1,442</b>	<b>7</b>	1,543	9	5,153	12
Other and eliminations						
Hydro Aluminium	<b>6,194</b>	<b>32</b>	5,581	32	25,318	57
Other Activities	<b>1,058</b>	<b>5</b>	791	4	3,008	7
Corporate and eliminations	<b>145</b>	<b>1</b>	81	0	1,144	3

Total	<b>19,464</b>	<b>100</b>	17,712	100	44,166	100
-------	---------------	------------	--------	-----	--------	-----

- 
- 1) Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in non-consolidated investees.
  - 2) Includes effect of change in accounting principle (FIN 46R). Non-cash increase in investment of NOK 1,275 million.
  - 3) Includes non-cash increase in investment from effect of change in accounting principle (FAS143), of NOK 1,918 million.

The largest investments for Exploration and Production related to new and existing fields; of which Snøhvit (Hydro's share in Snøhvit was sold to Statoil and the sale was settled in December 2004), Kristin, Ormen Lange and Dalia were the most important. For Energy and Oil Marketing, the most important investment in 2004 was related to the Langedal project. The major investments in Aluminium Metals in 2004 included the expansion activities in Sunndal, Norway, where the third and final phase was completed, and in Alouette in Canada. Investments in Rolled Products related primarily to the construction of a Lithographic line in Germany. Investments in Extrusion and Automotive continued for the construction of a new casting line in Dillingen in Germany. Investments for Other activities relates primarily to the construction of a new chlorine plant at Rafnes in Norway which was started in 2003.

Investments in Exploration and Production in 2003 were NOK 10,270 million. The largest investments for Exploration and Production related to new and existing fields, of which Grane, Kristin and Snøhvit were the most important. The major investments in Aluminium Metals in 2003 included the expansion activities pertaining to the smelters in Sunndal, Norway, where phase II was completed and phase III is under construction, and in Alouette in Canada. An expansion of the alumina refinery, Alunorte, in Brazil was also completed during the year. The investments in Extrusion and Automotive related to the construction of a new casting line in Dillingen in Germany.

Investments in Exploration and Production in 2002 were NOK 14,073 million. The purchase of assets from SDFI and investments related to new and existing fields, mainly the development of the Grane field, were the most important investment projects for Exploration and Production in 2002. The largest investments for Hydro Aluminium included the VAW acquisition, the acquisition of Technal and the expansion activities relating to the aluminium smelter in Sunndal, Norway and the alumina refinery Alunorte, in Brazil.

#### **Material commitments for capital expenditures**

Contractual commitments for investments in property, plant and equipment relating to land-based activities and oil and gas field activities and transport systems at the end of 2004 were NOK 986 million and NOK 19,513 million, respectively. The total amount of NOK 20,499 million is included in the contractual obligations table above in Contractual commitments for PP&E. Additional authorized future investments representing projects formally approved by the Board of Directors or management were NOK 1,306 million relating

to land-based activities and NOK 326 million relating to oil and gas field activities and transport systems.

Hydro's long-term committed stand-by facilities of approximately USD 2 billion, the EUR 300 million loan facility with EIB in connection with the Ormen Lange/Langeled developments, as well as cash holdings and expected cash flow from operations, are expected to provide sufficient reserves to fund these expenditures. In addition, the company's A/A2 rating (investment grade) ensures adequate access to the global capital markets for raising additional liquidity, if needed.

## Research and development

Hydro engages in research and development (R&D) in order to maintain its competitive position and to develop new products and processes. Hydro spent approximately NOK 760 million, NOK 722 million and NOK 639 million during 2004, 2003, and 2002 respectively, on such activities. As part of its R&D activities, Hydro continues to focus on ecological issues including life cycle analyses and energy efficiency studies relating to products produced by the Company.

Hydro maintains major research centers in Porsgrunn and Bergen in Norway, with a combined staff of 320 as well as smaller research groups in several other locations. The Bergen facility, with a staff of 158 people, is dedicated to the Group's oil and gas activities. Research centers for Hydro Aluminium are located in Karmøy, Årdal, Raufoss Sunndal and Porsgrunn in Norway; in Bonn and Ulm in Germany; in Tønder, Denmark and in Michigan, US.

The following highlights major contributors to total R&D costs incurred in 2004.

Hydro Oil and Energy incurred R&D costs in 2004 totaling approximately NOK 223 million compared to NOK 194 million in the previous year. R&D expenditures in 2004 were primarily dedicated to

increased discovery rate through improved exploration technology,

increased oil recovery in order to prolong the production from mature fields,

economic viable development of smaller fields and,

further improvement of health, safety and environmental technology to insure personnel and technical safety as well as protecting the external environment.

Power generation with CO<sub>2</sub> capture and storage, hydrogen as future energy carrier and, renewable energy, were also part of Hydro Oil and Energy's R&D programs in 2004, aimed at achieving a cleaner and more efficient production.

Hydro Aluminium's R&D is oriented toward the core activities of its business. Hydro Aluminium incurred a total of NOK 494 million in 2004 in R&D cost compared with NOK 459 million in R&D costs in 2003. Metals, Extrusion and Automotive, and Rolled Products incurred NOK 213 million (NOK 168 million in 2003), NOK 220 million (NOK 240 million) and NOK 61 million (NOK 51 million), respectively. R&D activities serve to continuously improve products and manufacturing processes, as well as to develop innovative technologies and new applications. The work focuses also on securing the continued progress of aluminium as a competitive and environmentally sound material.

R&D expenditures were mainly dedicated to developing technologies for production of primary metal, extrusion, rolling and casting. In addition, the work covers development of new aluminium and magnesium alloys, and development of semi-fabricated and finished products. Hydro Aluminium's R&D organization consists of an international network covering Europe, North America and Asia.

**Risk management**

Risk management in Hydro is based on the principle that risk evaluation is an integral part of all business activities. The main responsibility for risk management is consequently placed within the Company's business areas and its corporate finance function, all having policies and procedures in place for monitoring risks, assessing appropriate risk levels, and mitigating risk. Overall and aggregated risk positions are also assessed at the Company level, most notably in the following categories:

Business Strategy and Management including events that may impact the Company's reputation and brand

Financial Risks including events that may have an impact on the adjusted net debt/equity ratio, liquidity and credit rating

Commercial Risks mainly comprising fluctuations in commodity prices, currencies and interest rates

Operational and Human Resource Risks comprising technical risk, continuity risk and risks related to non-performance of employees

Health, Security, Safety, Environmental issues and potential impact on communities

Information Systems comprising elements such as poor data quality and consistency, loss of systems and data, inadequate administration of access to systems and malicious attacks.

Legal and Regulatory comprising elements such as business exposure to new regulation including tax, illegal acts, regulatory non-compliance and unauthorized actions.

The following discussion provides additional detail regarding Hydro's exposure to financial and commercial risks with a focus on commodity prices, foreign exchange rates and interest rates.

Hydro's operating results are primarily affected by price developments of Hydro's main products oil and aluminium, in addition to foreign currency fluctuation of the most significant currency, the US dollar, against the Norwegian krone. An indication of the sensitivity regarding prices and foreign currency fluctuation for 2005 is provided below. The table illustrates the sensitivity of earnings, before and after tax, to changes in these factors and is provided to supplement the sensitivity analysis required by the SEC, included later in this section.

**Indicative price and currency sensitivities 2005 <sup>1)</sup>**

Amounts in NOK million	Pre tax	After tax	Change
Oil price per barrel	1,150	310	1 USD
Aluminium price per tonne	800	560	100 USD
US dollar Hydro Oil & Energy	7,250	1,960	1 NOK
US dollar Hydro Aluminium	2,500	1,750	1 NOK
US dollar before financial items	9,750	3,710	1 NOK
US dollar financial items <sup>2)</sup>	(3,100)	(1,705)	1 NOK
US dollar Net income	6,650	2,005	1 NOK

- 
- 1) Based on average 2004 prices and expected business volumes for 2005: Oil 38 US dollar/bbl, Aluminium 1,700 US dollar/tonne and Norwegian krone/US dollar 6.5.
  - 2) US dollar sensitivity calculated based on long-term debt denominated in US dollar and net US dollar amounts sold forward on long-term forward currency contracts. Cash positions denominated in US dollar, short-term debt denominated in US dollar and net US dollar amounts sold forward on short-term forward currency contracts are excluded.



In addition to the above sensitivities, the revaluation of derivative instruments and contracts classified as derivatives may influence reported earnings, as described in more detail in the following paragraphs.

### **Financial and Commercial Risk Management**

The overall objective of financial and commercial risk management is to safeguard Hydro's ability to continuously meet its cash commitments and maintain a strong financial position. This includes identifying and monitoring the Company's main risk exposures, quantifying the potential impact on key financial ratios and proposing corrective actions when deemed appropriate. Shortfalls in operational cash flow due to unfavorable developments in prices of main products, raw materials and/or exchange rates could substantially impact Hydro's financial position. Cash commitments are risk evaluated against cash flow from operations. Probabilities of not meeting set financial targets, such as maintaining the adjusted net debt/equity ratio target of 0.5, are monitored. Simulations of cash flow scenarios, using a 5-year rolling horizon, are carried out for this purpose. The outcome of this analysis is reported to management on a quarterly basis.

Mitigating financial and commercial risk exposures through the use of derivative instruments is done only to some extent. For this purpose, Hydro utilizes financial derivatives as well as commodity derivatives. The most common use of financial and exchange traded commodity derivatives relates to hedging of currency, and aluminium as part of the Company's day-to-day aluminium operations.

For accounting purposes, unless otherwise indicated below, derivative financial and commodity instruments are recognized at fair value with changes in the fair value impacting earnings. Hedge accounting, as allowed by Statement of Financial Accounting Standards (SFAS) No. 133 *Accounting for Derivative Instruments and Hedging Activities*, is used to a limited extent, and only when specific hedge criteria are met. This can result in volatility in earnings since the associated gain or loss on the related physical transactions may be reported in earnings in different periods.

### **Commodity price risk**

A substantial portion of Hydro's revenues is derived from the sale of commodities such as crude oil and aluminium. Hydro also produces, purchases and sells natural gas, electricity and petrochemical products. The prices of these commodities can be volatile, creating fluctuations in Hydro's earnings. Natural hedging positions are established to the extent possible and economically viable. However derivatives are used in special situations to mitigate price movements and to participate in limited speculative trading within strict guidelines defined by management.

### **Oil**

Hydro produces and sells crude oil and gas liquids. Hydro utilizes futures and swaps to mitigate unwanted price exposure for a limited portion of its crude oil production. From time to time financial options are used for the same purpose. In the first half of 2003 Hydro had in place a hedging program using average rate put options (Asian options) with the right to sell 10 million barrels of oil for an average strike price of US dollar 17 per barrel. At the end of 2004 Hydro had no significant hedging in place for the purpose of protecting against the risk of low oil prices.

### **Natural gas**

Hydro is a producer, buyer, seller, and to a limited extent consumer of natural gas. The majority of Hydro's equity gas production is sold to European counterparties based on long-term gas supply contracts. Contract prices are mainly indexed to oil product prices. Hydro utilizes on a limited basis instruments such as forwards and swaps to mitigate unwanted price exposures on the portion of the natural gas portfolio not sold on long-term contracts. Hydro is also participating in trading activities based on partly own gas production and partly externally sourced gas volumes. In

addition, Hydro engages in limited speculative trading.

An increasing number of the Company's sales and purchase contracts related to natural gas are being classified as derivatives or deemed to contain embedded derivatives according to SFAS 133. These contracts are marked to their market value with changes to market value recognized in operating income. Gas contracts can be indexed to oil products or quoted gas prices at recognized gas delivering points such as National Balancing Point (NBP) in Great Britain, Zeebrugge Hub (ZB) in Belgium or the Dutch Title Transfer Facility (TTF). The discussion on Hydro's Critical Accounting Policies included above provides more detail on the accounting treatment of these contracts and how they are valued. These derivative contracts are not fully hedged with other natural gas derivatives. As such Hydro expects to have certain open derivative positions at any time, which can result in fluctuations in earnings. The magnitude of the unrealized gains and losses on these contracts will be influenced by geographic price differentials and spreads on the above mentioned gas contract indices.

### **Electricity**

Hydro is a producer and consumer of electricity. Hydro's consumption of electricity exceeds its production both in Norway and in Continental Europe. The deficit is principally covered through long-term purchase contracts with other producers and suppliers to secure electricity in the market for Hydro's own consumption and delivery commitments. In order to manage and hedge the risks of unfavorable fluctuations in electricity prices and production volume, Hydro utilizes both physical contracts and financial derivative instruments such as futures, forwards and options. These are traded either bilaterally or over electricity exchanges such as the Nordic power exchange ( Nord Pool ). Hydro is also offering power portfolio management services to third party clients and participates in limited speculative trading.

### **Aluminium**

Hydro produces primary aluminium and fabricated aluminium products. The Company's sourcing and trading activities procure raw materials and primary aluminium for use in Hydro's smelters or in downstream operations. These materials are also sold directly to third parties. In addition, the trading activities contribute to optimize capacity utilization and to reduce logistical costs, as well as strengthening market positions by providing customers with flexibility in pricing and sourcing. Hydro has considerable activities relating to remelting and long-term commercial agreements to secure sourcing of casthouse products. All these activities are considered when evaluating the risk profile of Hydro's aluminium activities.

Hydro enters into future contracts with the LME with the following purposes. The first is to achieve an average aluminium price on smelter production. Secondly, because the Company's midstream and downstream business, and the sale of third party products, are margin businesses, Hydro hedges metal prices when entering into customer and supplier contracts with corresponding future contracts at fixed prices (back-to-back hedging). The third is to hedge raw material contracts. The majority of these contracts mature within one year. Hydro manages these hedging activities on a port-

folio basis, taking LME positions based upon net exposures. These contracts are intended as an economic hedge of sales and purchases of aluminium or purchases of raw materials. Because the related sales or purchases transactions with customers or vendors have not been completed, i.e. normally delivery has not taken place, Hydro is not able to recognize an unrealized offsetting earnings effects which these transactions are likely to have against the unrealized earnings effects on the LME positions. Aluminium price volatility can consequently result in significant fluctuations in earnings since only the LME positions are marked to their market value with changes to market value recognized in operating income.

The expansion project at the Sunndal metal plant increased Hydro's exposure to commodity prices and foreign currency exchange rates. Hydro has entered into short positions using LME future contracts and US dollar forward contracts to secure an average aluminium price of approximately NOK 14,000 per tonne of a portion of the forecasted sales of primary metal production per year until the end of 2007. This hedging strategy meets certain hedging criteria in accordance with SFAS 133, and has therefore been designated as a cash flow hedge.

### **Foreign currency exchange rate risk**

Prices of many of Hydro's most important products, mainly crude oil, aluminium and natural gas are either denominated in US dollar or are influenced by movements in the value of other currencies against the US dollar.

The cost of raw materials, including natural gas, Natural gas liquids (NGLs) and alumina, are affected by the US dollar price of crude oil or the US dollar price of aluminium, and variations in the US dollar exchange rates against local currencies. Hydro's primary foreign currency risk is therefore linked to fluctuations in the value of the US dollar. Hydro also incurs costs related to production, distribution and marketing of products in a number of different currencies, mainly Euro, Norwegian krone, US dollar, Canadian dollar, Australian dollar, British Pounds and Swedish krone. Consequently, the effects of changes in currency rates on the translation of local currencies into Norwegian krone for subsidiaries outside of Norway can influence comparative results of operations.

Normally, Hydro's operating income will increase when the US dollar appreciates against European currencies and decline when the value of the US dollar falls. To reduce the long-term effects of fluctuations in the US dollar exchange rates, Hydro has issued most of its debt in US dollars (as of 31 December 2004, approximately 80 percent of Hydro's long-term debt was denominated in US dollars). When the US dollar weakens, the decline in operating income is offset by unrealized currency gains and lower interest expense relating to the US dollar denominated debt. Conversely, a stronger US dollar improves operating income but also results in unrealized currency losses and higher interest expense.

Hydro also employs foreign currency swaps and forward currency contracts to modify the currency exposures for Hydro's long-term debt portfolio. Forward currency contracts are entered into to safeguard cash flows for forecasted future transactions or to cover short-term liquidity needs in one currency through excess liquidity available in another currency.

As of 1 January 2005 Hydro no longer designates portions of its long-term debt and certain forward currency contracts as hedges of net investments in foreign subsidiary companies. Changes to the Company's long-term debt portfolio and to the Company's structure during the recent years has rendered these accounting hedges less material to earnings and Shareholders' equity.

### **Interest rate risk**

Hydro is exposed to changes in interest rates primarily as a result of borrowing and investing activities used to maintain liquidity and fund its business operations in different currencies. Hydro maintains a high ratio of long-term,

fixed-rate debt, as a proportion of its total interest-bearing debt, with an even debt repayment schedule. Hydro uses foreign exchange and interest rate swaps from time to time and other derivatives to optimize currency and interest rate exposure.

### **Credit risk**

Setting counterparty risk limits, requiring insurance, and establishing procedures for monitoring exposures and settlement of accounts limits Hydro's credit risk. The Company's overall credit risk level is also reduced through a diversified customer base representing various industries and geographic areas. Follow-up of timely payments of accounts receivables is given high priority in the Company.

Credit risk arising from the inability of a counterparty to meet the terms of derivative financial instrument contracts is generally limited to amounts by which the counterparty's obligations exceed the obligations of Hydro. Pre-approval of exposure limits is required for financial institutions relating to current accounts, deposits and other obligations. Credit risk related to derivative commodity instruments is substantially limited since most instruments are settled through commodity exchanges. Therefore, counter party risk related to use of derivative instruments and financial operations is regarded as limited.

### **Sensitivity analysis**

In accordance with applicable requirements of the US Securities and Exchange Commission (SEC), Hydro has chosen to provide information about market risk and potential exposure to hypothetical loss from its use of derivative financial instruments and other financial instruments and derivative commodity instruments through sensitivity analysis disclosures. The sensitivity analysis depicted in the tables below reflects the hypothetical loss in fair values assuming a 10 percent change in rates or prices and no changes in the portfolio of instruments as of 31 December 2004 and 31 December 2003, respectively.

The overall use of derivatives has remained stable from 2003 to 2004. Certain natural gas contracts that were not classified as derivatives at end of 2003 have over the course of the year been classified as derivatives or deemed to contain embedded derivatives. This accounts for the increased sensitivity to changes in commodity prices and foreign currency exchange rates for derivative commodity instruments. The fair value of other financial instruments has increased compared to 2003, as a consequence of repayment of debt during 2004 and higher cash positions at the end of 2004. Consequently the sensitivity related to changes in interest rates and foreign currency exchange rates has been reduced for other financial instruments.

Hydro's management emphasizes that the sensitivity analysis contains material limitations. This is due to the arbitrary nature of assumptions involved as well as the inability of such a simple analysis to model reality and continuous changes to Hydro's portfolio. The most significant limitations on the figures provided are as follows:

The tables only include the effects of the derivative instruments discussed above and of certain financial instruments (see Footnote 3). The analysis does not include any related physical positions, contracts, and anticipated transactions that many of the derivative instruments are meant to secure. A rate or price change of 10 percent will often result in a corresponding effect to the fair value of the physical or underlying position such that the resulting gains and losses would offset.

As allowed by the SEC regulations, Hydro has excluded accounts payable and accounts receivable from the presentation, which may have had a significant effect on the foreign exchange risk figures provided.

The computations, which provide the most negative effect to Hydro of either a 10 percent increase or decrease in each rate or price, do not take into account correlations, which would be expected to occur between the risk exposure categories. For example, the effect that a change in a foreign exchange rate may have on a commodity price is not reflected in the tables.

It is not likely that all rates or prices would simultaneously move in directions that would have negative effects on Hydro's portfolio of instruments.

The above discussion about Hydro's risk management policies and the estimated amounts generated from the sensitivity analyses are forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those projected due to actual developments in the global markets. The methods used by Hydro to analyze risks discussed above should not be considered projections of future events, gains or losses.

**As of 31 December 2004** Hypothetical loss from +/- 10% change in:

Amounts in NOK million (unaudited)	Fair value as of 31 December 2004 <sup>1)</sup>	Interest rates	Foreign currency exchange rates	Commodity prices	Volatility	Other
Derivative financial instruments <sup>2)</sup>	2,115	8	827			
Other financial instruments <sup>3)</sup>	1,825	1,136	1,442			182
Derivative commodity instruments	(130)		325	695	(29)	

**As of 31 December 2003** Hypothetical loss from +/- 10% change in:

Amounts in NOK million (unaudited)	Fair value as of 31 December 2003 <sup>1)</sup>	Interest rates	Foreign currency exchange rates	Commodity prices	Volatility	Other
Derivative financial instruments <sup>2)</sup>	2,410	30	823			
Other financial instruments <sup>3)</sup>	(19,880)	1,870	2,261			57
Derivative commodity instruments	719	3	79	264		

---

1)

The change in fair value due to price changes is calculated based on upon pricing formulas for certain derivatives, the Black-Scholes model for options and the net present value of cash flows for certain financial instruments or derivatives. Discount rates vary as appropriate for the individual instruments.

- 2) Include mainly forward currency contracts and currency swaps.
- 3) Include cash and cash equivalents, investments in marketable securities, bank loans and other interest-bearing short-term debt and long-term debt. A substantial portion of the hypothetical loss in fair value for changes in interest rates relates to Hydro's long-term fixed rate debt. As Hydro expects to hold this debt until maturity, changes in the fair value of debt would only impact earnings over time as interest payments fall due.

## Use Of Non-GAAP Financial Measures

Non-GAAP financial measures are defined in the SEC regulations as financial measures that either exclude or include amounts that are not excluded from or included in the most directly comparable measure calculated and presented in accordance with GAAP.

### **Adjusted net interest-bearing debt, Adjusted equity and Adjusted net debt/equity ratio.**

Hydro refers to Adjusted net interest-bearing debt and Adjusted net debt/equity ratio in its discussion of its financial condition.

The Adjusted net debt/equity ratio is comprised of Adjusted net interest-bearing debt divided by Adjusted equity.

Adjusted net interest-bearing debt is defined as net interest-bearing debt, plus net unfunded pension obligations, after tax, and the present value of operating lease obligations.

Net interest-bearing debt is comprised of interest bearing debt less cash and cash equivalents and Other liquid assets. Hydro's interest bearing debt consists primarily of long-term debenture bonds which are not readily repayable. Cash and cash equivalents and Other liquid assets are therefore accumulated in periods with significant cash in-flow. Investments, including substantial acquisitions, have, to a large extent been financed through drawing on accumulated cash positions. Hydro uses net debt to calculate the Adjusted net debt/equity ratio in order to reflect the considerable variances in ability to assume additional debt from variance cash holdings over time.

Net interest bearing debt is adjusted for the estimated effects of changes to the fair value of net pension liabilities disclosed but not recognized. Hydro also adjusts Net interest bearing debt for liabilities relating to operating lease agreements. Both of the above described obligations, although not recognized as liabilities under generally accepted accounting principles, are considered debt-like in nature and therefore affect Hydro's ability to acquire additional debt.

Adjusted equity consists of equity plus minority interests, less unrecorded pension liabilities which are not reflected in retained earnings and therefore excluded from equity under GAAP. The adjustment is net of expected income tax benefit. No adjustment to Equity is made for operating lease agreements because the value of the right to use leased assets is considered to be similar to the payment obligation.

The adjustments are considered important to measure Hydro's financial position, since market conditions may result in significant differences between pension liabilities recognized under generally accepted accounting principles and the fair value of these liabilities, and because the unrecognized pension liabilities and leases represent commitments effecting Hydro's financial capacity going forward. The Adjusted debt/equity ratio is calculated by Hydro using similar methodology as the major credit rating agencies, and the company believes it helps the company and investors to evaluate potential changes in credit rating.

Management believes that Adjusted net interest-bearing debt is a useful tool for investors and other users of the Company's financial statements in assessing Hydro's financial performance, including its liquidity and ability to meet obligations with available cash balances.

Management makes regular use of among others, the Adjusted net debt/equity ratio in its assessment of Hydro's financial stability and ability to incur new debt. Management believes that this ratio provides useful information to readers of Hydro's financial statements and helps them to assess the effect of pension liabilities and operating lease commitments that are otherwise not apparent when analyzing the Company's financial statements prepared in accordance with GAAP. However, this measure does not recognize the fact that cash may not be available for debt

repayments, but may be required for operational needs including tax payments of periodic results, contractual obligations or necessary investments.

Adjusted net interest-bearing debt, Adjusted equity and Adjusted net debt/equity ratio are presented in the table below.

Management believes that the most directly comparable GAAP ratio is the Debt/equity ratio. However, this ratio measures gross interest bearing debt relative to equity, i.e. it does not measure changes in cash position, and is therefore not directly comparable with the non-GAAP measure Adjusted net debt/equity ratio.

Hydro management's use of the described non-GAAP measures should not be construed as an alternative to Debt/equity ratio, gross debt and statements of cash flows in accordance with generally accepted accounting principles when evaluating Hydro's financial condition. Management carefully reviews the appropriateness of adjustments to the GAAP figures, and also makes regular use of measures calculated according to generally accepted accounting principles in addition to Adjusted net interest-bearing debt and Adjusted net debt/equity ratio when measuring financial condition.

### **Return on average Capital Employed (RoACE)**

In this Report, Hydro refers to certain non-GAAP financial measures, which are an integral part of Hydro's steering model. These non-GAAP financial measures are:

Return on average Capital Employed (RoACE)

Earnings after tax

Capital Employed

Hydro's management makes regular use of these indicators to measure performance for the group as a whole and within its operating segments, both in absolute terms and comparatively from period to period. Management views these measures as providing additional understanding, - for management and for investors -, of:

The rate of return on investments over time, in each of its capital intensive businesses

The operating results of its business segments

Cash flow generation of its business segments

Because Hydro is subject to significantly different tax regimes in its operating segments, e.g. Norwegian surtax on petroleum and power production, management believes financial performance must also be measured on an after tax basis, in order to achieve comparability between Hydro's operating segments.

RoACE is defined as Earnings after tax divided by average Capital Employed. Earnings after tax is defined as Operating income plus Equity in net income of non-consolidated investees plus Other income, net less Adjusted income tax expense. Because RoACE represents the return to the capital providers before dividend and interest payments, adjusted income tax expense included in Earnings after tax does not include the tax effect of items reported as Financial income and expense. Capital Employed is defined as Shareholders Equity plus Minority interest plus long-term and short-term interest-bearing debt less Cash and cash equivalents and Other liquid assets. Capital Employed can be derived by deducting Cash and cash equivalents, Other liquid assets and Short-term and long-term interest



free liabilities (including deferred tax liabilities) from Total assets . The two different approaches yield the same value.

In order to calculate Earnings after tax for the Company's operating segments, an imputed tax is calculated for each segment. An adjusted income tax expense is calculated as Operating income and Other income, net multiplied by an applicable tax rate. For most operating segments the applicable tax rate is estimated at 35 percent. Oil and Energy businesses are subject to various tax regimes including Norwegian surtax on petroleum and power production. To calculate tax effects for these business units applicable statutory tax rates based on the source of income are applied. For the Group as a whole, Adjusted Income tax expense is calculated as US GAAP Income tax expense less tax effects relating to items reported as Financial income and expense .

Hydro believes that RoaCE facilitates benchmarking of the Company with its peers. It is important to note however, that RoaCE is, similar to all other financial metrics, influenced by a company's selection of acceptable accounting principles which can result in significant differences when comparing RoaCE for different companies applying different GAAPs. This is particularly important when comparing companies with an active acquisition history.

RoaCE should not be construed as an alternative to operating income, income before taxes and net income as an indicator of Hydro's results of operations in accordance with generally accepted accounting principles. Hydro's management make regular use of measures calculated according to generally accepted accounting principles in addition to non-GAAP financial measures described above when measuring financial performance.

Hydro also measures RoaCE based on long-term price assumptions, referred to as normalized prices. Normalized prices are used in order to avoid placing undue emphasis on such variables as historically high or low prices of its commodity products, and the effects of changes in currency exchange rates. As described more fully in the Risk Management section of this Financial Review, the development of the Company's results are primarily affected by the price developments of Hydro's main products, oil and aluminium, in addition to the US dollar and Euro exchange rates against the Norwegian kroner. For the purpose of calculating RoaCE on a normalized basis the following assumptions are used :

Oil price 25 US dollar per barrel

Aluminium price (London Metal Exchange) 1,500 US dollar per tonne

US dollar - Norwegian kroner exchange rate 7.00

Euro - Norwegian kroner exchange rate 8.00

In addition, items reported as Other income, net and Restructuring costs according to generally accepted accounting principles are excluded when calculating normalized RoaCE.

Hydro's management views normalization as a tool to measure underlying financial performance consistently over time and against the Group's business plans that are prepared according to the price assumptions described above for each financial year. By keeping certain main commodity prices and exchange rates constant, Hydro increases the focus on operating costs and efficiency improvements. Such a focus would be more challenging to maintain in periods with high commodity prices and favorable exchange rates.

Other income, net has two main components, consisting of gains and losses related to sale of operations or major assets and certain infrequent items. Gains and losses on sale of operations or major assets are excluded because they do not relate to ongoing operations. By excluding these items, Hydro increases the focus on the results of ongoing operations such as changes in efficiency and other operational factors. For the three year period, one infrequent item

was included in Other income, net ; the effect of a change in the Norwegian tax regulations relating to the removal costs for oil and gas installations on the Norwegian continental shelf. This item had a substantial effect on Other income, net as described more fully in footnote 9 to the Consolidated Financial Statements. The change in regulation was a major amendment to the system regulating removal of oil and gas installations in Norway. The previous regulations had been in place from 1986. Restructuring costs are only incurred relating to major changes in the business. The most recent restructuring charge was incurred in 2001, with adjustments to the estimates in the following periods. These items are excluded because they are infrequent in nature and could result in an incorrect picture of the underlying development in financial performance.

During the 2000 to 2004 period Hydro has employed normalization as a tool in measuring financial performance. Normalization has resulted, on average, in lower normalized earnings compared to earnings based on realized prices. Normalization for certain commodity and exchange rates is most relevant for Hydro's upstream oil and gas business and the Company's upstream aluminium production. For other parts of Hydro's business, which are more margin based, normalization for commodity prices is less important and the difference between actual and normalized RoaCE will be smaller. Normalized results should not be construed as alternative to measuring financial performance based upon realized commodity prices and exchange rates. Hydro's management reviews both realized results and normalized results. Management makes regular use of both normalized results and ratios to compare with business plans; for period-over-period comparisons; and in comparison with actual results and ratios. Typically, normalized results receive more attention when realized prices and exchange rates are above the normalized price assumptions. For an overview of how Hydro manages commodity price risk and foreign currency exchange rate risk please refer to the Risk Management section of the Financial Review included in Hydro's Annual Report.

In order to illustrate the effects of certain major events on RoaCE, both the actual RoaCE and normalized RoaCE have also been calculated excluding such events. For 2004, the write-down of German metal plants (affecting the Group and Aluminium), and the change in tax law in Norway (affecting the Group) have been excluded for this purpose. Excluding such items from RoaCE should not be considered as an adjustment of the metric for these effects but rather as supplemental information to demonstrate how these events affects RoaCE.

**Adjusted Net interest-bearing debt to equity**

	December 31 <b>2004</b>	December 31 2003
NOK million		
Cash and cash equivalents	<b>14,366</b>	14,873
Other liquid assets	<b>10,970</b>	1,553
Bank loans and other interest-bearing short-term debt	<b>(3,785)</b>	(5,273)
Current portion of long-term debt	<b>(568)</b>	(1,212)
Long-term debt	<b>(19,487)</b>	(28,403)
Net interest-bearing debt discontinued operations		(86)
Net interest-bearing debt	<b>1,496</b>	(18,548)
Net pension liabilities at fair value	<b>(10,056)</b>	(11,974)
Expected income tax benefit on pension liability 30%	<b>3,017</b>	3,592
Operating leases commitments discounted at 10%	<b>(3,500)</b>	(4,916)
Adjusted Net Interest-bearing debt	<b>(9,043)</b>	(31,846)
Shareholders' equity	<b>(85,890)</b>	(88,080)
Minority interest	<b>(1,571)</b>	(660)
Shareholders' equity and minority interests	<b>(87,461)</b>	(88,740)
Net pension liabilities not recognized without equity effect	<b>6,341</b>	7,863
Expected income tax benefit 30%	<b>(1,902)</b>	(2,359)
Equity adjustment off-balance sheet pension liabilities	<b>4,439</b>	5,504
Adjusted Shareholders' equity and minority interests	<b>(83,022)</b>	(83,236)
Adjusted net debt/equity ratio	<b>0.11</b>	0.38

The most directly comparable GAAP figure is considered to be Debt/equity ratio . However, this ratio measures gross debt relative to equity, and does not measure changes in cash position, and the non-GAAP measure Adjusted debt/equity ratio is therefore not directly comparable.

Debt/equity ratio	<b>0.28</b>	0.40
-------------------	-------------	------



**Return on average Capital Employed - Hydro**

Amounts in NOK million	Year ended <b>2004</b>	Year ended 2003	Year ended 2002
Operating Income	<b>31,847</b>	21,625	17,667
Equity in net income of non-consolidated investees	<b>628</b>	620	(24)
Other income/expense, net	<b>169</b>	(1,253)	77
Earnings before tax	<b>32,644</b>	20,992	17,720
Adjusted Income tax expense	<b>(21,165)</b>	(13,224)	(11,589)
Earnings after tax	<b>11,479</b>	7,768	6,131

Amounts in NOK million	31 December <b>2004</b>	31 December 2003	31 December 2002	31 December 2001
Current assets <sup>1)</sup>	<b>45,070</b>	45,468	46,914	37,480
Non-consolidated investees	<b>10,017</b>	10,162	9,410	7,168
Property, plant and equipment	<b>106,117</b>	107,779	105,251	87,205
Prepaid pension, investments and other non-current assets <sup>2)</sup>	<b>13,703</b>	13,228	15,585	11,612
Other current liabilities <sup>3)</sup>	<b>(41,724)</b>	(37,725)	(34,359)	(28,328)
Other long-term liabilities <sup>4)</sup>	<b>(47,218)</b>	(48,083)	(49,033)	(38,594)
Capital Employed	<b>85,965</b>	90,829	93,768	76,543

	<b>2004</b>	2003	2002
Return on average Capital Employed (RoaCE)	<b>13.0%</b>	8.4%	7.2%

Amounts in NOK million	Year ended <b>2004</b>	Year ended 2003	Year ended 2002
Reported Earnings before tax	<b>32,644</b>	20,992	17,720
Normalization Other income	<b>(169)</b>	1,253	(77)
Normalization Restructuring costs	<b>(22)</b>		(10)
Normalization Price and currency	<b>(13,328)</b>	(6,146)	(1,761)
Normalized Earnings before tax	<b>19,125</b>	16,099	15,872
Normalized Income tax expense	<b>(11,905)</b>	(10,165)	(9,988)

Edgar Filing: NORSK HYDRO A S A - Form 20-F

Normalized Earnings after tax		<b>7,220</b>	5,934	5,884
	31	31	31	31
	December	December	December	December
Amounts in NOK million	<b>2004</b>	2003	2002	2001
Reported Capital Employed	<b>85,965</b>	90,829	93,768	76,543
Normalization currency rates (translation effects)	<b>1,279</b>	(1,105)	5,085	(1,705)
Normalization current tax payable	<b>5,101</b>	1,654	989	3,162
Normalized Capital Employed	<b>92,345</b>	91,378	99,842	78,000
		<b>2004</b>	2003	2002
Normalized Return on average Capital Employed (RoACE)		<b>7.9%</b>	6.2%	6.6%

- 
- 1) Excluding Cash and cash equivalents and Other liquid assets, but including Deferred tax assets
  - 2) Including Deferred tax assets
  - 3) Including Deferred tax liabilities
  - 4) Including Accrued pension liabilities and Deferred tax liabilities

**Return on average Capital Employed - Oil and Energy**

Amounts in NOK million	Year ended <b>2004</b>	Year ended 2003	Year ended 2002
Operating Income	<b>31,144</b>	21,143	15,947
Equity in net income of non-consolidated investees	<b>75</b>	107	179
Other income/expense, net	<b>59</b>	816	77
Earnings before tax	<b>31,278</b>	22,066	16,203
Adjusted Income tax expense	<b>(22,051)</b>	(15,089)	(11,316)
Earnings after tax	<b>9,227</b>	6,977	4,887

Amounts in NOK million	31 December <b>2004</b>	31 December 2003	31 December 2002	31 December 2001
Current assets <sup>1)</sup>	<b>15,545</b>	16,017	21,213	12,979
Non-consolidated investees	<b>2,347</b>	2,406	1,991	2,095
Property, plant and equipment	<b>73,437</b>	74,460	73,223	70,146
Prepaid pension, investments and other non-current assets <sup>2)</sup>	<b>4,392</b>	3,903	4,199	3,909
Other current liabilities <sup>3)</sup>	<b>(23,208)</b>	(18,829)	(22,520)	(15,718)
Other long-term liabilities <sup>4)</sup>	<b>(35,985)</b>	(35,628)	(34,554)	(32,988)
Capital Employed	<b>36,528</b>	42,329	43,552	40,423

	<b>2004</b>	2003	2002
Return on average Capital Employed (RoaCE)	<b>23.4%</b>	16.2%	11.6%

Amounts in NOK million	Year ended <b>2004</b>	Year ended 2003	Year ended 2002
Reported Earnings before tax	<b>31,278</b>	22,066	16,203
Normalization Other income	<b>(59)</b>	(816)	(77)
Normalization Price and currency	<b>(12,531)</b>	(4,103)	(2,352)
Normalized Earnings before tax	<b>18,688</b>	17,147	13,774
Normalized Income tax expense	<b>(13,121)</b>	(12,013)	(9,674)
Normalized Earnings after tax	<b>5,567</b>	5,134	4,100

Amounts in NOK million	31 December <b>2004</b>	31 December 2003	31 December 2002	31 December 2001
Reported Capital Employed	<b>36,528</b>	42,329	43,552	40,423
Normalization currency rates (translation effects)	<b>199</b>	30	1,420	(212)
Normalization current tax payable	<b>4,771</b>	1,711	1,039	2,894
Normalized Capital Employed	<b>41,498</b>	44,070	46,011	43,105
		<b>2004</b>	2003	2002
Normalized Return on average Capital Employed (RoACE)		<b>13.0%</b>	11.4%	9.2%

- 
- 1) Excluding Cash and cash equivalents and Other liquid assets, but including Deferred tax assets
  - 2) Including Deferred tax assets
  - 3) Including Deferred tax liabilities
  - 4) Including Accrued pension liabilities and Deferred tax liabilities



**Return on average Capital Employed - Aluminium**

Amounts in NOK million	Year ended <b>2004</b>	Year ended 2003	Year ended 2002
Operating Income	<b>1,805</b>	2,456	1,698
Equity in net income of non-consolidated investees	<b>381</b>	433	(219)
Other income/expense, net			
Earnings before tax	<b>2,186</b>	2,889	1,479
Adjusted Income tax expense	<b>(632)</b>	(860)	(594)
Earnings after tax	<b>1,554</b>	2,029	885

Amounts in NOK million	31 December <b>2004</b>	31 December 2003	31 December 2002	31 December 2001
Current assets <sup>1)</sup>	<b>24,371</b>	22,860	21,715	15,993
Non-consolidated investees	<b>5,457</b>	5,787	4,902	3,288
Property, plant and equipment	<b>28,696</b>	29,504	26,496	11,770
Prepaid pension, investments and other non-current assets <sup>2)</sup>	<b>4,306</b>	4,849	5,212	3,723
Other current liabilities <sup>3)</sup>	<b>(14,699)</b>	(12,831)	(10,566)	(8,587)
Other long-term liabilities <sup>4)</sup>	<b>(4,693)</b>	(5,316)	(5,782)	(1,632)
Capital Employed	<b>43,438</b>	44,853	41,977	24,555

	<b>2004</b>	2003	2002
Return on average Capital Employed (RoACE)	<b>3.5%</b>	4.7%	2.7%

Amounts in NOK million	Year ended <b>2004</b>	Year ended 2003	Year ended 2002
Reported Earnings before tax	<b>2,186</b>	2,889	1,479
Normalization Other income			
Normalization Restructuring costs	<b>(22)</b>		(10)
Normalization Price and currency	<b>(1,215)</b>	(300)	(99)
Normalized Earnings before tax	<b>949</b>	2,589	1,370
Normalized Income tax expense	<b>(256)</b>	(760)	(395)

Edgar Filing: NORSK HYDRO A S A - Form 20-F

Normalized Earnings after tax		<b>693</b>	1,829	975
	31	31	31	31
	December	December	December	December
Amounts in NOK million	<b>2004</b>	2003	2002	2001
Reported Capital Employed	<b>43,438</b>	44,853	41,977	24,555
Normalization currency rates (translation effects)	<b>1,297</b>	(571)	2,736	(1,573)
Normalization current tax payable	<b>409</b>	99	199	244
Normalized Capital Employed	<b>45,144</b>	44,381	44,912	23,226
		<b>2004</b>	2003	2002
Normalized Return on average Capital Employed (RoACE)		<b>1.5%</b>	4.1%	2.9%

- 
- 1) Excluding Cash and cash equivalents and Other liquid assets, but including Deferred tax assets
  - 2) Including Deferred tax assets
  - 3) Including Deferred tax liabilities
  - 4) Including Accrued pension liabilities and Deferred tax liabilities

**Effect on RoaCE of major events**

Actual RoaCE adjusted for major write downs and change in tax regulations in Norway

Amounts in NOK million			Hydro Year Ended <b>2004</b>	Aluminium Year Ended <b>2004</b>
Earnings after tax			<b>11,479</b>	<b>1,554</b>
Adjustment for Write down after tax and change in tax regulation			<b>606</b>	<b>1,595</b>
Adjusted Earnings after tax			<b>12,085</b>	<b>3,149</b>
	31 December <b>2004</b>	31 December 2003	31 December <b>2004</b>	31 December 2003
Capital Employed	<b>85,965</b>	90,829	<b>43,438</b>	44,853
Adjustment for write down after tax and change in tax regulation	<b>680</b>		<b>1,595</b>	
Adjusted Capital Employed	<b>86,645</b>	90,829	<b>45,033</b>	44,853
			<b>2004</b>	<b>2004</b>
RoaCE adjusted for write down and change in tax regulation			<b>13.6%</b>	<b>7.0%</b>

Normalized RoaCE adjusted for major write downs and change in tax regulations in Norway

Amounts in NOK million			Hydro Year Ended <b>2004</b>	Aluminium Year Ended 2004
Normalized Earnings after tax			<b>7,220</b>	693
Adjustment for Write down after tax and change in tax regulation			<b>606</b>	1,595
Adjusted Normalized Earnings after tax			<b>7,826</b>	2,288
	31 December <b>2004</b>	31 December 2003	31 December <b>2004</b>	31 December 2003

Edgar Filing: NORSK HYDRO A S A - Form 20-F

Normalized Capital Employed	<b>92,345</b>	91,378	<b>45,144</b>	44,381
Adjustment for write down after tax and change in tax regulation	<b>680</b>		<b>1,595</b>	
Adjusted Normalized Capital Employed	<b>93,025</b>	91,378	<b>46,739</b>	44,381
			<b>2004</b>	<b>2004</b>
Normalized RoaCE adjusted for write down			<b>8.5%</b>	<b>5.0%</b>

## **ITEM 6. DIRECTORS, SENIOR MANAGERS AND EMPLOYEES**

### **ITEM 6.A. DIRECTORS, CORPORATE ASSEMBLY AND CORPORATE MANAGEMENT BOARD**

The Company is a public limited company organized under Norwegian law and the Group's governance structure is based on Norwegian corporate law. Norwegian corporate law has been revised in recent years to, among other things, clarify areas of responsibility of the board of directors of a Norwegian company.

#### **Corporate Assembly**

In accordance with Norwegian law, Hydro has established a Corporate Assembly. Hydro's Corporate Assembly currently consists of 18 members, of which the annual general meeting of shareholders has elected 12 members and, according to Norwegian legislation, the employees of Hydro's Norwegian companies have elected six members (i.e., one-third of the Corporate Assembly's members). The annual general meeting of shareholders and the employees have elected alternates in 2004. In addition, the employees have elected three observers. The arrangement for employee elected observers will be terminated from May 2005.

Under Norwegian companies' law, the members of the Corporate Assembly have a fiduciary duty to the Company and the Company's shareholders. Such fiduciary duty requires that the Corporate Assembly act in the Company's best interests when exercising their functions and exercise a general duty of loyalty and care towards the Company.

The Corporate Assembly communicates to the annual general meeting its recommendations concerning the Board of Directors' proposals about Hydro's yearly accounts, and dividend distribution. The Corporate Assembly elects the members of the Company's Board of Directors and nominates the external auditor. Upon the recommendation of the Board, the Corporate Assembly adopts resolutions in matters concerning investments that are substantial in relation to Hydro's resources, or concerning such rationalization of, or changes in, operations as will entail a major change in or redeployment of the labor force.

The Corporate Assembly met three times in 2004. Each member or deputy member and observer of the Corporate Assembly was paid NOK 5,000 per meeting attended. The Chairperson and the Vice Chairperson of the Corporate Assembly were paid an additional NOK 75,000 and NOK 37,500, respectively, for serving in such capacities in 2004. The names of the current members of Hydro's Corporate Assembly, as well as the deputy members and observers, are listed in Exhibit 99.1 to this annual report.

## Nomination Committee

The Company's articles of association (the **Articles of Association**) provide for a nomination committee (the **Nomination Committee**). The Nomination Committee consists of the Chairperson of the Corporate Assembly, two members elected directly by the shareholders and one member elected by and among the shareholders' representatives in the Corporate Assembly. The Nomination Committee nominates candidates to the Corporate Assembly to be elected by the shareholders at the annual general meeting, and candidates to the Company's Board of Directors to be elected by the shareholder-elected members of the Corporate Assembly. The Nomination Committee operates under a charter established by the shareholders' representatives in the Corporate Assembly. The Nomination Committee held seven meetings in 2004. The Nomination Committee currently consists of four members: Svein Steen Thomassen (Chairperson), Westye Høegh, Reier Sjøberg, and Siri Teigum.

## Board of Directors

The Company's management is vested in its Board of Directors and its President and Chief Executive Officer. In accordance with Norwegian corporate law, the Board of Directors has the overall responsibility for management of the Company, while the President and CEO is responsible for day-to-day management. The Board supervises day-to-day management as carried out by the President and CEO and the activities of the Company in general, as well as ensuring that appropriate steering and control systems are in place. The Board's internal rules of procedure were amended in 2001, and further revised in 2003, to clarify the Board's role in relation to the management of the Company as well as the other corporate bodies. The President and CEO's authority and responsibilities were defined in greater detail to allow the Board of Directors to concentrate on the Company's strategy and organization, while Board committees have been established to prepare matters for which the Board is responsible.

The Company's Articles of Association require that the Board consist of nine members who are nominated and elected by the Corporate Assembly. The shareholder representatives in the Corporate Assembly elect six Board members; the employee representatives in the Corporate Assembly, three Board members. Neither the President and CEO nor any other member of the Company's executive management is a member of the Company's Board. The Board of Directors held twelve meetings in 2004.

Information about each member of the Board of Directors, his or her place of residence, age, position on the Board and Board committees, year in which his or her term expires, the period during which the Board member has served as such, and business experience outside of the Company (including directorships in other companies) is presented in the table below or in the biographical information which follows:

<b>Name</b>	<b>Place of Residence</b>	<b>Age</b>	<b>Position</b>	<b>Term Expires</b>
Jan Reinås <sup>(1)</sup>	Oslo, Norway	60	Chairperson	2006
Borger A. Lenth	Koppang, Norway	67	Deputy Chairperson	2006
Elisabeth Grieg	Oslo, Norway	45	Director	2006
Håkan Mogren	Stockholm, Sweden	60	Director	2006
Ingvild R. Myhre	Oslo, Norway	47	Director	2006
Kurt Anker Nielsen <sup>(2)</sup>	Copenhagen, Denmark	59	Director	2006
Geir Nilsen <sup>(3)</sup>	Skien, Norway	49	Director	2005
Odd Semstrøm <sup>(3)</sup>	Øvre Årdal, Norway	60	Director	2005
Terje Friestad <sup>(3),(4)</sup>	Skudeneshavn, Norway	52	Director	2005

- (1) The Corporate Assembly elected Mr. Reinås to the Board and appointed him as Chairperson on 16 March 2004, with effect from 25 March 2004. Mr. Reinås succeeded Egil Myklebust, who announced in November 2003 that he would not stand for re-election to Hydro's Board of Directors when his term expired in 2004.
- (2) Elected by the Corporate Assembly 13 May 2004 to succeed Anne Cathrine Høeg Rasmussen.
- (3) Elected by the employee representatives in the Corporate Assembly.
- (4) The Corporate Assembly elected Mr. Friestad to the Board on 16 March 2004, with effect from 25 March 2004. Mr. Friestad succeeded Steinar Skarstein, who stepped down from the Board at the time of completion of the Agri demerger.

**Jan Reinås.** Mr. Reinås has served as Chairperson of the Board since 25 March 2004. Mr. Reinås served as the Chief Executive Officer of the paper group, Norske Skog, from 1994 until the end of 2003. He had previously served as the Chief Executive Officer of Scandinavian Airlines. Mr. Reinås currently serves on the Board of Directors of the media group, Schibsted ASA, and Swiss International Air Lines. Mr. Reinås serves as the Chairperson of the Board's Compensation Committee.

**Borger A. Lenth.** Mr. Lenth served as a director from 1990 to 1992, has served as a director from 1998, and has been the Deputy Chairperson of the Board since 2 May 2001. Mr. Lenth practices as a lawyer. Previously, from 1991 to 1997, Mr. Lenth was Chief Executive Officer of Christiania Bank. He has also had the position of Permanent Secretary in the Ministry of Development Corporation. Mr. Lenth is currently also Chairman of the Board of Treschow Fritzøe AS and Bolig og Næringsbanken ASA, and Deputy Chairman of the Board of Directors of Kommunal Landspensjonskasse (KLP) and Norfund. Mr. Lenth serves as the Chairperson of the Board's Audit Committee.

**Elisabeth Grieg.** Ms. Grieg has served as a director since 2001. Ms. Grieg, who is the co-owner of the Grieg Group, is the Chief Executive Officer of Grieg International AS. She is also a member of the Board of Directors of the Norwegian Shipowners' Association, Star Shipping, Grieg International and Grieg Maturitas, a member of the DnV Council and a member of the corporate assembly of Orkla ASA. Ms. Grieg serves on the Board's Audit Committee.

**Håkan Mogren.** Mr. Mogren has served as a director since 2001. Mr. Mogren served as Chief Executive Officer of Astra AB from 1988 to 1999. Mr. Mogren is Chairman of Affibody AB, Deputy Chairman of AstraZeneca PLC, and of Gambro AB, a member of the Board of Directors of Investor AB, Rémy Cointreau SA, the Swedish-American Foundation and the Group Danone, and a director for the Marianne and Marcus Wallenberg Foundation. Mr. Mogren is a Swedish national. Mr. Mogren serves on the Board's Compensation Committee.

**Ingvild R. Myhre.** Ms. Myhre has served as a director since 2001. Ms. Myhre is currently Director of the Norwegian Red Cross. She is also the Deputy Chairperson of the Norwegian Defense Research Establishment, a member of the Board of Directors of Flytoget AS, the Research Park in Narvik, Norges Handels- og Sjøfartstidende/Dagens Næringsliv, Telecomputing and Folketrygdfondet. Ms. Myhre serves on the Board's Compensation Committee.

**Kurt Anker Nielsen.** Mr. Nielsen has served as a director since 13 May 2004. Mr. Nielsen served as co-Chief Executive Officer of Novo A/S, a focused healthcare company and a world leader in diabetes care, from 2000 to 2003 and as Chief Financial Officer of Novo Nordisk A/S from 1989 to 2000. Mr. Nielsen is a member of the Board of Directors of Novo Nordisk A/S, Novozymes A/S, Novo A/S, DakoCytomation A/S, ZymoGenetics Inc, Coloplast A/S and TDC A/S. Mr. Nielsen is a Danish national. Mr. Nielsen serves on the Board's Audit Committee.

**Geir Nilsen.** Mr. Nilsen has served as a director since 2003. He is currently employed by Hydro as a maintenance supervisor. He represents the employees' union, LO, where he is a full time union official.

**Odd Semstrøm.** Mr. Semstrøm has served as a director since 1997. Mr. Semstrøm represents the employees' union, LO, where he is a full time union official. Mr. Semstrøm is an electrician and is based at Hydro's aluminium plant in Årdal.



**Terje Friestad.** Mr. Friestad has served as a director since 25 March 2004. Mr. Friestad represents the employees union, NITO, and he is currently employed as a Senior Engineer in Hydro Aluminium, Karmøy. Mr. Friestad serves on the Board's Audit Committee.

### **President and CEO and Corporate Management Board**

The President and CEO constitutes a formal corporate body according to Norwegian corporate law. The President and CEO is responsible for day-to-day management of Hydro in accordance with legislation and the instructions, policies and operating guidelines set out by Hydro's Board of Directors.

A corporate management board is not required under Norwegian corporate law, but Hydro's President and CEO has, in accordance with rules of procedure established by Hydro's Board of Directors, established a corporate management board (the **Corporate Management Board**) to assist him in discharging specialized management tasks. The Corporate Management Board consists of the Executive Vice Presidents for Oil and Energy, and Aluminium, in addition to the Executive Vice President and Chief Financial Officer, and the Executive Vice President Leadership and Culture. The members of the Corporate Management Board have a collective duty to promote Hydro's strategic, financial and other objectives, as well as to safeguard Hydro's assets, organization and reputation. The Corporate Management Board convenes at least once a week.

No member of Hydro's Board of Directors or the Corporate Management Board has any family relationship with any other director or member of the Corporate Management Board.

Information concerning each member of the Corporate Management Board, as of 14 February 2005, including his or her age and position, and brief background information regarding his or her business experience is presented below:

<b>Name</b>	<b>Place of residence</b>	<b>Age</b>	<b>Position</b>
Eivind Reiten	Oslo, Norway	51	President and Chief Executive Officer
John Ove Ottestad	Lierskogen, Norway	55	Executive Vice President and Chief Financial Officer
Alexandra Bech Gjørsv	Oslo, Norway	39	Executive Vice President
Tore Torvund	Oslo, Norway	53	Executive Vice President
Jon-Harald Nilsen	Oslo, Norway	53	Executive Vice President

**Eivind Reiten.** Mr. Reiten succeeded Egil Myklebust as President and Chief Executive Officer of Hydro, effective from 2 May 2001. From 1999 to the date of his appointment as President and CEO, Mr. Reiten served as Executive Vice President for Hydro's Light Metals business area. From 1996 to 1998, he served as President of Hydro Aluminium Metal Products. From 1992 to 1996, he served as President of Hydro's Refining and Marketing Division. From 1991 to 1992, he served as Senior Vice President, Special Projects. From 1988 to 1990, he served as President of the Energy Division, following a two-year period as manager, and later Vice President for Hydro Agri. From 1990 to 1991, he had the position of Minister of Petroleum and Energy in the Norwegian government. During the seven-year period from 1979 to 1986, Mr. Reiten held several governmental posts including Junior Executive Officer in the Ministry of Fisheries and Secretary to the Center Party's Parliamentary Group and State Secretary, Ministry of Finance and Minister of Fisheries. Mr. Reiten graduated from the University of Oslo in 1978 with a degree in economics.

**John Ove Ottestad.** Mr. Ottestad has served as Executive Vice President and Chief Financial Officer since 1 March 2002. Employed at Hydro since 1975, Mr. Ottestad has held numerous positions. Mr. Ottestad served as Senior Vice President for Mergers and Acquisitions from 1999 to 2002, as President of Hydro's Refining and Marketing Division from 1996 to 1999, as President of Hydro's Magnesium Division from 1988 to 1996, and as President of Hydro Innovation from 1985 to 1987. Between 1975 and 1985, Mr. Ottestad served as Director for Corporate Strategic Planning, as a manager in Corporate Financial Planning and as an engineer in the Oil and Gas Division. Mr. Ottestad also

served two years as an EDP scientist with the Norwegian Research Foundation, SINTEF. Mr. Ottestad graduated from the Norwegian Institute of Technology in 1973 with a degree in physics.

**Alexandra Bech Gjørsv.** Ms. Gjørsv. has served as Executive Vice President since 15 January 2002. Ms. Gjørsv. joined Hydro in New York in 1993 as the legal counsel for Hydro's U.S. subsidiaries. Since then, she has served as Company Secretary from 1995 to 1998 and as Vice President of Strategy and Organization in Hydro's Automotive Structures division from 1998 to 2000 and Senior Vice President of Corporate Human Resources from 2000 to 2002. Ms. Gjørsv. received a Bachelor of Law degree from the University of Oslo and a diploma in legal studies from Oxford University. She was admitted to the bar in the State of New York, United States in 1994.

**Tore Torvund.** Mr. Torvund has served as Executive Vice President for Hydro's Oil and Energy area since January 2000. From 1996 to the date of his appointment as Executive Vice President, Mr. Torvund served as Senior Vice President with responsibility for all exploration and production activities in Norway, and from 1992 to 1996, he had responsibility for Hydro's operations on the Norwegian Continental Shelf. Between 1990 and 1992, he served as Vice President for drilling operations, and from 1982-1990 he held different management positions within the Exploration & Production Division related to a North Sea field development project. From 1977 to 1982, Mr. Torvund worked for the French oil company, Elf Aquitaine, where he was involved with oil and gas projects. Mr. Torvund received an MSc in petroleum engineering from the Norwegian Institute of Technology in 1976.

**Jon-Harald Nilsen.** Mr. Nilsen has served as Executive Vice President of Hydro Aluminium since 15 February 2001. Mr. Nilsen had previously served as President of Hydro Aluminium Metal Products from 1999 to 2001, following seven years as Senior Vice President of various areas within the Hydro Aluminium Metal Products group. From 1985 to 1988, Mr. Nilsen was Hydro's Market/Product Director and held various managerial positions in financial planning and control for the Oseberg project from 1982 to 1985, and financial and market projects in Hydro's Aluminium from 1977 to 1982, and as an Assistant Export Manager for Bergensmeieriet from 1975 to 1977. Mr. Nilsen graduated from the Norwegian School of Economics and Business Administration in 1975.

## ITEM 6.B. COMPENSATION

In 2004, total remuneration of NOK 2,362,000 was paid to the members of Hydro's Board of Directors for serving in their capacities as Board members, NOK 393,500 to the members of the Corporate Assembly, NOK 50,000 to the members of the Nomination Committee, NOK 43,000 to the members of the Board's Compensation Committee and NOK 191,000 to the members of the Board's Audit Committee. See Item 6.C. Board Practices for a discussion of the Compensation and Audit Committees. The remuneration of the Corporate Assembly is determined by the annual general meeting, while the Corporate Assembly determines the remuneration to the Board and the Nomination Committee.

### Director Compensation Arrangements

#### *Compensation for Employee and Non Employee Directors*

Annual fees for employee and non-employee directors were NOK 220,000, increasing to NOK 230,000 effective May 2004. Employee director fees are paid in addition to compensation as an employee.

The annual fee for the Deputy Chairperson was NOK 330,000, increasing to NOK 345,000 from May 2004. The annual fee for the Chairperson was NOK 430,000, increasing to NOK 450,000 effective May 2004.



Mr. Egil Myklebust, who served as Chairperson of the Board until 24 March 2004, received NOK 99,230 for serving on the Board and his salary from Hydro was reduced correspondingly. Mr. Myklebust received total compensation in 2004 of NOK 3,583,000. In May 2001, Mr. Myklebust retired as President and Chief Executive Officer of Hydro. He continues to render services to Hydro in accordance with his employment contract of 1991.

Mr. Jan Reinås, who served as Chairperson from 25 March 2004, received NOK 342,000 for serving on the Board.

### **Compensation of the Chief Executive Officer and Corporate Management Board**

On 17 June 2004, the Board approved a new employment contract for Mr. Reiten, Hydro's President and Chief Executive Officer. In accordance with the new contract, which can be found at Exhibit 4 to this annual report, his right to continued employment after retirement as president has been discontinued. As a compensation, the Board decided to reduce his retirement age from 62 to 60 and to make a one-time payment of NOK 4 million to be used solely for the purchase of Hydro shares (the amount of shares to be purchased based on the net, after tax proceeds of the lump sum payment). Under the agreement, Mr. Reiten may not dispose of the shares for a period of 9 years.

In 2004, Mr. Reiten, received salary and other remuneration of NOK 4,695,000, as well as a bonus for 2003 of NOK 1,190,000 and the one-time payment described above.

All employees based in Norway are eligible for a bonus linked to performance targets for the various business units. Mr. Reiten has a bonus potential of six months salary as part of this plan. The Board also determined in its meeting on 17 June 2004, that Mr. Reiten was entitled to a bonus for 2003 of NOK 1,190,000 in accordance with the bonus plan and performance related targets established earlier.

Under Mr. Reiten's new employment contract, he is entitled to retire at 60 years of age with a pension benefit representing 65 percent of his salary. In the event his employment terminates before the age of 60, he has the right to salary for a three-year period. In the event Mr. Reiten receives salary from other sources during this period, Hydro has the option to reduce its obligation to Mr. Reiten correspondingly.

The total salary and benefits, excluding bonuses, for the four other members of the Corporate Management Board was NOK 10,445,000 in 2004. The total amount of bonuses paid to this group in 2004 was NOK 1,563,000 as follows:

Tore Torvund	NOK 490,000
Jon Harald Nilsen	NOK 351,000
John O. Ottestad	NOK 556,000
Alexandra Bech Gjørsv	NOK 166,000

Of the other members of the Corporate Management Board, three members have a retirement age of 62 years of age, and one member has a retirement age of 65 years of age.

### **Grants of Share Options in Last Fiscal Year**

#### ***Employee Incentive Plan Share-Based Compensation Plans***

Approximately 30 people in the Company's senior management, including the President and Chief Executive Officer and members of the Corporate Management Board, are eligible to participate in Hydro's share-based

compensation plans, currently the 2004, 2003 and 2002 Executive Share Option Plans. The President and Chief Executive Officer receives options granted under the plans on an annual basis. Options issued under the 2004 plan may be exercised within a six-year period, but not before 1 July 2007, their exercise being conditional on the development of the price of the underlying shares. If the share price reaches above NOK 476 between 1 July 2007 and 30 June 2010, all the options are exercisable. Options granted under the 2003 and 2002 plans may be exercised within a five-year period, but not before the expiry of three years from the date of grant. Exercise of the options is conditional of the development of the price of the underlying shares (including dividends paid) from the date of the

grant of the option. If the average increase in share price is less than 12 percent per year, none of the options vest. If the increase is between 12 percent and 20 percent, the corresponding percentage of options that vest increases linearly between 20 percent and 100 percent. Upon exercise of an option granted under 2003 and 2002 plans of the Executive Share Option Plans, the Company fulfills its obligation toward the option holder by way of a cash payment equal to the economic value of the option, representing the difference between the market value of the underlying Company share (the average of the closing price during the last five days of trading before the option is exercised) and the exercise price of the option. The option holder is liable for any tax or employee social security contributions arising from the grant or exercise of options. In addition, the option holder must have or acquire and hold a set number of the Company's shares equal to the bonus payment.

Eligible participants have been granted options relating to a total of 125,000 Company shares with an exercise price of NOK 476 per share under the 2004 Executive Share Option Plan, 97,500 shares with an exercise price of NOK 321.62 per share under the 2003 Executive Share Option Plan, and a total of 92,500 shares with an exercise price of NOK 331.14 per share under the 2002 Executive Share Option Plan. As explained more fully below, these prices reflect a downward adjustment of 8.5 percent as a result of the change in the Company's share capital in connection with the Yara demerger.

The total number of Company shares underlying options which members of senior management are eligible to receive in any year under the Executive Share Option Plans are presented below:

Recipient	Number of Shares			
	Underlying Option Grants			
	2002 and 2003		2004	
President and Chief Executive Officer	10,000		15,000	
Other members of the Corporate Management Board	7,000		7,000	10,000
Other Plan participants	2,000	3,500	2,500	3,500

Options for all the shares authorized under each of the 2004, 2003 and 2002 Executive Share Option Plans have been granted. See Note 4 to the Consolidated Financial Statements.

Administration of the Executive Share Option Plans is delegated by the Board to its Compensation Committee, which has responsibility to interpret, construe and administer each of the plans and to determine the number, terms, conditions and duration of any grant in accordance with the terms of the applicable plan. In case of a change in the Company's share capital, the exercise price may be adjusted in such a manner as the Compensation Committee considers fair and reasonable. The performance objectives shall only be changed if the Compensation Committee considers this to be necessary. In connection with the Yara demerger, the Compensation Committee determined that the exercise price and the base share price for calculation of performance would be adjusted in accordance with the demerger share split ratio. As a result, the exercise price of outstanding options at the time of consummation of the demerger and the base share price for calculation of performance was reduced by 8.5 percent, effective as of the completion date of the demerger (i.e., 24 March 2004).

## ITEM 6.C. BOARD PRACTICES

The Company adheres to requirements applicable to it in the countries where its shares are listed and also implements corporate governance initiatives deemed beneficial to the Company's development. The Company continuously reviews its corporate governance structure in order to develop and align it with international best practices.

The Company's primary share listing is on the Oslo Stock Exchange (OSE). The OSE listing is governed by Norwegian securities legislation. The Company's shares are also listed on Düsseldorf, Frankfurt, Hamburg, London and Paris stock exchanges, and its American Depositary Shares are listed on the New York Stock Exchange (the **NYSE** ).



Beginning in 2002 and on a continuing basis since, the Company has monitored closely the development of regulations issued or proposed by the SEC to implement provisions of the US Sarbanes-Oxley Act of 2002 (the **Sarbanes-Oxley Act** ), as well as proposed and adopted changes to NYSE listing standards. Hydro is complying with the new corporate governance requirements and listing standards that apply to non-U.S. companies, including the Chief Executive Officer and Chief Financial Officer certifications that are required to be included in its annual reports on Form 20-F. In light of the required certifications, the Company has, among other things, established a disclosure committee (the **Disclosure Committee** ) comprised of members of senior management. The Disclosure Committee is responsible for reviewing financial and related information before it is made public.

Board members are elected for a two-year period. See the biographical information for each of the Board members, included in Item 6.A. Directors and Corporate Management Board Board of Directors, for the period during which each Board member has served as such.

Except as noted in the next sentence, none of the Company's non-employee Board members have any other service contractual agreements with the Company. Elisabeth Grieg, who is a member of the Board of Directors and serves on the Board's Audit Committee, is part owner of a family owned company, Grieg Maturitas AS, which indirectly holds 20 percent of the ownership of Aon Grieg. Aon Grieg acted as a broker for Hydro in relation to offshore insurance in 2004 and received USD 907,863 in fees from Hydro for such services. Employee directors have no other service contractual agreements with the Company outside of their employee contracts, though they are subject to their duties as Board members.

### **Committees of the Board of Directors**

The Board of Directors has established two Board committees: a compensation committee (the **Compensation Committee** ) and an audit committee (the **Audit Committee** ). The Board of Directors has approved mandates or charters for both committees.

#### ***Compensation Committee***

On 12 October 2001, the Board of Directors constituted the Compensation Committee, to consist of not fewer than three members of the Board of Directors who are not officers of the Company. The members of the Compensation Committee, who are elected by the full Board, are to serve in such capacity for the two-year term of their service on the Board, but are subject to removal at any time by a majority of the Board of Directors.

The mandate or charter of the Compensation Committee provides that the committee is, on an annual basis, to:

review the performance of the Company's President and Chief Executive Officer and other members of senior management;

prepare and recommend to the Board proposals for compensation for the President and Chief Executive Officer, including base salary adjustments, awards under incentive plans and other benefits;

review and advise the President and Chief Executive Officer on the compensation of the other members of senior management; and

determine eligible participants in the Company's share incentive plans, and approve the participants in, and the types of awards and number of shares covered under, each such plan.

The Compensation Committee held seven meetings in 2004. As of 14 March 2005 the members of the Compensation Committee are Jan Reinås (Chairperson), Håkan Mogren and Ingvild Myhre. The Board has

determined that each of the members of the Compensation Committee is independent under the recently adopted NYSE listing standards.

## *Audit Committee*

### *Organization*

On 1 November 2001, the Board of Directors established the Audit Committee. The Audit Committee's mandate or charter provides that the Audit Committee is to consist of at least three members of the Board of Directors, each to be appointed by the full Board and to serve in such capacity for the two-year term of their service on the Board, subject to removal at any time by a majority of the Board of Directors.

The Audit Committee held eight meetings in 2004. As of 14 March 2005 the members of the Audit Committee are Borger A. Lenth (Chairperson), Elisabeth Grieg, Kurt Anker Nielsen and Terje Friestad, an employee representative who was elected to serve on the Board as of 16 March 2004, with effect from 25 March 2004. Messrs. Lenth and Nielsen, and Ms. Grieg, are each considered independent under the SEC's regulations adopted to implement the provisions of Section 301 of the Sarbanes-Oxley Act. As a non-management employee of Hydro elected to the Board in accordance with Norwegian law, Mr. Friestad is exempt from the SEC's independence requirement. The Board has assessed whether reliance on the exemption in the case of Mr. Friestad would materially adversely affect the ability of the Audit Committee to act independently and satisfy the other requirements of Rule 10A-3 under the Exchange Act, and has concluded that it would not.

In accordance with applicable NYSE listing standards, the Board is of the opinion that each of the current members of the Audit Committee fulfills the NYSE's listing standard with respect to being financially literate, as such qualification is interpreted by the Board in its business judgment. In addition, the Board has determined that Kurt Anker Nielsen, elected to the Board as of 13 May 2004, is an audit committee financial expert, as that term is defined in SEC rules.

### *Role and Responsibilities*

The Audit Committee operates in accordance with a mandate approved by the entire Board. The mandate was revised initially in June 2003 and also recently in March 2005 to meet the new requirements under the SEC's rules to implement relevant provisions of the Sarbanes-Oxley Act and the NYSE listing standards. The Audit Committee mandate can be found at Exhibit 99.3 to this annual report. The mandate establishes that the Audit Committee acts as a preparatory body related to the Board's supervisory role with respect to the Company's financial controls, disclosures and external audit, consistent with Norwegian law. The primary function of the Audit Committee is to assist the Board with respect to:

the integrity of the Company's financial statements;

the company's financial reporting processes and internal controls;

the qualifications, independence and performance of the external auditors; and

the performance of the Company's internal audit function.

The Audit Committee mandate provides the Audit Committee with the authority to engage independent counsel and other advisers, as it deems necessary to carry out its duties. Management is responsible for the Company's financial reporting process, the preparation of the Company's consolidated financial statements in accordance with generally accepted accounting principles, and the design and operation of the Company's system of internal control over financial reporting to ensure compliance with accounting standards and applicable laws and regulations. The Company's external auditors, Deloitte Statsautoriserede Revisorer AS, are responsible for performing an independent audit of the Company's consolidated financial statements in accordance with generally accepted auditing standards and

issuing a report on such financial statements. The Audit Committee's responsibility is, in an oversight role, to monitor, oversee and review these processes.

### ***Review of the Company's Consolidated Financial Statements***

In connection with the Audit Committee's responsibilities, the Audit Committee reviewed and discussed the Consolidated Financial Statements and discussed these financial statements with the Company's management and external auditors. Management and the external auditors advised the Audit Committee that the Consolidated Financial Statements were fairly stated in accordance with U.S. GAAP.

The Audit Committee also discussed with the Company's external auditors the external auditors' independence, a discussion that encompassed, among other things, whether the external auditors' provision of non-audit related services to the Company is compatible with maintaining such auditors' independence.

In accordance with Section 204 of the Sarbanes-Oxley Act and the SEC's rules to implement its provisions, the Company's external auditors also communicated with the Audit Committee, prior to filing of the external auditors' audit report with the SEC with respect to the Consolidated Financial Statements, regarding all critical accounting policies and practices, alternative accounting treatments, and other written material communications between the external auditors and the Company's management.

In reliance on the reviews and discussions referred to above, the Audit Committee informed the Board that it was not aware of any matters weighing against the Board's approval of the Consolidated Financial Statements to be included in this annual report on Form 20-F for the year ended 31 December 2004 for filing with the SEC.

As noted above, the Company established a Disclosure Committee to strengthen the Company's disclosure controls and procedures as part of its efforts to ensure the quality and reliability of Hydro's financial reporting and disclosure. Issues considered by the Disclosure Committee are reviewed and evaluated by the Audit Committee.

The Audit Committee reviews the Company's external financial reports and the disclosures in such reports in separate meetings prior to the Board's review and approval.

### ***Pre-Approval Policy***

The Audit Committee has established a pre-approval policy. See Item 16.C Principal Accountant Fees and Services for a discussion of the Company's pre-approval policy.

### ***Handling of Concerns and Complaints***

In December 2003, the Audit Committee established and implemented a channel for handling of concerns and complaints. All Hydro employees may, confidentially and anonymously, raise any concerns, including concerns about accounting, internal accounting controls or auditing matters, directly with the head of Internal Audit, who acts in this capacity as, in essence, a secretary for the Audit Committee. Alternatively, employees may raise any concerns or questions regarding such matters directly with the Chairperson of the Audit Committee.

### ***Cooling-off Policy***

In December 2004, the Audit Committee approved a cooling-off policy intended to ensure that the independence of the Company's external auditor is not impaired in connection with Hydro's employment of former or current external auditor personnel and their close family members, as that term is defined in applicable SEC rules. During 2004, Hydro did not recruit or hire any such personnel (or close family members of such personnel) to fill positions within the scope of the policy.



**Internal Audit**

The Audit Committee has reviewed and evaluated the operational audit reports prepared by the Company's internal audit department. Separate and independent sessions were held between the Audit Committee and the external and internal auditors.

**ITEM 6.D. EMPLOYEES**

As of 31 December 2004, the Group employed approximately 34,600 people, compared with approximately 42,900 people in 2003, and 49,700 people in 2002. The decline in 2004 reflected the transfer of approximately 7,500 employees to Yara in connection with the demerger of Hydro's Agri business operations. Approximately 22,500 of the Group's employees were located outside Norway as of 31 December 2004, compared to approximately 29,200 at the end of 2003 and 35,100 at the end of 2002. The number of people employed in each segment as of 31 December 2004 is as follows:

<b>Business Segment</b>	<b>Number of Employees</b>
Exploration & Production	2,821
Energy and Oil Marketing	706
Metals	6,161
Rolled Products	4,013
Extrusion and Automotive	15,793
Other Activities <sup>(1)</sup>	5,154

<sup>(1)</sup> Other Activities consists of the following: Hydro Polymers AS, BioMar AS (formerly Treka AS), Pronova, the industrial insurance company, Industriforsikring, Hydro Business Partner, Hydro Production Partner, Hydro IS Partner AS and other Corporate staff.

Production workers and certain staff categories in Norway are generally organized on a national basis with annual or bi-annual contract negotiations held between employee organizations and the national employers association. Norwegian employees are represented in Hydro's Corporate Assembly and Board of Directors. The Company considers its relationship with the Norwegian employee organizations to be good. Outside Norway, the degree of worker organizations and the form of negotiations with such organizations varies from one country to another.

**ITEM 6.E. SHARE OWNERSHIP****Share Ownership:**

The following table sets forth the beneficial ownership of ordinary shares as of 18 February 2005 by (i) each director and member of senior management, and (ii) all directors and members of the Corporate Management Board of the Company as a group.

Name of Beneficial Owner	Shares Beneficially Owned
Jan Reinås	0
Borger A. Lenth	144
Elisabeth Grieg	6,080
Håkan Mogren	0
Ingvild Myhre	0
Geir Nilsen	55
Kurt Anker Nielsen	0
Odd Semstrøm	129
Terje Friestad	236
Eivind Reiten	11,641
Alexandra Bech Gjørsv	900
John Ove Ottestad	8,238
Jon-Harald Nilsen	270
Tore Torvund (includes 360 shares held by a close family member)	3,640
Total number of ordinary shares owned by all directors and members of Corporate Management Board as a group (consisting of 14 persons)	31,333

The total number of authorized and issued ordinary shares of the Company as of 31 December 2004 was 258,954,428. Excluding shares held in treasury as of 31 December 2004 of 8,115,198 the total number of issued and outstanding shares was 250,839,230. The percentage beneficial ownership of the total number of ordinary shares owned by all directors and members of Corporate Management Board as a group was approximately 0.012 percent.

The percentage beneficial ownership of the total number of ordinary shares owned, individually and collectively by all members of the Corporate Assembly as a group as of 31 December 2004 was approximately 0.02 percent. The beneficial ownership of ordinary shares by each member, observer, and deputy member of the Corporate Assembly can be found in Note 26 to the Consolidated Financial Statements.

The percentage of outstanding shares held by residents of different countries as of 18 February 2005, are presented below:

Norway	61.4%
United Kingdom	15.1%
United States	13.5%
Other	10.0%

### Option Ownership

The following table sets forth the beneficial ownership of options to acquire ordinary shares as of 14 March 2005 by (i) each director and member of the Corporate Management Board who has served in either of such capacities at any time since 1 January 2004, and (ii) all such directors and members of the Corporate Management Board as a group:





Name	Number of Shares Underlying Options Granted			Exercise Price (NOK/Share)			Expiration Date		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Eivind Reiten	10,000	10,000	15,000	331.14	321.62	476	June 30, 2007	June 30, 2008	June 30, 2010
John Ove Ottestad	7,000	7,000	10,000	331.14	321.62	476	June 30, 2007	June 30, 2008	June 30, 2010
Tore Torvund	7,000	7,000	10,000	331.14	321.62	476	June 30, 2007	June 30, 2008	June 30, 2010
Jon-Harald Nilsen	7,000	7,000	10,000	331.14	321.62	476	June 30, 2007	June 30, 2008	June 30, 2010
Alexandra Bech Gjørsv	7,000	7,000	7,000	331.14	321.62	476	June 30, 2007	June 30, 2008	June 30, 2010
All directors and members of the Corporate Management Board as a group	38,000	38,000	52,000						

#### All Employee Share Purchase Plan

In 2000, the Board decided that the Company would, on an annual basis, offer its employees in Norway (and employees of Norwegian subsidiaries in which the Company has an ownership interest of more than 90 percent) the opportunity to purchase the Company's shares on favorable terms. The amount of the discount from the traded price of the shares is dependent on the development of the Company's share price (including dividends paid) during the applicable performance period (i.e., the 12-month period beginning on 1 January of the preceding year). Eligible employees are offered the opportunity to buy shares for NOK 6,000 at a 20 percent discount to the market price if the share price has increased by less than 12 percent, and a 50 percent discount to the market price if the share price has increased by more than 12 percent, during the performance period. Interest-free loans are granted to employees in connection with their share purchases.

In 1988, Hydro established a stock option purchase program for employees in the United Kingdom. The stock option purchase program is organized in an independent trust. The trust acquired shares in the market at the time options were granted. The last options were granted in July 2002 and the program will be operational until July 2012 when the last remaining options expire. Each year the employees were given the option to acquire a limited number of shares at a fixed price during a period from the third to the tenth year from grant date.

Details as to number of shares awarded to employees and the price per share can be found in Note 4 to the Consolidated Financial Statements.

## ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

### ITEM 7.A. MAJOR SHAREHOLDERS

The Kingdom of Norway is the only person or entity known to the Company to own beneficially, directly or indirectly, more than 5 percent of the Company's ordinary shares. As of 18 February 2005, the Kingdom owned 113,483,658 ordinary shares, representing 43.8 percent of the total number of ordinary shares issued and 45.2 percent of the total number of outstanding shares as of such date. There are no different voting rights associated with the ordinary shares held by the Kingdom. As of 18 February 2005, there were a total of 37,336 registered holders of Hydro's shares resident in Norway.

The Kingdom acquired most of its interest in the Company in 1945. From that time and until July 1999, the Kingdom owned 51 percent of the total number of ordinary shares issued and outstanding. Ordinary shares issued in connection with the acquisition of Saga Petroleum in July 1999 increased the total number of shares issued and outstanding with a corresponding decrease in the Kingdom's percentage ownership interest.

Since 1945, the Kingdom has not disposed of any of the Company's ordinary shares owned by it. However, there can be no assurance that the Kingdom will not do so in the future. The Norwegian Ministry of Trade and Industry represents the Norwegian government in exercising the Kingdom's voting rights. Acting through the Norwegian government, the Kingdom, in its capacity as a shareholder of the Company, has never taken an active role in the day-to-day management of the Company.

As of 18 February 2005, JPMorgan Chase Bank, as depositary of the ADSs (the Depositary), through its nominee company, Morgan Guaranty Nominees Limited, held interests in 9,099,337 ordinary shares (approximately 3.6 percent of the issued and outstanding ordinary shares as of such date) on behalf of 547 registered and an estimated 5,500 beneficial holders of American depositary receipts (ADRs), evidencing ADSs. There were 339 holders of ordinary shares with addresses in the United States (not including the Depositary) as of the same date. These shareholders held 24,717,350 ordinary shares, equal to approximately 9.9 percent of the issued and outstanding ordinary shares.

## ITEM 7.B. RELATED PARTY TRANSACTIONS

The following table sets forth information regarding outstanding loans from Hydro to individuals who have served on the Board of Directors or the Corporate Management Board since 1 January 2004:

Name of Loan Recipient	Largest Amount Outstanding as of 18 February 2005		Nature of Loan	Interest Rate <sup>(1)</sup>	Remaining Repayment Term <sup>(2)</sup>
	Amount (in thousands of NOK)	Amount (in thousands of NOK)			
Odd Semstrøm <sup>(3)</sup>	45	37	Consumer	4.0%	2 years-Upon termination
Geir Nilsen	170	72	Consumer	4.0%	1.5 years
John O. Ottestad	591	0	Consumer/Mortgage	3.25-4.00%	N/A
Tore Torvund	414	365	Consumer/Mortgage	3.25-4.00%	2.5 - 12 years
Jon-Harald Nilsen	195	173	Mortgage	3.25%	8.5 years
Egil Myklebust <sup>(4)</sup>	4,565	4,521	Mortgage	2.90 -3.25%	25 years Upon termination
Terje Friestad	75	69	Consumer	4.0%	3.5 years

- (1) Interest rate as of 31 December 2004. All of the above loans bear interest rates that reflect market rates. The interest rates are variable and are adjusted periodically by the Company.
- (2) Amortized on a monthly basis.
- (3) Includes an interest-free loan of NOK 20,000, which is repayable upon the termination of Mr. Semstrøm's employment with the Company.
- (4) Mr. Myklebust served as chairman of the board until 24 March 2004. As of 18 February 2005, Mr. Myklebust had several mortgage loans, including an interest-only loan of NOK 2,200,000 bearing interest at 2.90 percent and repayable upon the expiration or earlier termination of his employment agreement, a mortgage loan of NOK 2,071,000 bearing interest at 2.90 percent with a remaining payment period of 25 years and other mortgage loans totaling NOK 250,000 bearing interest at 3.25 percent repayable upon the expiration or earlier termination of his employment agreement. All of these loans are secured by Mr. Myklebust's principal residence.

Except as described in the notes to the above table, the loans included in the above table have been extended to members of the Board of Directors or the Corporate Management Board under terms and conditions that are equivalent to those made available to all Norway-based employees of the Company. All loans to directors appointed by the shareholders, and executive officers (i.e., members of the Corporate Management Board) of the Company were entered into prior to July 30, 2002. The Company has not materially modified or renewed any of these loans since that date. Mr. Terje Friestad, who in May 2004 joined the Board after being elected by the employees in accordance with Norwegian company law, was extended a loan in the amount of NOK 75,000 in July 2004 under an employee benefit scheme applicable to all employees in Norway.

#### **ITEM 7.C. INTERESTS OF EXPERTS AND COUNSEL**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 7.C. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

#### **ITEM 8. FINANCIAL INFORMATION**

##### **ITEM 8.A. CONSOLIDATED FINANCIAL STATEMENTS AND OTHER FINANCIAL INFORMATION**

The Consolidated Financial Statements are included in Exhibit 10 to this annual report on Form 20-F. Reference is made to Item 19. Financial Statements and Exhibits for a list of all financial statements included in this annual report.

##### **Export Sales**

See Note 5 to the Consolidated Financial Statements for a listing of the operating revenues by country of customer for export sales information.

##### **Legal Proceedings**

##### ***Tax Claim Relating to Kharyaga Field***

In May 2003, the Nenets Autonomus Okrug of the Ministry of Taxes and Revenues of the Russian Federation submitted to Total, the French major oil company and operator for the Kharyaga field located in Northwest Russia, a claim for tax and the Russian State's share of the revenues from oil extracted under the Production Sharing Agreement (PSA) for this field. Hydro has a 40 percent share in the PSA and is carrying 50 percent of the 10 percent interest of the Nenets Oil Company. As such, Hydro's share of the claim, if found to be valid, would be approximately USD 32 million. The claim stems from the unwillingness of the Kharyaga project's joint committee, which includes a representative of the region's administration, to approve audited accounts relating to the field for 2001 and 2002, and the work program and budget for 2002, submitted by Total, as the field operator. Due to this lack of approval, the Russian tax authorities have taken the position that all revenues from the project technically represented profit, and thus could not be included in the PSA's cost recovery category. The joint committee has also been unwilling to approve the work programs and budgets for 2003 and 2004, but no claim has been made related to these periods. Total and Hydro have filed a lawsuit with an international arbitration court in Stockholm to have spending on the development of the Kharyaga field recognized. The case is expected to be heard by the Stockholm Arbitration Court in July 2005.

***Zero-Rate Electricity Tax***

The EFTA (European Free Trade Association) Surveillance Authority (ESA) completed a formal investigation procedure against the Norwegian State to determine if the former zero-rate electricity tax applicable to Norwegian industry was in accordance with State aid rules included in the European

Economic Area Agreement (the EEA Agreement). Based on this investigation, ESA issued a decision on 30 June 2004, reflecting its determination that the exemption of certain Norwegian businesses from the electricity tax constituted illegal State aid under the EEA Agreement. The decision requires the Norwegian government to recover at least a minimum rate of 0.5 per MWh for the period between 6 February and 31 December 2003 from the recipients of such State aid. In another decision of the same date, ESA determined not to raise any objections to the tax derogations from the new electricity tax, applicable as of 1 July 2004.

The decision to order recovery of electricity tax from the industry has been appealed to the EFTA Court by the Norwegian government, the Federation of the Norwegian Processing Industry (Prosessindustriens landsforening, PIL) and several individual member companies of PIL, including Hydro. The appellants have asserted several bases upon which the ESA decision should be annulled, including that the decision violates Articles 61 and 62 of the EEA Agreement as regards recovery of aid and infringes the principle of legal certainty, and that the ESA failed to follow proper procedure. The appellants have not applied for an interim order to suspend the effect of the decision with regard to the recovery claim and a dialogue has been instigated between the Norwegian Government and ESA in order to clarify how the recovery shall be implemented.

The exact amount the Norwegian government is to recover from Hydro according to ESA's illegal State aid ruling depends on an interpretation of the decision. This interpretation issue is part of the dispute submitted to the EFTA Court, but is also part of a discussion between the Norwegian Government and ESA as regards how the recovery shall be implemented. Hydro estimates that the amount may be approximately NOK 15 million, plus interest.

#### ***Dispute as to Allocation of Pension Liabilities***

As of 1 January 2001, the system for the charging or allocation of pension costs by operators of oil and gas fields on the NCS to other companies with interests in such fields was changed. Prior to that date, the costs of funded pensions were charged based upon pension premiums and the costs of unfunded pensions were charged when pensions were paid. With effect from 1 January 2001, pension costs are charged as a percentage of pensionable salary.

In transitioning to the current system, Hydro, as an operator of oil and gas fields on the NCS, recorded pension costs of approximately NOK 796 million in the fourth quarter of 2000, of which NOK 205 million was for Hydro's own account. The balance of the increased pension obligation was charged for the account of the other companies with interests in the Hydro-operated fields. Most of the other companies did not accept this allocation. After negotiations with these companies, Hydro was able to reach an agreement with certain of them. The companies with which Hydro was not able to reach an agreement have started an arbitration proceeding over this matter.

Hydro has charged the companies which are parties to the arbitration an aggregate amount of approximately NOK 456 million. In preparation of the arbitration proceedings, it has been recognized that Hydro has the right to allocate amounts to its partners when pensions are paid. Regardless of which principle to apply with respect to the timing of the allocation, the parties need to agree upon the actual amounts to be charged.

Although no assertion for disputed amounts has been made to the parties of the dispute, Hydro's management does not believe that the amounts will have a material adverse effect on Hydro's results of operations or financial position.

#### ***Other Legal Proceedings***

Hydro is involved in or threatened with various other legal, tax and environmental matters arising in the ordinary course of business. Hydro is of the opinion that resulting liabilities, if any, will not have a material adverse effect on its consolidated results of operations, liquidity or financial position.





## Dividend Policy

The Board of Directors believes that long-term returns to shareholders should reflect the value created in the Company in the form of dividends and a higher share price. The Board's policy is that dividends paid should increase steadily in line with the growth in Hydro's results, while taking into consideration opportunities for adding value through profitable new investments. Over time, the value added will be reflected to a greater extent by a higher share price than through dividend distributions. The Board considers it appropriate that dividends over a period of several years average roughly 30 percent of Hydro's net income. Future dividends will be dependent on Hydro's future earnings, financial condition and cash flow, as well as other factors affecting Hydro.

The Board of Directors has proposed a dividend of NOK 20 per share for 2004. This is regarded as an extraordinarily high dividend and should be seen in the context of the solid financial position achieved by the Company as a result of the strong operating results.

In order to achieve the greatest possible value creation over time and to strike a balance with Hydro's operational risk exposure, it is necessary to have adequate access to financial resources. This requires Hydro to maintain a position that will allow it to be able to access the necessary loan capital with attractive conditions. As of 31 December 2004, the Company's senior unsecured debt was rated A2 by Moody's and A with negative outlook from Standard & Poor's. To assist the Company in maintaining its credit ratings, the Company intends its adjusted net interest-bearing debt over time to be equivalent to half of the Company's adjusted equity capital, including minority interests. When calculating this ratio, adjustments are made to net interest-bearing debt and to equity capital. These adjustments are discussed in Item 5 to this annual report on Form 20-F under the caption Non-GAAP Financial Measures.

## Share Repurchases

In periods of high earnings, the Company will consider implementation of share repurchase or buy-back programs. Such consideration will be made in light of alternative investment opportunities available to the Company and its financial condition. On the basis of these considerations, the Board may propose to the Corporate Assembly that authorization be given for a repurchase of shares.

On 1 December 2004, the extraordinary general meeting authorized Hydro's Board of Directors to buy back up to 5,617,621 of the Company's shares in the market over the following 18 months for the purpose of subsequent cancellation. The Norwegian State has agreed to participate in the redemption and cancellation of a proportional number of shares. The State's ownership share will, therefore, remain unaffected by the buy-back and cancellation. In total, up to 10 million shares may be cancelled, equivalent to approximately four percent of the outstanding shares. Final decisions on cancellation will require the approval of two-thirds of the votes cast at a future general meeting at which such approval is sought.

The extraordinary general meeting also approved a capital reduction by cancellation of the 2,808,810 treasury shares acquired in 2004. These shares were repurchased following the May 2004 annual general meeting approval. The Company repurchased all of the approved shares during the months of June through September 2004. Details of the buy-back program such as the total number of shares repurchased for each period and the average price paid per share, can be found in Item 16.E Repurchase of Shares. The extraordinary general meeting also authorized the redemption of 2,191,190 shares owned by the Norwegian State. These shares were redeemed and cancelled in February 2005. The per share redemption price was based on the volume-weighted average of the price paid for the 2,808,810 shares purchased in the market. The Company paid the Norwegian State an aggregate amount of NOK 981 million including interest compensation of NIBOR plus one percent in February 2005.



The Company has also previously purchased its own shares with the intention of using them in connection with possible business transactions and employee incentive plans. The Company held 8,115,198 of such shares in treasury as of 31 December 2004.

**ITEM 8.B. SIGNIFICANT CHANGES**

There have been no significant changes in Hydro s results of operations, financial condition or business prospects since 31 December 2004.

**ITEM 9.THE OFFER AND LISTING****ITEM 9.A. OFFER AND LISTING DETAILS**

The following table gives, for the periods indicated, adjusted high and low prices for the Company's ordinary shares on the Oslo Stock Exchange and the ADSs on the New York Stock Exchange. Share prices quoted prior to the demerger of the Company's agri business on 24 March 2004 have been adjusted with a 0.881699 factor in accordance with the practice of Oslo Stock Exchange .

**Five Most Recent Fiscal Years**

<b>Year</b>	<b>Oslo Stock Exchange</b>		<b>New York Stock Exchange</b>	
	<b>High (in NOK)</b>	<b>Low (in NOK)</b>	<b>High (in US Dollars)</b>	<b>Low (in US Dollars)</b>
2000	365.91	261.42	40.06	31.30
2001	356.21	273.33	39.59	30.86
2002	388.83	240.70	46.11	32.67
2003	365.91	231.01	54.74	31.65
2004	521.50	361.50	83.62	53.44

**Quarterly Data for Two Most Recent Fiscal Years**

<b>Quarterly Period</b>	<b>Oslo Stock Exchange</b>		<b>New York Stock Exchange</b>	
	<b>High (in NOK)</b>	<b>Low (in NOK)</b>	<b>High (in US Dollars)</b>	<b>Low (in US Dollars)</b>
First quarter 2003	279.94	231.01	40.41	31.65
Second quarter 2003	331.52	238.06	45.76	33.11
Third quarter 2003	350.48	298.90	47.56	40.47
Fourth quarter 2003	365.91	316.97	54.74	45.94
First quarter 2004	464.66	361.50	65.91	53.44
Second quarter 2004	467.00	395.00	67.50	54.92
Third quarter 2004	503.00	419.00	74.19	60.28
Fourth quarter 2004	521.50	457.50	83.62	71.34

**Most Recent Six Months****Oslo Stock Exchange****New York Stock Exchange**

<b>Month</b>	<b>High (in NOK)</b>	<b>Low (in NOK)</b>	<b>High (in US Dollars)</b>	<b>Low (in US Dollars)</b>
September 2004	503.00	432.00	74.19	63.00
October 2004	521.50	457.50	77.24	71.24
November 2004	510.00	461.00	83.62	72.99
December 2004	500.50	465.00	81.81	75.00
January 2005	499.00	462.50	79.40	74.00
February 2005	545.00	487.00	86.97	76.60

Source: Reuters

There were 339 holders of ordinary shares with addresses in the United States (not including the Depositary) as of 18 February 2005. These shareholders held 24,717,350 ordinary shares, equal to approximately 9.9 percent of the issued and outstanding ordinary shares. As of 18 February 2005, a total of 9,099,337 ADSs (representing approximately 3.6 percent of the issued and outstanding ordinary shares) were held by 547 registered and approximately 5,500 beneficial holders of ADSs.

## **ITEM 9.B. PLAN OF DISTRIBUTION**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 9.B if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

## **ITEM 9.C. MARKETS**

The Company's ordinary shares are listed on the stock exchanges in Oslo, London, Paris, Frankfurt, Hamburg and Düsseldorf. The Board of Directors approved delisting of the Company's shares from the Stockholm stock exchange effective 25 March 2004. The Company's ADSs are listed on the New York Stock Exchange.

## **ITEM 9.D. SELLING SHAREHOLDERS**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 9.D. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

## **ITEM 9.E. DILUTION**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 9.E. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

## **ITEM 9.F. EXPENSES OF THE ISSUE**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 9.F. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

## **ITEM 10. ADDITIONAL INFORMATION**

### **ITEM 10.A. SHARE CAPITAL**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 10.A. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

### **ITEM 10.B. ARTICLES OF ASSOCIATION**

Norsk Hydro ASA is a public limited company organized under the laws of Norway. Its registration number in the Norwegian Register of Business Enterprises is 914 778 271. Norsk Hydro ASA was incorporated on December 2, 1905 and registered with the Norwegian Register of Business Enterprises in 1906.

Section 2 of the Company's Articles of Association provides that the Company's objects or purposes are to engage in industry, commerce and transport, to utilize energy resources and raw materials, and to engage in other activities connected with the above-mentioned objects. The Company's operations may be conducted through participation in or in cooperation with other enterprises.

**Board of Directors**

Section 5 of the Articles of Association provides that the Board of Directors shall be composed of nine members who are elected by the Corporate Assembly to serve for a term of two years, such term to expire at the conclusion of the annual general meeting of shareholders in the year in which the period



of service ends. The Corporate Assembly also elects the Chairman and the Vice-Chairman of the Board. In the event a director retires, is removed or is disqualified as a result of personal bankruptcy prior to the end of his or her period of service and there is no alternate Board member, the rest of the Board of Directors must arrange for the election by the Corporate Assembly of a new member of the Board of Directors for the remainder of the period of service.

There are no requirements for a Board member's being qualified to serve in such capacity other than a requirement under Norwegian law that at least half of the members of the Board of Directors must reside in the Kingdom of Norway or another country that is a member of the European Economic Community (absent the grant of an exemption by the King of Norway in an individual case). Section 9 of the Articles of Association requires a director to retire the year he or she reaches the age of 70.

Under Norwegian law and the Rules of Procedure for the Board of Directors, a member of the Board of Directors may not participate in the discussion or in the decision on any matter in which the Board member (or any person affiliated with such Board member) has a major personal or financial interest. The rest of the Board may decide whether the Board member has such an interest in the decision or matter. In addition, no member of the Board may participate in any matter concerning a loan or other credit to such Board member or with respect to the pledge of security for such member's debt to the Company.

Under Norwegian law, the Company's directors have no power to vote compensation to themselves or any member of their body. Instead, the Corporate Assembly fixes the remuneration to be received by members of the Board of Directors, alternate members and observers. Norwegian law also stipulates that members of the Board of Directors are not to receive any remuneration from parties other than the Company in connection with their services for the Company. However, a Board member who does not participate in the day-to-day management of the Company is not precluded from acting as an agent on behalf of a business carried on by the Board member and receiving a standard agency fee in such capacity, provided that such member does not also represent the Company in the transaction.

### **Liability of Directors**

The members of the Board of Directors and the members of the Corporate Assembly owe a fiduciary duty to the Company and its shareholders. Their principal obligation is to safeguard the interests of the shareholders. In addition, they may also have duties to other third parties, such as employees and creditors. The Company's directors and members of the Corporate Assembly can be held liable for any damage they negligently or intentionally cause the Company. Norwegian law permits shareholders to exempt any such persons from liability, but the exemption is not binding if substantially correct and complete information was not provided to the shareholders at the general meeting at which the shareholder action to exempt the person(s) from liability was taken. If a resolution to grant such exemption from liability or not to pursue claims against such a person has been passed by a general meeting with a smaller majority than that required to amend the Articles of Association, shareholders representing at least ten percent of the share capital or, if there are more than 100 shareholders, more than ten percent of the shareholders may pursue the claim on the Company's behalf and in its name. The cost of any such action is not the Company's responsibility, but can be recovered from any proceeds the Company receives as a result of the action. If the decision to grant an exemption from liability or not to pursue claims is made by such a majority as is necessary to amend the Articles of Association, the minority shareholders cannot pursue the claim in the Company's name.

### **Indemnification of Directors and Officers**

Neither Norwegian law nor the Articles of Association contains any provision concerning indemnification by the Company of the members of the Board of Directors.



## **Description of Ordinary Shares**

The following is a summary of material information relating to the share capital and the ordinary shares of the Company, including summaries of certain provisions of the Articles of Association and applicable Norwegian law (including the Norwegian Public Limited Companies Act) in effect as of the date of filing of this annual report.

### ***General***

The authorized share capital of the Company consists of one class of shares: 258,954,428 ordinary shares, nominal value NOK 18.30 per share, of which 250,839,230 ordinary shares were outstanding as of 31 December 2004. All outstanding ordinary shares are validly issued, fully paid and nonassessable. The extraordinary General Meeting approved on 1 December 2004 a capital reduction by cancellation of 2,808,810 treasury shares acquired in 2004. These treasury shares were acquired as part of a buy-back program approved by the 2004 annual general meeting. The extraordinary general meeting also authorized the redemption of 2,191,190 shares owned by the Norwegian State. The capital reduction was registered in the Norwegian Registry on the 8th of February 2005. The above-presented authorized and outstanding numbers of shares are adjusted for the effects of the extraordinary general meeting decision.

### ***The VPS System***

The ordinary shares are registered in the Norwegian Verdipapirsentralen (the Norwegian Central Securities Depository), referred to as the VPS. The VPS is Norway's paperless centralized registry. The VPS is owned by a public company and operates under a license from the Ministry of Finance. The ownership of, and all transactions relating to, Norwegian listed shares must be recorded in a licensed securities registry. The Company's share register is operated through the VPS.

All transactions relating to securities registered with the VPS are made through computerized book-entries. No physical share certificates are or can be issued. The VPS confirms each entry by sending a transcript to the registered shareholder, regardless of beneficial ownership. To effect these entries, the individual shareholder must establish a securities account with a Norwegian account operator unless the individual's shares are registered in the name of a nominee. Norwegian banks, the Central Bank of Norway, authorized investment firms in Norway, bond issuing mortgage companies, management companies for securities funds (insofar as units in securities funds they manage are concerned), and Norwegian branches of credit institutions established within the European Economic Area (EEA) are allowed to act as account operators. If a security holder does not establish such an account, an account agent will be appointed on the security holder's behalf by the issuer of the security in question.

The entry of a transaction in the VPS will generally be decisive in determining the legal rights of parties as against the issuing company or a third party claiming an interest in a security. The VPS is strictly liable for any loss resulting from an error in connection with registering, altering or canceling a right, except in the event of contributory negligence, in which event compensation owed by the VPS may be reduced or withdrawn.

A transferee or assignee of the Company's ordinary shares may not exercise the rights of a shareholder with respect to his or her shares unless the transferee or assignee has registered his or her shareholding or has reported and shown evidence of such share acquisition and the acquisition of such shares is not prevented by law, the Articles of Association or otherwise.

### ***Shareholder Meetings***

Under Norwegian law, a company's shareholders are to exercise supreme authority in the company through the general meeting.

In accordance with Norwegian law, the Company is required to hold its annual general meeting of shareholders within six months following the end of the fiscal year. In accordance with Norwegian

law and Section 11 of the Articles of Association, the following business must be transacted at the annual general meeting:

approval of the annual accounts and annual report for the prior fiscal year, including the distribution of any dividend;

election of the shareholders members and deputy members to the Corporate Assembly (if subject to election at the annual general meeting); and

any other business to be transacted at the general meeting by law or in accordance with the Articles of Association (i.e., matters listed in the notice convening the meeting).

In addition to the annual general meeting, extraordinary general meetings of shareholders may be held if deemed necessary by the Board of Directors, the Corporate Assembly or the Chairman of the Corporate Assembly. An extraordinary general meeting must also be convened for the consideration of specific matters at the written demand of the Company's auditors or shareholders representing a total of at least five percent of the share capital of the Company.

The Board of Directors is to convene a general meeting of shareholders, including any extraordinary general meeting. A general meeting must be convened by written notice to all shareholders, sent at least 14 days in advance of the meeting date. Shareholders have the right to have an issue discussed at a general meeting. In order to exercise this right, shareholders must deliver written notice to the Board of Directors in sufficient time so that the issue can be included in the notice convening the general meeting. If the Company's notice of the general meeting has already been sent, a new notice as to the convening of the general meeting must be sent if at least two weeks remain before the general meeting is to be held.

Neither Norwegian law nor the Articles of Association provides for any quorum requirement (i.e., a minimum level of voting power to be present, either in person or by proxy, in order to conduct business at any general meeting).

Under Norwegian law, shareholders are entitled to attend and vote at a general meeting, either in person or by a proxy appointed at their own discretion. The right to attend a general meeting cannot be restricted in the Articles of Association. Under Section 10 of the Articles of Association, shareholders or their procurators (proxies) are entitled to attend and to vote at an annual general meeting provided they have informed the Company of their intended attendance at least five days in advance of the meeting date.

### ***Voting Rights***

Subject to the terms of a company's articles of association to the contrary, Norwegian law provides that each outstanding share shall represent a right to one vote. All of the Company's shares (other than shares held by the Company itself or any of its subsidiaries) have an equal right to vote at general meetings and are entitled to one vote per share.

Generally, all matters to be voted on by shareholders must be approved by a majority of the votes cast by all ordinary shares that are present in person or represented by proxy at the general meeting at which such matters are considered. In the case of elections (for example, of members of the Corporate Assembly), the persons who receive the most votes cast are elected. However, certain decisions, including resolutions to:

amend the Articles of Association;

approve a merger or demerger;

authorize an increase or reduction in the Company's share capital; or

waive preferential rights in connection with an increase in share capital

must be approved by at least two-thirds of the aggregate number of votes cast at the general meeting at which any such action is before the shareholders for approval.

Any resolution which has the effect of reducing shareholders' rights to a dividend or to the assets of the Company requires the approval of shareholders representing more than 90 percent of the share capital represented at the general meeting at which such action is considered as well as at least two-thirds of the votes cast at that meeting.

Under Norwegian law, certain matters require the unanimous approval of the Company's shareholders, including the taking of any action that would:

- increase shareholders' obligations to the Company;
- restrict the right to transfer, acquire or own shares in the Company;
- subject the shares to compulsory redemption; or
- change the legal relationship among previously equal shares.

If any such action would affect less than all shareholders, such action would require the unanimous approval of all affected shareholders as well as at least two-thirds of the votes cast and at least two-thirds of the share capital represented at the general meeting at which such action is considered.

Under Norwegian law, shareholders may not take action by written consent.

The beneficial owners of shares which are registered in the name of a nominee are generally not entitled to vote under Norwegian law, nor are any persons who are designated in the share register as holding such shares as nominees.

### ***Dividends***

Under Norwegian law, any proposal to pay dividends must be made by the Board of Directors and approved by the shareholders at the annual general meeting of shareholders. The dividend cannot exceed the amount proposed or consented to by the Board of Directors. Dividends in respect of a fiscal year are normally determined at the annual general meeting held in the following year. Any dividend approved at a general meeting accrues to those shareholders who are shareholders at the time of shareholder approval, unless otherwise stated in the resolution with respect to such dividend distribution.

Dividends may be paid in cash or in kind. The Norwegian Public Limited Companies Act provides several constraints on the distribution of dividends:

Dividends are payable only out of distributable reserves. Section 8-1 of the Norwegian Public Limited Companies Act provides that distributable reserves consist of the profit for the prior fiscal year (as reflected in the income statement approved by the annual general meeting of shareholders) and the retained profit from previous years (adjusted for any reclassification of equity), less (i) uncovered losses, (ii) the book value of research and development, goodwill and net deferred tax assets (as recorded in the balance sheet, as of the prior fiscal year end, approved by the annual general meeting of shareholders), (iii) the total nominal value of treasury shares which the Company has acquired for ownership or as security in previous fiscal years, and credit and security which, pursuant to Sections 8-7 to 8-9 of the Norwegian Public Limited Companies Act, fall within the limits of distributable equity, and (iv) that part of the profit for the prior fiscal year which, by law or pursuant to the Articles of Association, must be allocated to the undistributable reserve or cannot be distributed as a dividend. Distributable reserves are to be calculated in accordance with Norwegian GAAP.





Dividends cannot be distributed if the Company's equity amounts to less than 10 percent of the total assets, measured with reference to the Company's unconsolidated balance sheet as of the prior fiscal year end, except if the Company follows a creditor notice procedure provided for under the Norwegian Public Limited Companies Act in relation to reductions of share capital.

Dividends can only be distributed to the extent compatible with good and careful business practice, with due regard to any losses which the Company may have incurred since the balance sheet date (i.e., the prior fiscal year end) or which the Company may expect to incur.

The amount of dividends the Company can distribute is calculated on the basis of its unconsolidated financial statements.

Norwegian law does not permit the payment of dividends based on interim results of operations.

Because the Company pays dividends in Norwegian kroner, exchange rate fluctuations will affect the US dollar amounts received by holders of ADSs upon the conversion of cash dividends into US dollars by the Depositary.

#### ***Limitations on the Right to Own Ordinary Shares***

There are no restrictions affecting the right of non-Norwegian residents or citizens to own or exercise voting rights with respect to the Company's ordinary shares. However, based on a 1917 law as amended in 1994, which applies to Norwegian companies engaged in hydropower, mining and real estate, no person or entity may acquire more than 20 percent (or the right to vote more than 20 percent) of the share capital of the Company, and no group of two or more persons may, whether by mutual agreement or by family relationship, jointly or separately acquire an aggregate of more than 20 percent of the share capital of the Company or 20 percent of its voting rights unless such person or persons obtain the consent of the Norwegian government. The Depositary and The Depositary Trust Company have been granted a concession from the Norwegian government to hold up to 25 percent of the Company's ordinary shares in their respective capacities as depositaries.

#### ***Restrictions on Transfer***

Except in certain circumstances, no acquirer of ordinary shares is entitled to any of the rights of a shareholder unless and until he has registered the transfer in the Company's share registry in the VPS. Under Norwegian law, the transferor must ensure that the VPS is notified of any change of ownership immediately after it has taken place.

The Articles of Association do not contain any provisions restricting the transferability of ordinary shares other than that the Board of Directors may refuse to consent to the transfer of ordinary shares and may take such other steps as may be necessary to prevent ordinary shares from being transferred if in contravention of the restrictions, if any, then provided by applicable Norwegian law. If the Board of Directors refuses to consent to a transfer of ordinary shares, the Board must, without delay, notify the transferee of the decision as well as the reasons for such refusal and what is required in order to remedy the matter. If the transferee has not been notified of a refusal to grant consent within two months of the date of the VPS's receipt of notice of the acquisition, the Board's consent shall be regarded as having been granted. If the Board refuses to grant its consent to the acquisition of the ordinary shares, the transferee may (i) rescind the purchase agreement with the transferor (unless otherwise provided in such agreement), (ii) dispose of the shares, or (iii) bring a legal action against the Company with respect to the refusal to grant consent. Any of the foregoing actions must be taken within two months from when the transferee receives notice of the Board's refusal of consent to the transfer. If the transferee fails to act in a timely manner, the Board of Directors may demand that the shares be sold.

### ***Additional Issuances and Preferential Rights***

All issuances of ordinary shares by the Company, including bonus issues (share dividends), require an amendment of the Articles of Association (which specifies the Company's share capital) and, thus, shareholder approval. In connection with an increase in the Company's share capital by a subscription for shares against cash contributions, Norwegian law provides the Company's shareholders with a preferential right to subscribe for the new shares on a *pro rata* basis in accordance with their then current shareholdings in the Company. The preferential rights to subscribe to an issue may be waived by a resolution in a general meeting passed by the same vote required to approve amendments to the Articles of Association.

The general meeting may, with a vote as described above, authorize the Board of Directors to issue new shares. Such authorization may be effective for a maximum of two years, and the nominal or par value of the shares to be issued may not exceed 50 percent of the nominal share capital when the authorization was granted. Under Norwegian law, the general meeting must also approve the waiver of the preferential rights of shareholders in connection with such issuances.

Shareholders' preferential rights, if any, are *pro rata* in accordance with their relative holdings in the Company's ordinary shares at the time of such issuance. If not all shareholders exercise their preferential rights (or not all shareholders exercise such rights in full), shareholders who have exercised their preferential rights and want to acquire additional shares may subscribe for those shares which have not been subscribed for, generally on a *pro rata* basis based on the number of shares for which preferential rights have been exercised. Under Norwegian law, preferential rights cannot be set aside in the Articles of Association.

The Company's Articles of Association provide that if the share capital is increased, and provided the Norwegian law then in effect so permits, preferential subscription rights shall be reserved in connection with each such capital increase, on the conditions stipulated by the Board of Directors, for up to:

0.83 percent of the increase for holders of the 83 unredeemed founder certificates, and

2.79 percent of the increase for holders of the 4,343 unredeemed subscription certificates.

These preferential rights shall not apply if the increase is made in order to allot shares to third parties as compensation for their transfer of assets to the Company.

Under Norwegian law, bonus issues (share dividends) of the Company's ordinary shares may be distributed, subject to shareholder approval, from amounts which (i) could otherwise be distributed as dividends, or (ii) may be created by transferring funds from the Company's share premium reserve or from retained earnings available for dividends. Such bonus issues (share dividends) may be effected either by issuing new ordinary shares, allotted to the Company's shareholders on a *pro rata* basis, or by increasing the nominal value of the ordinary shares outstanding.

### ***Redemption of the Ordinary Shares***

The Articles of Association do not currently contain any provisions regarding the redemption of the Company's ordinary shares. Under Norwegian law, a company may, upon a motion by its board of directors and subject to obtaining shareholder approval, reduce its share capital to:

cover a loss which cannot be covered in any other way;

effect a distribution to shareholders;

effect a cancellation of treasury shares; or

allocate amounts from share capital to reserves to be used in accordance with the resolution adopted by the shareholders.

The reduction in share capital may be implemented by a redemption of ordinary shares or by a reduction in the nominal value of the shares.

### ***Related Party Transactions***

Under Norwegian law, an agreement to acquire assets or services from a shareholder or connected person (e.g., a spouse or significant other, and other family members) of such shareholder which involves consideration from the Company in excess of 1/20<sup>th</sup> of the Company's share capital at the time of such acquisition is not binding on the Company unless the agreement has been approved by a general meeting. Business agreements in the normal course of the Company's business containing pricing and other terms and conditions which are normal for such agreements, as well as the purchase of securities at a price which is in accordance with the official quotation, do not require such approval. Any performance of an agreement which is not binding on the Company must be reversed.

### ***Minority Rights***

Norwegian law contains a number of protections for minority shareholders against oppression by the majority. Any shareholder may petition the courts to have a decision of the Board of Directors or general meeting declared invalid on the grounds that it unreasonably favors certain shareholders or third parties to the detriment of other shareholders or the Company itself. In certain grave circumstances, shareholders may require the courts to dissolve the Company as a result of such decisions. Shareholders holding in the aggregate five percent or more of the Company's share capital have a right to demand that the Company hold an extraordinary general meeting to discuss or resolve specific matters. In addition, any shareholder may demand that the Company place an item on the agenda for any general meeting if the Company is notified in time for such item to be included in the notice of the meeting.

### ***Rights Upon Dissolution and Winding Up***

Any decision by a Norwegian company to dissolve generally requires the approval of two-thirds of the votes cast by its shareholders, as well as two-thirds of the share capital represented at the general meeting called to vote on the issue. If any conditions have occurred which, in accordance with a company's articles of association, must result in the dissolution of the company, or if the company must be dissolved as a result of a statutory provision, the shareholder proposal with respect to the company's dissolution requires approval of the majority of votes cast at the general meeting called to vote on the proposal. In the event of a dissolution, liquidation or winding up of the Company, the holders of ordinary shares are entitled to share ratably in all assets remaining after payment of all liabilities of the Company.

### ***Obligations upon Acquiring Certain Percentages of the Company's Shares***

Norwegian law requires any person, entity or group acting in concert that acquires more than 40 percent of the voting rights of a Norwegian company listed on the Oslo Stock Exchange (OSE) to make an unconditional general offer to acquire the whole of the outstanding share capital of that company. The offer is subject to approval by the OSE before submission of the offer to the shareholders. The offer must be in cash or contain a cash alternative at least equivalent to any other consideration offered. The offering price per share must be at least as high as the highest price paid by the offeror in the six-month period prior to the date the 40 percent threshold was exceeded, but equal to the market price if the market price was higher when the 40 percent threshold was exceeded. A shareholder who fails to make the required offer must, within four weeks, dispose of sufficient shares so that the obligation ceases to apply. Otherwise, the OSE may cause the shares exceeding the 40 percent limit to be sold by public auction. A shareholder who fails to make such offer cannot, as long as the mandatory offer requirement remains in force, vote the portion of his shares that exceed the 40 percent limit or exercise any rights of share ownership in respect of such shares, unless a majority of the remaining shareholders approve. However, such shareholder retains the right to receive dividends and preferential rights in the event of a share capital increase. In addition, the OSE may impose a daily fine upon a shareholder who fails to make the required offer.



If a shareholder, directly or via subsidiaries, acquires shares representing more than 90 percent of the total number of issued shares as well as more than 90 percent of the total voting rights attached to those shares, then the majority shareholder has the right (and each remaining minority shareholder of that company has the right to require the majority shareholder) to effect a compulsory acquisition for cash of any shares not already owned by the majority shareholder. A compulsory acquisition results in the majority shareholder becoming the owner of the shares of the minority shareholders with immediate effect. Upon effecting the compulsory acquisition, the majority shareholder must offer the minority shareholders a specific price per share and to pay the consideration offered to a separate bank account for the benefit of the minority shareholders. The determination of the price per share would be at the discretion of the majority shareholder. If any minority shareholder does not accept the offered price, such minority shareholder may, within a specified period of not less than two months, request that the price be set by the Norwegian courts. The cost of the court procedure would normally be charged to the account of the majority shareholder, and the courts would have full discretion in determining the consideration due the minority shareholder as a result of the compulsory acquisition.

### **Transfers and Other Changes in Ownership of the Company's Shares by Directors and Officers**

Under Norwegian law, the individual members of the Board of Directors, the President and Chief Executive Officer, and other key employees must immediately notify the Board of Directors of both their own and their personal connected persons' sale or acquisition of the Company's shares or other securities. Such sale or acquisition must also be reported to the OSE, which will promptly publish the notice through its information system.

### **Insider Trading Legislation**

Under Norwegian law, the subscription, purchase, sale or exchange of securities that are listed must not be undertaken by anyone who has information about the securities, the issuer thereof, or other factors which may influence the price of the securities, and which is not publicly available or generally known in the market. No member of the board or auditor associated with the company issuing securities may subscribe for, or incite anyone to subscribe for, purchase, sell or exchange financial instruments connected to the issuing company without properly investigating whether there exists such information. This applies correspondingly to deputy members and observers of the board of directors, senior employees of the company and senior employees and board members of a company in the same group who can normally be expected to have access to such information. The same restrictions apply to entering into the purchase, sale or exchange of derivative rights connected to such securities.

### **Description of American Depositary Receipts**

The following is a summary of certain provisions of the Amended and Restated Deposit Agreement, dated as of 1 October 1987, as amended by Amendment No. 1, dated 27 May 1999 (the **Deposit Agreement**), among the Company, JPMorgan Chase Bank (as successor in interest to Morgan Guaranty Trust Company of New York), as Depositary and holders from time to time of the ADRs issued by the Depositary under the Deposit Agreement. An ADR is the physical certificate that evidences any number of American depositary shares (ADSs). Subject to the terms of the Deposit Agreement, each ADS represents rights attributable to one ordinary share of the Company.

This summary is not intended to be a complete description of the Deposit Agreement. Copies of the Deposit Agreement are available for inspection at the Depositary's office located at 60 Wall Street, New York, New York 10260 (the **Depositary's Office**) and at the principal Oslo office of Den norske Bank (the **Custodian**) or any successor or additional custodian.

The Deposit Agreement and the ADRs are governed by New York law.





### ***Deposit of Ordinary Shares***

A person or entity may register ordinary shares of the Company in the VPS System in the name of the Depository (as a nominee of such person or entity and not as a beneficial owner of such shares). Ordinary shares (or evidence of rights to receive ordinary shares) may be deposited through:

electronic transfer of such shares to the account of the Depository in the Company's share registry on the VPS System, or

evidence, satisfactory to the Custodian, of irrevocable instructions to cause the ordinary shares to be transferred to the Depository's account, together with related documentation specified in the Deposit Agreement.

Subject to the terms and conditions of the Deposit Agreement, upon each deposit of ordinary shares, receipt of related delivery documentation and compliance with the other provisions of the Deposit Agreement, including the payment of the fees and charges of the Depository and any taxes or other fees or charges owing, the Depository will issue an ADR or ADRs in the name of the person or entity entitled to such ADR(s) evidencing the number of ADSs to which such person or entity is entitled. Certificated ADRs will be delivered at the Depository's Office.

The Depository may issue ADRs prior to the deposit of ordinary shares (or rights to receive ordinary shares), referred to in the Deposit Agreement as a pre-release, only if: (i) the ADRs are fully collateralized (marked to market daily) with cash or U.S. government securities until the ordinary shares are deposited in the Depository's name; (ii) the applicant for the ADRs represents in writing that it owns the ordinary shares, has assigned all beneficial right, title and interest in such ordinary shares to the Depository, and will not dispose of such ordinary shares other than in satisfaction of the pre-release; and (iii) all such ADRs represent not more than 20 percent of all ADSs (excluding those evidenced by pre-released ADRs). The collateral shall be held for the benefit of the ADR holders. The Depository may retain for its own account any compensation for the issuance of ADRs in connection with a pre-release, including any earnings on the held collateral.

### ***Transfer of ADRs***

The ADRs are transferable on the books of the Depository; provided, however, that the Depository may close the transfer books at any time or from time to time when deemed expedient by it in its reasonable judgment in connection with the performance of its duties. As a condition precedent to the execution and delivery, registration of transfer, split-up, or combination or surrender of, any ADR, or transfer and withdrawal of ordinary shares, the Depository or the Custodian may require payment from the person presenting the ADR or the depositor of the ordinary shares of a sum sufficient to reimburse it for any taxes or other governmental charges and any stock transfer or registration fees with respect to the ADR or ordinary shares and payment of any applicable fees payable by the holders of ADRs. The Depository may refuse to deliver an ADR, register the transfer of any ADR or make any distribution of, or related to, ordinary shares until it or the Custodian has received such proof of citizenship, residence, exchange control approval, legal or beneficial ownership or other information as it may deem necessary or proper or as the Company may require by written request to the Depository or the Custodian. The delivery, transfer and surrender of ADRs generally may be suspended during any period when the transfer books of the Depository are closed, or if any such action is deemed necessary or advisable by the Depository or the Company at any time or from time to time because of any requirement of law or of any government or governmental body or commission, or under any provision of the Deposit Agreement, or for any other reason.

### ***Surrender of ADRs for purposes of Receiving Ordinary Shares and Other Deposited Securities***

An ADR holder may surrender its ADRs at the Depository's Office for the purpose of withdrawal of the ordinary shares represented thereby, together with all securities, property and cash received by the Depository or the Custodian

in respect of or in lieu of such ordinary shares (collectively, the **Deposited Securities** ). Upon such surrender, the payment of applicable fees, charges and taxes, and delivery of proper instructions, the holder is entitled to have the ordinary shares relating to the

surrendered ADRs registered in the name of the holder (or such other name as the holder may request) in the VPS System. The holder is also entitled to delivery, at the Depository's Office or at the office of the Custodian, of a certificate or certificates for, or other documents of title to, the Deposited Securities, if any, not registered in the VPS System that are then represented by the surrendered ADRs. At the Depository's discretion, the Depository may make delivery of any cash, dividends, distributions or rights with respect to the amount of the Deposited Securities evidenced by the surrendered ADRs, or any proceeds of sale of such cash, dividends, distributions or rights held by the Depository.

Under the terms of the Deposit Agreement, the Depository may refuse or suspend the surrender of outstanding ADRs only in connection with:

temporary delays caused by closing the transfer books of the Depository or the Company, the deposit of ordinary shares in connection with voting at a shareholders' meeting, or the payment of dividends;

the payment of fees, taxes and similar charges; or

compliance with any laws or governmental regulations relating to the ADRs or to the withdrawal of Deposited Securities.

#### ***Dividends and Other Distributions***

The Company may make various types of distributions with respect to its ordinary shares. Under the terms of the Deposit Agreement, the Depository has agreed to pay ADR holders the cash dividends and other distributions received by the Custodian on any Deposited Securities. ADR holders shall receive these distributions, in proportion to the number of ADSs held by them, in the following manner:

#### **Cash Distributions**

Whenever the Depository receives any cash dividend or other cash distribution by the Company on any Deposited Securities, the Depository is to convert such dividend or distribution into US dollars and remit the amount received, net of applicable taxes and governmental charges, to the ADR holders, net of any amounts required to be withheld by the Company, the Custodian or the Depository on account of taxes or other governmental charges and reasonable and customary expenses incurred by the Depository, if any, in the conversion of currency.

The Depository will distribute only such amount of the net cash dividend or other cash distribution as can be distributed without attributing to any ADR holder a fraction of one cent. Any balance not distributable on that basis will be held by the Depository (without liability for interest on such balance) and added to the next sum received by the Depository for distribution to holders of then outstanding ADRs.

If the Depository receives any currency other than US dollars, the Depository is required, to the extent that in its judgment it can convert such currency on a reasonable basis into US dollars and transfer the resulting US dollars to the United States, to convert all cash dividends and other cash distributions which it receives in respect of the Deposited Securities into US dollars. If the Depository determines, in its judgment, that such other currency received by it cannot be so converted or transferred (or if any approval or license of a governmental authority or agency of the United States required for such conversion is denied or is not obtainable or is not obtained within a reasonable period as determined by the Depository), the Depository may distribute such other currency (or documentation evidencing the right to receive the same) or, in its discretion, hold such currency for the respective accounts of the ADR holders entitled to receive the same. If any conversion of currency, in whole or in part, cannot be effected for distribution in US dollars to some of the ADR holders, the Depository may, in its discretion, convert the currency into US dollars and distribute the same to ADR holders for whom such conversion and distribution is practicable and distribute the

balance of such currency to, or hold such balance for, the accounts of the ADR holders for whom such conversion and distribution is not practicable.

### Distributions of Ordinary Shares

If a distribution by the Company consists of a dividend in, or distribution of, ordinary shares, the Depositary may, with the Company's approval, and shall, if the Company so requests, distribute to the ADR holders additional ADRs for an aggregate number of ADSs representing the number of ordinary shares received as such dividend or distribution. In lieu of delivering ADRs for fractional ADSs, the Depositary may sell the amount of ordinary shares represented by the aggregate of such fractions and distribute the net proceeds in the manner described with respect to cash distributions. If additional ADRs are not so distributed (other than with respect to fractional ADSs), each ADS will then represent the additional ordinary shares distributed upon the Deposited Securities represented thereby.

### Distributions other than Cash or Ordinary Shares

If the Depositary receives any distribution upon the Deposited Securities in a form other than cash or the Company's ordinary shares (e.g., other securities or property), the Depositary is to distribute the same in any manner that the Depositary deems equitable and practicable. If, in the opinion of the Depositary, it cannot distribute such distribution (for example, because of its determination that such distribution in the United States would be unlawful) or cannot do so proportionately among the ADR holders, the Depositary may, with the Company's approval, adopt such method as it deems equitable and practicable to effect the distribution, including the sale (at public or private sale) of the securities or other property distributed, or any part of the distribution, and then distribute the net proceeds of any such sale in the manner described with respect to cash distributions.

### ***Subscription Rights***

In the event that the Company offers (or causes to be offered) to the holders of any Deposited Securities any rights to subscribe for additional ordinary shares or any rights of any other nature, the Depositary, after consultation with the Company, has discretion to (i) follow a procedure to make such rights available to the ADR holders, or (ii) dispose of such rights and make the net proceeds available in US dollars to such holders. However, if requested by the Company, the Depositary is to either:

- (a) if lawful and feasible at the time of the rights offering, make such rights available to ADR holders by means of warrants or other instruments, or employ another method deemed feasible to facilitate the exercise, sale or transfer of the rights by the ADR holders; or
- (b) if not then lawful and feasible by means of warrants or other instruments (or if the rights represented by such warrants or other instruments are not exercised and appear to be about to lapse), sell such rights or such warrants or other instruments at public or private sale on terms the Depositary deems proper, and allocate the proceeds of any such sale for the accounts of the ADR holders, upon an averaged or other practicable basis without regard to distinctions among ADR holders because of the application of exchange restrictions applicable to any particular ADR holder(s), the date of delivery of ADRs or otherwise.

### ***Record Dates***

Whenever any cash dividend or other cash distribution, if any, becomes payable or any distribution other than cash is made, or rights are issued, with respect to the Deposited Securities, or whenever the Depositary receives notice of any meeting of holders of ordinary shares or other Deposited Securities, the Depositary will, after consultation with the Company, if the Company so requests, fix a record date for the determination of the ADR holders who will be entitled to receive such dividend, distribution or rights, or the net proceeds of the sale of the dividend, distribution or rights, to give instructions for the exercise of voting rights at any such meeting.



### ***Voting of the Underlying Ordinary Shares***

Upon receipt of notice of any meeting of holders of ordinary shares or other Deposited Securities, the Depositary is obligated, as soon as practicable thereafter, to mail to ADR holders (i) a notice containing a summary of such information as is contained in such notice of meeting and a statement that ADR holders at the close of business on a specified record date will be entitled, subject to applicable Norwegian law and the Company's articles of association, to instruct the Depositary as to the exercise of voting rights, if any, pertaining to the ordinary shares or other Deposited Securities underlying their ADSs, and (ii) a statement as to the manner in which such instructions may be given, including an express indication that instructions may be given to the Depositary to give a discretionary proxy to a person designated by the Company. Upon the written request of an ADR holder on such record date, received on or before the date established by the Depositary for such purpose, the Depositary will endeavor insofar as practicable to vote or cause to be voted the ordinary shares or other Deposited Securities under the ADSs evidenced by the holder's ADRs in accordance with any non-discretionary instructions set forth in such request. Under the Company's articles of association, notice of shareholders' meeting must be given at least 14 days in advance of the meeting. Unless notification of a meeting is given in sufficient time to permit the Depositary to notify ADR holders of the proposed meeting and to allow holders to take the steps described above, ADR holders will not be able to exercise voting rights with respect to the ordinary shares underlying their ADRs.

The Depositary will not, under any circumstances, exercise any discretion as to voting. Further, the Depositary will not vote the ordinary shares or other Deposited Securities represented by ADRs other than in accordance with the written instructions received from ADR holders.

### ***Reports and Notices***

The Depositary will make available for inspection by ADR holders at the Depositary's Office any reports and communications received from the Company which are both (a) received by the Depositary or its nominee or nominees as the holder of the Deposited Securities, and (b) made generally available to the holders of such Deposited Securities by the Company. The Depositary will mail to ADR holders copies of notices of shareholder meetings (or adjournments thereof) furnished by the Company to the Custodian, the taking of any action in respect of cash or other distributions, or any rights offering.

### ***Amendment and Termination of the Deposit Agreement***

The form of the ADRs and the Deposit Agreement may at any time be amended by agreement between the Company and the Depositary. Any amendment which imposes or increases any fees or charges (other than stock transfer or other taxes and other governmental charges, transfer or registration fees, cable, telex or facsimile transmission costs, delivery costs, and expenses of the Depositary in connection with conversion of any currency into US dollars) or which otherwise prejudices any substantial existing right of ADR holders, will not take effect as to outstanding ADRs until the expiration of three months after the Depositary has given notice of such amendment to the ADR holders. Every ADR holder at the time such amendment becomes effective will be deemed, by continuing to hold such ADR(s), to consent and agree to such amendment and to be bound by the Deposit Agreement as amended thereby. In no event may any amendment impair the rights of any ADR holder to surrender its ADRs and receive the Deposited Securities represented thereby.

Whenever so directed by the Company, the Depositary has agreed to terminate the Deposit Agreement by mailing notice of such termination to the holders of the ADRs then outstanding at least 60 days prior to the date fixed in such notice for such termination. The Depositary may likewise terminate the Deposit Agreement at any time 60 days after the Depositary has delivered to the Company a notice of its election to resign if a successor depositary has not, within the 60-day period, been appointed and accepted its appointment as provided in the Deposit Agreement.

If any ADRs remain outstanding after the termination date, the Depositary will then discontinue the registration of transfer of ADRs, suspend the distribution of dividends to the holders and not give any further notices or perform any further acts under the Deposit Agreement. The Depositary will continue to collect dividends and



other distributions pertaining to the Deposited Securities, sell rights as provided in the Deposit Agreement, deliver ordinary shares and other property represented by ADRs and the net proceeds of the sale of any rights or other property, in exchange for surrendered ADRs. At any time after the expiration of two years from the termination date, the Depositary may sell the Deposited Securities and hold the net proceeds, together with any other cash then held, without liability for interest, for the *pro rata* benefit of the holders of ADRs which have not previously been surrendered.

### ***Charges of Depositary***

The Depositary will charge the party to whom ADRs are delivered against deposits, and the party surrendering ADRs for delivery of ordinary shares or other deposited securities, property and cash, \$5.00 for each 100 ADSs (or fraction thereof) represented by the ADRs issued or surrendered. The Company will pay all other charges of the Depositary and those of any registrar or co-registrar under the Deposit Agreement, except for taxes and other governmental charges, any applicable share transfer or registration fees on deposits or withdrawals of ordinary shares, certain cable, telex, facsimile transmission and delivery charges and such expenses as are incurred by the Depositary in the conversion of foreign currency into US dollars. The Company will pay all charges and expenses of the Depositary in connection with the initial issuance of ADRs payable as a dividend or distribution to shareholders and in connection with any rights offering to shareholders. The charges and expenses of the Custodian are for the sole account of the Depositary.

### ***Limitations on Obligations and Liability to ADR Holders***

Neither the Depositary nor the Company will be liable to the holders of ADRs if prevented or delayed by law, governmental authority, any provision of the Company's articles of association or any circumstances beyond its control in performing its obligations under the Deposit Agreement or if obliged to do or perform any act or thing inconsistent with the provisions of the Deposit Agreement. The obligations of the Company and the Depositary under the Deposit Agreement are expressly limited to using their best judgment and good faith in performing their respective duties specified in the Deposit Agreement.

Neither the Depositary nor the Company has any obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADRs which, in its opinion, may involve it in expense or liability, unless indemnity satisfactory to it against all expense (including fees and disbursements of counsel) and liability is furnished as often as may be required.

The Depositary will not be responsible for any failure to carry out any instructions to vote any of the Deposited Securities, or for the manner in which any vote is cast or the effect of any such vote, provided that any such action or failure to act is in good faith.

The Depositary, subject to the laws of Norway, the Company's articles of association and the terms of the Deposit Agreement, may own and deal in any class of the Company's securities and in ADRs.

## **ITEM 10.C. MATERIAL CONTRACTS**

Item 10.C. of Form 20-F requires a summary of each material contract, other than contracts entered into in the ordinary course of business, to which the Company or any member of the Group is a party, for the two years immediately preceding publication of the Form 20-F. In accordance with this requirement, please see Exhibit 4 and Exhibit 99.4 pertaining to the new employment contract for Mr. Eivind Reiten, the Company's President and CEO, and the Agri demerger plan. Mr. Reiten's employment contract is required to be filed in accordance with Instruction 4 to

Item 19 of Form 20-F.

## ITEM 10.D. EXCHANGE CONTROLS

Under current Norwegian foreign exchange regulations, transfers of capital to and from Norway are not subject to prior approval from Norwegian authorities or the Central Bank provided that payments are made through licensed banks. Thus, non-Norwegian shareholders may receive dividend payments without a Norwegian exchange control consent.

## ITEM 10.E. TAXATION

### United States Federal Income Tax Consequences

The following discussion outlines certain potential United States federal income tax consequences of the acquisition, ownership and disposition of the Company's ordinary shares or ADSs. The discussion generally applies to a U.S. holder (as defined below) of ordinary shares or ADSs that holds the same as capital assets for tax purposes. This discussion does not apply to certain U.S. holders subject to special rules, such as dealers in securities, traders in securities that elect to use a mark-to-market method of accounting for their securities holdings, tax-exempt entities (including pension plans), life insurance companies, persons liable for alternative minimum tax, persons that hold ordinary shares or ADSs through a partnership or other pass-through entity, persons that hold shares or ADSs as part of a straddle or a hedging or conversion transaction or persons whose functional currency is not the US dollar.

This discussion is based on the Internal Revenue Code of 1986, as amended (the **Code**), its legislative history, existing and proposed regulations, published rulings and court decisions, and the Convention between the United States and the Kingdom of Norway for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Property (the "**Treaty**"). These authorities are subject to change at any time, possibly on a retroactive basis. In addition, this discussion is based in part upon the representations of the Depositary and the assumption that each obligation in the Deposit Agreement and any related agreement will be performed in accordance with its terms.

A holder of ordinary shares or ADSs is a **U.S. holder** if the holder is a beneficial owner of such shares or ADSs and is (i) a citizen or resident of the United States, (ii) a corporation created or organized in or under the laws of the United States or any political subdivision thereof, (iii) an estate whose income is subject to United States federal income tax regardless of its source, or (iv) a trust, if a court in the United States can exercise primary supervision over the trust's administration and one or more United States persons are authorized to control all substantial decisions of the trust.

A **non-U.S. holder** is a beneficial owner of ordinary shares or ADSs that is not a U.S. holder.

The Company recommends that you consult your own tax advisor regarding the U.S. federal, state, local and other tax consequences of acquiring, owning and disposing of ordinary shares and ADSs in your particular circumstances.

Taking into account the above assumptions, for U.S. federal income tax purposes, if you hold ADRs evidencing ADSs, you generally will be treated as the owner of the ordinary shares represented by those ADSs.

### *Taxation of Dividends*

A non-Norwegian shareholder is generally subject to a withholding tax at a rate of 25 percent on dividends distributed by Norwegian companies, unless the non-Norwegian shareholder is carrying on business activities in

Norway and such shares are effectively connected with such activities. The withholding tax of 25 percent may be lower pursuant to tax treaties between Norway and the country in which the shareholder is resident. The Treaty rate is generally 15 percent. The Treaty withholding tax rate will generally apply to dividends paid on shares held directly by U.S. holders that are residents of the United States within the meaning of the Treaty.

Dividends paid to the Depository for redistribution to U.S. holders will generally be subject to a withholding tax of 15 percent. If you are a U.S. holder, you must generally include in your gross income for United States federal income tax purposes as a dividend the gross amount of any distribution made by the Company out of its current or accumulated earnings and profits (as determined for United States federal income tax purposes). You must include in gross income any Norwegian tax withheld from any dividend even though you do not, in fact, receive the amount withheld as tax. You must include any dividend in income when you (in the case of shares) or the Depository (in the case of ADSs) receive the dividend, actually or constructively. The dividend will not be eligible for the dividends-received deduction generally allowed to United States corporations in respect of dividends received from other United States corporations.

For taxable years beginning after 31 December 2002, and before 1 January 2009, dividends received by U.S. holders that are individuals, estates or trusts from qualified foreign corporations, as defined in Section 1(h)(11) of the Code, generally are taxed at the preferential tax rates applicable to long-term capital gains. Section 1(h)(11) of the Code defines a qualified foreign corporation as a foreign corporation the stock of which is readily tradable on an established securities market in the United States (including through ADRs) or a foreign corporation that is eligible for the benefits of one of certain comprehensive income tax treaties with the United States that include an exchange of information program. The Company expects that it will constitute a qualified foreign corporation provided that it is not treated as a Foreign Personal Holding Company, Foreign Investment Company, or Passive Foreign Investment Company, which it believes will be the case. There can be no assurance, however, that the Company will not be treated as a Foreign Personal Holding Company, Foreign Investment Company, or Passive Foreign Investment Company for 2004. Recently enacted law has eliminated the Foreign Personal Holding Company and Foreign Investment Company rules for taxable years beginning after 31 December 2004. Accordingly, for 2005 and future taxable years, the Company will constitute a qualified foreign corporation so long as it is not treated as a Passive Foreign Investment Company.

Dividends received in a taxable year when the Company does not constitute a qualified foreign corporation, or in a taxable year immediately after one in which the Company did not constitute a qualified foreign corporation, will be subject to U.S. federal income tax at ordinary income tax rates.

In 2003, the U.S. Department of the Treasury (the Treasury) and the Internal Revenue Service (the IRS) announced that they expected to issue regulations providing procedures for a foreign corporation to certify that it is a qualified foreign corporation. Such regulations were not issued in 2004, but Treasury and the IRS have confirmed their intent shortly to issue the regulations in proposed form. It is expected that these regulations will require persons required to file information returns to report a distribution with respect to a foreign security issued by a foreign corporation as a dividend from a qualified foreign corporation if the foreign corporation has, among other things, certified under penalties of perjury that the foreign corporation is not, in the taxable year of the corporation in which the distribution was paid, and was not in the preceding taxable year, a Foreign Personal Holding Company, Foreign Investment Company, or Passive Foreign Investment Company.

If regulations are issued in 2005, the Company anticipates certifying that it is a qualified foreign corporation for the year ending 31 December 2005.

In addition to the foregoing requirements, a dividend received by a U.S. holder is taxed at the rate applicable to long-term capital gains only if the U.S. holder satisfies certain holding period requirements. Thus, a dividend on ordinary shares or ADSs is taxed at preferential rates only if the U.S. holder receiving the dividend has held such ordinary shares or ADSs for at least 61 days during the 121-day period beginning 60 days before the first date when such ordinary shares or ADSs could be sold without an entitlement to the dividend (the ex-dividend date). The dividend rules are complex and the Company recommends that a U.S. holder consult his or her own tax advisor regarding the dividend rules and how these rules may affect his or her U.S. federal, state, local and other income tax

situation.

The amount of the dividend that any U.S. holder must include in income is the US dollar value of the gross amount of the Norwegian kroner dividend, determined at the spot Norwegian kroner/US dollar exchange rate on the date the dividend distribution is included in your income, regardless of whether the payment is, in fact, converted into US dollars.

Distributions to a U.S. holder in excess of such holder's pro rata share of the Company's current and accumulated earnings and profits, as determined for United States federal income tax purposes, will be treated as a nontaxable return of capital to the extent of your tax basis in the ordinary shares or ADSs and, to the extent such distribution exceeds your tax basis, the distribution will be treated as capital gain.

Subject to certain limitations, the 15 percent Norwegian tax withheld in accordance with the Treaty and paid over to Norway will be creditable against your United States federal income tax liability. Dividends will be income from sources outside the United States, but generally will be passive income or financial services income, which is treated separately from other types of income, for purposes of computing the foreign tax credit allowable to you. Alternatively, you may elect to claim a U.S. tax deduction, instead of a foreign tax credit, for such Norwegian tax, but only for a year in which you elect to do so with respect to all foreign income taxes.

Any gain or loss resulting from currency exchange fluctuations during the period from the date you include the dividend payment in income to the date you convert the payment into US dollars generally will be treated as ordinary income or loss. Such gain or loss generally will be income or loss from sources within the United States for foreign tax credit limitation purposes.

If you are a non-U.S. holder, dividends paid to you in respect of ordinary shares or ADSs will not generally be subject to United States federal income tax unless the dividends are effectively connected with the conduct of a trade or business within the United States or are attributable to a permanent establishment or fixed base that you maintain in the United States (if that is required by an applicable income tax treaty as a condition for subjecting you to United States taxation on a net income basis). In such cases, you will generally be taxed in the same manner as a U.S. holder. If you are a corporate non-U.S. holder, effectively connected dividends may, under certain circumstances, be subject to an additional branch profits tax at a 30 percent rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate.

### ***Taxation of Capital Gains***

If you are a U.S. holder and you sell or otherwise dispose of your ordinary shares or ADSs, you will generally recognize capital gain or loss for United States federal income tax purposes equal to the difference between the US dollar value of the amount that you realize and your tax basis, determined in US dollars, in your ordinary shares or ADSs. Capital gain of a non-corporate U.S. holder is generally taxed at a maximum rate of 15 percent where the property has been held for more than one year. The gain or loss will generally be income or loss from sources within the United States for foreign tax credit limitation purposes. If you receive any foreign currency on the sale of ordinary shares or ADSs, you may recognize U.S.-source ordinary income or loss as a result of currency fluctuations between the date of the sale of the ordinary shares or ADSs and the date the sales proceeds are converted into US dollars.

If you are a non-U.S. holder, you will not be subject to United States federal income tax on gain recognized on the sale or other disposition of your ordinary shares or ADSs unless: (i) the gain is effectively connected with a trade or business in the United States, or the gain is attributable to a permanent establishment or fixed base in the United States (if that is required by an applicable income tax treaty), or (ii) if you are an individual, you are present in the United States for at least 183 days in the taxable year of the sale, and certain other conditions exist. If you are a corporate non-U.S. holder, effectively connected gains that you recognize may also, under certain circumstances, be subject to an additional branch profits tax at a rate of 30 percent or at a lower rate if you are eligible for the benefits of

an income tax treaty that provides for a lower rate.



### ***Passive Foreign Investment Company (PFIC) Rules***

The Company believes that its ordinary shares and ADSs should not be treated as shares of a passive foreign investment company, or PFIC, for United States federal income tax purposes. However, this conclusion is a factual determination that is made annually and may, therefore, be subject to change.

A PFIC is defined as a corporation that is not formed in the United States and, for any taxable year, either (i) 75% or more of its gross income is passive income or (ii) the average percentage, by fair market value (or, if the corporation is not publicly traded and either is a controlled foreign corporation or makes an election, by adjusted tax basis) of its assets that produce or are held for the production of passive income is 50% or more. Passive income generally includes dividends, interest, certain rents and royalties, certain gains from the sale of stock and securities, and certain gains from commodities transactions.

For purposes of the PFIC income test and the assets test, if a foreign corporation owns (directly or indirectly) at least 25% by value of the stock of another corporation, such foreign corporation shall be treated as if it (a) held a proportionate share of the assets of such other corporation, and (b) received directly its proportionate share of the income of such other corporation. Also, for purposes of such PFIC tests, passive income does not include any interest, dividends, rents or royalties that are received or accrued from a related person to the extent such amount is properly allocable to the income of such related person which is not passive income.

U.S. holders owning shares of a PFIC are subject to the highest rate of tax on ordinary income in effect for the applicable taxable year and to an interest charge based on the value of deferral of tax for the period during which the shares of the PFIC are owned with respect to certain excess distributions on and certain dispositions of PFIC stock. However, if the U.S. holder makes a timely election to treat a PFIC as a qualified electing fund ( QEF ) with respect to such shareholder's interest therein, the above-described rules generally will not apply. Instead, the electing U.S. holder would include annually in his gross income his pro rata share of the PFIC's ordinary earnings and net capital gain regardless of whether such income or gain was actually distributed. A U.S. holder of a QEF may, however, elect to defer the payment of U.S. federal income tax on such income inclusions. In addition, subject to certain limitations, U.S. holders owning, actually or constructively, marketable stock (as specifically defined) in a PFIC will be permitted to elect to mark that stock to market annually, rather than be subject to the tax regime described above. Amounts included in or deducted from income under this alternative (and actual gains and losses realized upon disposition, subject to certain limitations) will be treated as ordinary gains or losses.

The Company believes that it was not a PFIC for its fiscal year ended 31 December 2003. However, there can be no assurance that the Company will not be considered a PFIC for the current or any future taxable year. There can be no assurance that the Company's determination concerning its PFIC status will not be challenged by the IRS, or that it will be able to satisfy record keeping requirements that will be imposed on QEFs in the event that it qualifies as a PFIC.

If you are a U.S. holder and you own shares or ADSs during any year that the Company is a PFIC, you must generally file IRS Form 8621.

### ***Backup Withholding and Information Reporting***

Dividend payments, or other taxable distributions, made within the United States to a non-corporate U.S. resident generally will be subject to information reporting requirements and backup withholding tax at a rate of 28 percent if the resident (i) fails to provide an accurate taxpayer identification number, (ii) is notified by the IRS that the resident has failed to report all interest or dividends required to be shown on federal income tax returns, or (iii) in certain circumstances, fails to comply with applicable certification requirements.



Persons that are not United States persons may be required to establish their exemption from information reporting and backup withholding by certifying their status on an appropriate IRS Form W-8.

If you sell your ordinary shares or ADSs to or through a United States office of a broker, the payment of the proceeds is subject to both United States backup withholding and information reporting unless you certify, under penalties of perjury, that you are a non-U.S. person or you otherwise establish an exemption. If you sell your ordinary shares or ADSs outside the United States through a non-U.S. office of a non-U.S. broker, and the sale proceeds are paid to you outside the United States, then United States backup withholding and information reporting requirements generally will not apply to that payment. However, U.S. information reporting, but not backup withholding, will apply to a payment of sales proceeds, even if that payment is made outside of the United States, if you sell your ordinary shares or ADSs through a non-U.S. office of a broker that:

is a U.S. person,

derives 50 percent or more of its gross income for a specified three-year period from the conduct of a trade or business in the United States,

is a controlled foreign corporation as to the United States, or

is a foreign partnership, if at any time during its tax year: (i) one or more of its partners are U.S. persons, as defined in U.S. Treasury regulations, who in the aggregate hold more than 50 percent of the income or capital interest in the partnership, or (ii) at any time during its tax year the foreign partnership is engaged in a U.S. trade or business,

unless the broker has documentary evidence in its records that you are a non-U.S. person and does not have actual knowledge that you are a U.S. person or you otherwise establish an exemption.

You generally may obtain a refund of any amount withheld under the backup withholding rules that exceeds your income tax liability by filing a timely refund claim with the IRS.

#### **ITEM 10.F. DIVIDENDS AND PAYING AGENTS**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 10.F. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

#### **ITEM 10.G. STATEMENT BY EXPERTS**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 10.G. if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

#### **ITEM 10.H. DOCUMENTS ON DISPLAY**

The English translation of the Articles of Association has been filed as an exhibit to this annual report. See the Index to Exhibits.

**ITEM 10.I. SUBSIDIARY INFORMATION**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 10.I. if, as is the case in this instance, the Form 20-F is being filed in the United States.

**ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Quantitative and qualitative information about market risk as of 31 December 2004 is included in the section titled Risk Management in Item 5 of this annual report. All statements other than historical information included in the Risk Management section are forward-looking statements. The actual impact of future market changes could differ materially due to, among other things, the risk factors discussed in the annual report.

**ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES**

In accordance with the instructions to Form 20-F, the Company does not need to provide the information called for by Item 12 if, as is the case in this instance, the Form 20-F is being filed as an annual report under the Exchange Act.

## **PART II**

### **ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES**

Item 13 of Form 20-F requires information with respect to (i) any material default in the payment of principal, interest, a sinking or purchase fund installment, or any other material default not cured within 30 days, relating to indebtedness of the Company or any of its significant subsidiaries, (ii) the payment of dividends if in arrears, (iii) any other material delinquency not cured within 30 days, relating to any class of preferred stock. There is nothing to report by the Company within the scope of this Item requirement.

### **ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS**

None.

### **ITEM 15. CONTROLS AND PROCEDURES; CEO AND CFO CERTIFICATIONS**

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, the Company has evaluated (as required by Exchange Act Rules 13a-15(b) and 15d-15(b)) the effectiveness of the design and operation of its disclosure controls and procedures (as defined in the Exchange Act Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this annual report.

In designing and evaluating the Company's disclosure controls and procedures, management, including the Chief Executive Officer and Chief Financial Officer, recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Management was also necessarily required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on their evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures are designed to provide reasonable assurance of achieving the Company's desired control objectives and that these disclosure controls and procedures are, in fact, effective at a reasonable assurance level.

There has been no change in the Company's internal control over financial reporting that occurred during the period covered by this annual report on Form 20-F that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

### **ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

The Board of Directors has determined that Hydro has at least one audit committee financial expert (as that term is defined in SEC rules) serving on its Audit Committee: Kurt Anker Nielsen. The Board has further determined that Mr. Nielsen is independent within the parameters set forth in Exchange Act Rule 10A-3.

### **ITEM 16B. CODE OF ETHICS**

In July 2003, the Board of Directors approved a new code of conduct (the **Code of Conduct** ) that applies to all Hydro employees (including the Company's President and Chief Executive Officer, Senior Vice President and Chief Financial Officer, and Senior Vice President, Corporate Accounting and Consolidation) throughout the world, as well as to Board members of the Company and its subsidiaries. The main purpose of the Code of Conduct is to ensure that all persons acting on behalf of

Hydro perform their activities in an ethical matter and in accordance with Hydro standards. The Code of Conduct provides channels for complaints, for instance over questionable accounting or auditing matters. It also addresses requirements regarding personal conduct, integrity, compliance with laws and other matters such as handling of conflicts of interest and a commitment to equal opportunities for all employees. The Code of Conduct has been posted on Hydro's website (www.hydro.com).

#### ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Deloitte Statsautoriserede Revisorer AS (Deloitte) is the principal auditor of Norsk Hydro ASA. Certain portions of audits are performed by Ernst & Young and other firms. The following table shows total audit and non-audit fees for the fiscal years ended 31 December 2004 and 2003.

Year ended 31 December 2004	Audit related fees	Audit	Other	Tax fees <sup>(3)</sup>	Total
		Fees <sup>(1)</sup>	non-audit Fees <sup>(2)</sup>		
Amounts in NOK thousand					
Deloitte Norway	24,691	2,018	1,337	17	28,063
Deloitte Abroad	23,399	4,899	427	7,445	36,170
Total Deloitte	48,090	6,917	1,764	7,462	64,233
Ernst & Young <sup>(5)</sup>	11,095	929	0	2,200	14,224
Others	3,660	1,314	1,215	1,774	7,963
Total fees	62,845	9,160	2,979	11,436	86,420

Year ended 31 December 2003 <sup>(4)</sup>	Audit related fees	Audit	Other	Tax fees <sup>(3)</sup>	Total
		Fees <sup>(1)</sup>	non-audit Fees <sup>(2)</sup>		
Amounts in NOK thousand					
Deloitte Norway	26,257	1,839	8,069	400	36,565
Deloitte Abroad	32,728	2,911	1,863	3,828	41,330
Total Deloitte	58,985	4,750	9,932	4,228	77,895
Ernst & Young <sup>(5)</sup>	16,998	1,486	1,076	4,768	24,328
Others	11,096	2,941	1,296	2,677	18,010
Total fees	87,079	9,177	12,304	11,673	120,233

- 
- (1) Audit related fees primarily consist of consultations for financial accounting reporting standards, SEC filings and compliance with new SEC rules and regulations, as well as audit and agreed-upon procedures in connection with acquisitions and divestments. In addition, there are other miscellaneous audit related projects at subsidiaries throughout the world.
  - (2) Other non-audit fees primarily consist of agreed-upon procedures associated with the Company's environmental and sustainability reporting.
  - (3) Tax fees are made up of various tax services such as: tax planning and support, tax controversy assistance, expatriate taxes, employee benefit taxes, tax compliance and support, tax opinions, tax-only valuations, and transfer-pricing evaluations.



- (4) Fee amounts for 2003 include services rendered to activities transferred to Yara in March 2004.
- (5) Amounts for Ernst & Young related to Hydro subsidiaries under Ernst & Young's audit. Ernst & Young provides non-audit services to subsidiaries that it does not audit; such fees are not included in this table.

***Pre-approval Policy***

In the Spring of 2003, the Audit Committee established a pre-approval policy governing the engagement of the Company's primary and other external auditors to provide audit and permissible non-audit services for or on behalf of the Company or any entity within the Hydro Group. The pre-approval policy is intended to safeguard the continued independence of such auditors, ensuring that: (1) the auditors are not functioning in the role of management; (2) the auditors are not auditing their own work; and (3) the auditors are not serving in an advocacy role for the Company and/or its affiliates.

Under the pre-approval policy, the Audit Committee has defined and pre-approved subcategories of audit and non-audit services, such non-audit services being limited to services permissible to be provided by the Company's primary external auditors under SEC regulations. The Audit Committee's pre-approval includes annual monetary frames for each of the following categories of services:

audit-related;

tax; and

non-audit related.

The Audit Committee chairperson is authorized to approve changes to the subcategories of the services and/or any increase in the monetary frames between regular meetings of the Audit Committee. Any such change is to be disclosed to the full Audit Committee on a quarterly basis.

The Audit Committee's pre-approval policy also applies to auditors, other than the Company's primary external auditors, which, in the aggregate, audit more than 5 percent of Hydro's consolidated assets or income from continuing operations before tax. For such auditors, the pre-approval policy applies only to services provided to the Hydro subsidiary or subsidiaries under audit. Within the scope of the pre-approval policy, all services have been pre-approved and all amounts for audit related, tax and other non-audit related services are within the monetary frames established by the audit committee.

#### ITEM 16D. EXEMPTION FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not Applicable

#### ITEM 16E. PURCHASE OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

The annual general meeting held in May 2004 approved the Board of Director's proposal to repurchase up to 2,808,810 of the Company's shares for an 18 month period. The following table shows the total number of shares repurchased in the open market, and the average price paid per share for each month starting June 2004, the month the Company began to repurchase its shares.

<b>Period</b>	<b>Total Number of Shares Purchased</b>	<b>Average Price Paid per Share in NOK</b>	<b>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</b>	<b>Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs</b>
<b>2004</b>				
1 - 30 June	653,000	434.45	653,000	2,155,810
1 - 31 July	630,460	432.02	630,460	1,525,350
1 - 31 August	1,055,200	434.41	1,055,200	470,150

Edgar Filing: NORSK HYDRO A S A - Form 20-F

1 - 30 September	470,150	476.65	470,150	0
Total	2,808,810	440.95	2,808,810	0

**PART III****ITEM 17. FINANCIAL STATEMENTS**

Not applicable.

**ITEM 18. FINANCIAL STATEMENTS**

The Company's Consolidated Financial Statements as of and for the year ended 31 December 2004 and the related notes thereto, which are included in Exhibit 10 of this Annual Report, as well as the schedule to the Consolidated Financial Statements listed in Item 19(a), have been audited by Deloitte Statsautoriserte Revisorer AS, independent public accountants, as indicated in their report. Reference is made to Item 19 for a list of all financial statements included in Exhibit 10 or filed herewith.

**ITEM 19. FINANCIAL STATEMENTS AND EXHIBITS****a. Financial Statements**

**The following are filed as part of this annual report on Form 20-F:**

Schedule II Valuation and qualifying accounts and reserves page 157

**The following is included in Exhibit 10 to this annual report on Form 20-F:**

	<b>Pages *</b>
Report of Independent Registered Public Accounting Firm Consent of Independent Registered Public Accounting Firm Consolidated income statements for the years ended 31 December 2004, 2003, and 2002	10-1
Consolidated statements of comprehensive income for the years ended 31 December 2004, 2003, and 2002	10-1
Consolidated balance sheets at 31 December 2004 and 2003	10-2
Consolidated statements of cash flows for the years ended 31 December 2004, 2003, and 2002	10-3
Notes to the Consolidated Financial Statements	10-4 to 10-39

\* Page references are to the page numbering in Exhibit 10

**b. Exhibits**

Exhibit No.	Description
1.	The Company's Articles of Association (as amended and currently in effect)
4.	CEO's Employment Contract
8.	Significant Subsidiaries of the Company

10. Consolidated Financial Statements (including the notes thereto)

155

---

Exhibit No.	Description
12.1	Certification of Eivind Reiten, President and Chief Executive Officer of Norsk Hydro ASA, pursuant to Exchange Act Rule 13a-14(a) or Rule 15d-14(a)
12.2	Certification of John Ove Ottestad, Executive Vice President and Chief Financial Officer of Norsk Hydro ASA, pursuant to Exchange Act Rule 13a-14(a) or Rule 15d-14(a)
13.	Certifications furnished pursuant to Rule 13a-14(b) or Rule 15d-14(b)
99.1	Information regarding the Corporate Assembly Members, Deputy Members and Observers
99.2	Operational Data
99.3	Audit Committee Mandate
99.4	The Demerger Plan (incorporated by reference to Exhibit 1 to the Company's report on Form 6-K dated December 1, 2003)

**Norsk Hydro ASA and Subsidiaries**  
**Schedule II Valuation and Qualifying Accounts and Reserves**

(Amount in NOK million)

Description	Balance at beginning of period	Charged to costs and expenses	Additions		Balance at end of period
			Charged to other accounts (1)	Deductions (2)	
Year-end 31 December 2004					
Allowance for doubtful accounts	922	199	39	(269)	891
Valuation allowance for deferred tax assets	1,047	(25)	(55)		967
Environment accruals	5,576	395	895	(235)	6,631
Year-end 31 December 2003					
Allowance for doubtful accounts	685	737	138	(638)	922
Valuation allowance for deferred tax assets	945	22	80		1,047
Environment accruals <sup>(3)</sup>	5,216	337	401	(378)	5,576
Year-end 31 December 2002					
Allowance for doubtful accounts	559	322	21	(217)	685
Valuation allowance for deferred tax assets	727	(163)	381		945
Environment accruals	2,188	323	513	(215)	2,809

(1) Includes amounts recognized in business combinations and foreign currency translation adjustments.

(2) Deductions primarily represent uncollectible accounts charged against the allowance for doubtful accounts and expenditures related to and reductions of environmental accruals.

(3) Effective 1 January 2003, Hydro implemented the accounting standard for asset retirement obligations, such as decommissioning and abandonment of oil and gas production platforms, facilities and pipelines [SFAS 143]. The accounting standard requires that the fair value of future asset retirement obligations be recorded in the Company's balance sheet in the period it is incurred; accordingly, obligations for oil and gas installations should be recognized at the start of production. Asset retirement costs are capitalized as part of the asset's original cost and depreciated over the asset's useful life, while changes to the present value of the obligations are charged to earnings. The changes resulted in an increase in the capitalized value of fixed assets by NOK 1,089 million. The increase in the original cost of fixed assets was NOK 1,918 million and related accumulated depreciation was NOK 829 million. In addition, liabilities for asset retirement obligations increased NOK 2,407 million to NOK 4,538 million.

**SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Date: 18 March 2005

NORSK HYDRO ASA

/s/ John O. Ottestad

John O. Ottestad  
Executive Vice President and  
Chief Financial Officer



## Glossary

### Terms Relating to the Group's Businesses and Operations

<b>Term</b>	<b>Definition</b>
ADRs	American Depositary Receipts, evidencing a specified number of ADSs
ADSs	American Depositary Shares, each ADS representing one deposited ordinary share
AluNorf	Aluminium Norf GmbH
Articles of Association	The articles of association of the Company, as amended and currently in effect
Audit Committee	The audit committee of the Company's Board of Directors
Automotive	The Automotive sector of Hydro Aluminium, comprising precision tubing, structures and shape casting businesses worldwide
BAT	Best Available Techniques for pollution prevention and control
Code	The U.S. Internal Revenue Code of 1986, as amended.
Company	Norsk Hydro ASA, a Norwegian public company limited by shares, or Norsk Hydro ASA and its consolidated subsidiaries, as the context requires
Compensation Committee	The compensation committee of the Company's Board of Directors
Consolidated Financial Statements	The consolidated financial statements and notes included in the Company's annual report to shareholders for the year ended 31 December 2004, included in Exhibit 10 to this annual report on Form 20-F
Corporate Assembly	The corporate assembly, a body contemplated by Norwegian companies' law, with responsibility, among other things, for the election of the members of the Company's Board of Directors and nomination of the external auditor
Corporate Management Board	The corporate management board established by the Company's President and Chief Executive Officer to assist him in discharging his responsibilities
CRU	CRU International Limited
Custodian	Den norske Bank, the custodian in connection with the Company's ADR facility
Deposit Agreement	Deposit Agreement, dated as of 3 January 1986, as amended and restated as of 1 October 1987, and as further amended by Amendment No. 1 thereto, dated 27 May 1999, among the Company, the Depositary and the holders from time to time of the ADRs
Depositary	JPMorgan Chase Bank, as depositary of the ADSs
Depositary's Office	The Depositary's office located at [60 Wall Street, New York, New York 10260]
Deposited Securities	ADRs, together with all securities, property and cash received by the Depositary or the Custodian in respect of or in lieu of the Company's ordinary shares
Disclosure Committee	The disclosure committee of the Company, comprised of members of senior management, which is responsible for reviewing financial and

	related information before it is made public
EEA	European Economic Area
EEA Agreement	The European Economic Area Agreement
EFTA	European Free Trade Association
Exchange Act	The U.S. Securities Exchange Act of 1934, as amended
Extrusion	The Extrusion sector of Hydro Aluminium
EU	European Union
GFU	The Gas Negotiation Committee ( <i>Gassforhandlingsutvalget</i> )
Group	Norsk Hydro ASA and its consolidated subsidiaries
HBP	Hydro Business Partner, a business unit of Norsk Hydro ASA and Norsk Hydro Produksjon AS
HSE	Health, safety and environment
Hydro	Norsk Hydro ASA and its consolidated subsidiaries
Hydro Aluminium	The aluminium business of Hydro, comprising the sub-segments Metals, Rolled Products, and Extrusion and Automotive
Hydro Oil and Energy	The oil and energy business of Hydro, comprising two sub-segments, Exploration and Production, and Energy and Oil Marketing
kWh	Kilowatt hour
LME	London Metals Exchange
Metals	Hydro Aluminium s Metals sub-segment, which comprises the Primary Metal sector and the Metals Products sector
Ministry	The Norwegian Ministry of Petroleum and Energy
mm	Millimeter
NCS	Norwegian Continental Shelf
NOC	The National Oil Company of Libya
NOK	Norwegian kroner
Nomination Committee	The nomination committee provided for in the Company s Articles of Association and operating under a charter established by the shareholders representatives in the Corporate Assembly
Noon Buying Rate	The noon buying rate in the City of New York for cable transfers in foreign currencies, as announced by the Federal Reserve Bank of New York for customs purposes
North America	The North America sector of Hydro Aluminium
NYSE	New York Stock Exchange
OPEC	Organization of the Petroleum Exporting Countries
OSE	Oslo Stock Exchange
PVC	Polyvinyl chloride, a plastic raw material
P-PVC	Paste PVC
S-PVC	Suspension PVC
Rolled Products	Hydro Aluminium s Rolled Products sub-segment
Sanctions Act	The Iran and Libya Sanctions Act of 1996, adopted by the United States
Sarbanes-Oxley Act	The U.S. Sarbanes-Oxley Act of 2002
SDFI	The Norwegian State s Direct Financial Interest

SEC	The United States Securities and Exchange Commission
Securities Act	The U.S. Securities Act of 1933, as amended
tonne	One metric tonne (approximately 1,000 kilograms or 2,205 pounds)
TWh	Terawatt hour (one billion kilowatt hours)
US GAAP	Generally accepted accounting principles in the United States
VAW	VAW Aluminium AG
VCM	Vinyl chloride monomer, the main raw material for PVC
VPS or VPS System	The Norwegian Central Securities Depository, Verdipapirsentralen.
WTO	World Trade Organization
Yara	Yara International ASA