

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

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

For The Fiscal Year Ended December 31, 2001

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)

Bygdøy allé 2

N-0240 OSLO 2

Norway

(Address of principal executive offices)

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
American Depositary Shares	New York Stock Exchange
Ordinary Shares, par value NOK 20 per share	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

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: Ordinary Shares, par value NOK 20 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.

257,634,172 Ordinary Shares, par value NOK 20 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 X

No -

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

Item 17 -

Item 18 X

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In this Annual Report on Form 20-F, references to the "Company" are to Norsk Hydro ASA. References to "Hydro" or the "Group" are to the Company and its consolidated subsidiaries. References to the "Kingdom" are to the Kingdom of Norway. **See Item 4.B. "Information on the Company - Business Overview - Exploration and Production - Oil and Gas Terms"** for the definitions of key oil and gas terms used in this Annual Report and the glossary at the end of this Annual Report for the definitions of certain other terms used throughout this Annual Report.

## EXCHANGE RATES

The Company publishes its consolidated financial statements in Norwegian kroner ("NOK"). In this Annual Report, references to "US dollar," "US dollars," "USD" 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>
1997	7.10
1998	7.56
1999	7.84
2000	8.83
2001	9.00

Calendar Monthly Period	Noon Buying Rate	
	High	Low
September 2001	8.94	8.54
October 2001	8.95	8.74
November 2001	9.04	8.82
December 2001	9.11	8.87
January 2002	9.11	8.88
February 2002	9.11	8.87

- <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 February 26, 2002 was NOK 8.92 = \$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 December 31, 2001, and as of December 31, 2001, 2000, 1999, 1998, and 1997 has been derived from Hydro's audited consolidated financial statements prepared in accordance with United States generally accepted accounting principles (“**USGAAP**”). The financial information for the three years ended December 31, 2001, and as of December 31, 2001 and 2000, 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 December 31, 2001 (the “**Consolidated Financial Statements**”), incorporated by reference into this Annual Report on Form 20-F.

## Income Statement Data <sup>(1)</sup>

	Year ended December 31,				
	2001	2000	1999	1998	1997
(in NOK million, except per share data)					
Operating revenues <sup>(2)</sup>	152,835	156,861	111,955	105,784	107,725
Operating costs and expenses excluding depreciation, impairment and restructuring charges <sup>(2)</sup>	118,518	115,722	93,094	92,446	90,197
Depreciation	12,273	12,538	10,494	7,508	6,826
Restructuring charges	961	135	632	-	-
Operating income before financial and other items	21,083	28,466	7,735	5,830	10,702
Financial and other income (expense) <sup>(3)</sup>	3,991	5,580	3,193	2,230	1,360
Earnings before interest expense and taxes (EBIT)	25,074	34,046	10,928	8,060	12,062
Interest expense and foreign exchange gain (loss)	(3,609)	(3,905)	(3,055)	(2,229)	(1,717)
Income before taxes and minority interest	21,465	30,141	7,873	5,831	10,345
Provision for taxes	(13,750)	(16,178)	(4,337)	(1,979)	(5,092)
Minority interest	177	18	(90)	(98)	(48)
Income (loss) before cumulative effect of accounting changes	7,892	13,981	3,446	3,754	5,205
Cumulative effect of accounting change for:					
Start-up costs	-	-	(30)	-	-
Net income (loss)	7,892	13,981	3,416	3,754	5,205
Earnings (loss) per share:					
Before cumulative effect of accounting changes	30.50	53.40	13.90	16.40	22.70
Cumulative effect of accounting changes	-	-	(0.10)	-	-
Earnings (loss) per share:	30.50	53.40	13.80	16.40	22.70
Avg. number of outstanding ordinary shares	258,434,202	261,620,982	247,045,270	229,072,674	229,072,674
Cash dividends paid per share during period:					
NOK per share <sup>(4)</sup>	9.50	8.00	7.50	7.50	7.00
Converted into USD per share <sup>(4)</sup>	1.05	0.90	0.94	0.99	0.96

<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 December 31, 2001.

<sup>(2)</sup> As of fiscal year 2000, operating revenues for certain trading activities have been presented on a gross basis in the income statement. Prior years' amounts have been restated to reflect the change. As a result, operating revenues and operating costs have increased by NOK 9,522 million in 1999, NOK 8,316 million in 1998, and NOK 10,003 million in 1997. As of fiscal year 1998, operating revenues and operating costs related to some of Hydro's aluminum remelt activities have been presented on a gross basis in the income statement. In prior years, such revenues and costs were presented on a net basis in the income statement and included in operating revenues. Prior years' amounts have been restated to reflect the change. As a result, operating revenues and operating costs increased by NOK 1,553 million in 1997.

<sup>(3)</sup> "Equity in net income of non-consolidated investees" is included under "Financial and other income (expense)."

<sup>(4)</sup> 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>

	As of December 31,				
	2001	2000	1999	1998	1997
	(in NOK million)				
Cash, cash equivalents and other liquid assets	29,569	24,257	9,970	4,429	5,299
Total assets	197,922	196,354	177,419	124,023	115,336
Short-term debt	10,424	11,297	8,268	6,737	8,401
Long-term debt	37,853	40,174	42,228	24,105	17,412
Deferred tax liabilities	31,429	31,644	30,573	18,645	17,930
Ordinary shares and additional paid-in capital	20,402	20,391	20,387	8,784	8,784
Total shareholders' equity	74,793	71,227	59,497	48,291	45,717

<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 December 31, 2001.

## Segment Data

The following table indicates the Group's operating revenues, sales to unaffiliated customers and operating income (after eliminating intersegment sales) by business segment for each of the three fiscal years in the period ended December 31, 2001.

Year ended December 31	Operating Revenues			Sales to Unaffiliated Customers			Operating Income/(loss)		
	2001	2000	1999	2001	2000	1999	2001	2000	1999
<b>Business Segment <sup>(1)</sup></b>									
Exploration and Production	33,282	35,494	17,406	7,848	9,436	6,996	17,813	20,108	5,840
Energy <sup>(2)</sup>	43,074	44,591	20,365	35,725	36,749	16,128	1,397	1,614	944
Oil Marketing <sup>(2)</sup>	3,729	4,094	2,652	3,725	4,088	2,648	(32)	55	169
Eliminations	(28,069)	(29,056)	(12,068)	-	-	-	-	27	9
<b>Hydro Oil and Energy</b>	<b>52,016</b>	<b>55,123</b>	<b>28,355</b>	<b>47,298</b>	<b>50,273</b>	<b>25,772</b>	<b>19,178</b>	<b>21,804</b>	<b>6,962</b>
Aluminium Metal									
Products	34,442	33,534	24,540	28,190	27,157	19,331	1,456	2,821	1,357
Aluminium Extrusion	15,554	15,881	12,081	15,384	15,763	11,974	142	691	649
Other Light Metals <sup>(3)</sup>	7,603	8,226	7,716	7,368	7,887	7,442	(1,446)	(143)	216
Eliminations	(6,516)	(6,511)	(4,857)	-	-	-	33	(33)	(43)
<b>Hydro Light Metals</b>	<b>51,083</b>	<b>51,130</b>	<b>39,480</b>	<b>50,942</b>	<b>50,807</b>	<b>38,747</b>	<b>185</b>	<b>3,336</b>	<b>2,179</b>
Plant Nutrition	34,392	33,744	26,799	32,295	31,187	24,776	1,752	990	(2,239)
Gas and Chemicals	4,649	4,776	4,718	4,513	4,569	4,521	362	313	349
A/S Korn- og Foderstof									
Kompagniet	11,000	10,638	9,756	10,967	10,412	9,558	(26)	(44)	233
Eliminations	(1,851)	(2,192)	(1,615)	-	-	-	18	44	(14)
<b>Hydro Agri</b>	<b>48,190</b>	<b>46,966</b>	<b>39,658</b>	<b>47,775</b>	<b>46,168</b>	<b>38,855</b>	<b>2,106</b>	<b>1,303</b>	<b>(1,671)</b>
Petrochemicals	5,374	6,270	5,346	5,321	6,211	5,221	(101)	265	113
Other Activities <sup>(4)</sup>	5,987	7,841	7,448	1,426	3,288	3,194	(218)	(20)	274
<b>Segments</b>	<b>162,650</b>	<b>167,330</b>	<b>120,287</b>	<b>152,762</b>	<b>156,747</b>	<b>111,789</b>	<b>21,150</b>	<b>26,688</b>	<b>7,857</b>
Corporate <sup>(5)</sup>	521	399	358	73	114	166	(72)	1,788	(129)
Eliminations	(10,336)	(10,868)	(8,690)	-	-	-	5	(10)	7
<b>Total</b>	<b>152,835</b>	<b>156,861</b>	<b>111,955</b>	<b>152,835</b>	<b>156,861</b>	<b>111,955</b>	<b>21,083</b>	<b>28,466</b>	<b>7,735</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 December 31, 2001.

(2) As of January 1, 2000, responsibility for the refining and marketing of crude oil and natural gas liquids was transferred to Energy, leaving the marketing of refined oil products within Oil Marketing. Prior years' amounts have been restated to reflect this change.

(3) "Other Light Metals" consists of Hydro Aluminium Rolled Products, Hydro Automotive Structures and Hydro Magnesium.

(4) "Other Activities" consists of Pronova, Technology and Projects, Industrial Insurance and Hydro Business Partner.

(5) Corporate operating income (loss) includes net periodic pension credits of NOK 421 million, NOK 2,263 million and NOK 470 million in 2001, 2000 and 1999, respectively. In 2000, Hydro changed the way it allocates pension costs to its Norwegian operations. Previously, costs were determined based on the number of years of service resulting in a concentration of the total costs towards the end of the service period. The change resulted in non-recurring charges to the segments with a corresponding credit of NOK 2,007 million reflected in Corporate results, which is part of the net periodic pension credit. Part of these pension costs has been charged to external parties resulting in a positive effect to the Company's operating income and EBITDA of NOK 470 million.

### **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, aluminum and fertilizer 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 include important factors, although not exhaustive, that may cause actual results or developments to differ materially from those expressed or implied by the forward-looking statements.

#### ***Hydro’s commodity-based businesses are subject to fluctuations in operating results.***

In the normal course of business, Hydro is exposed to fluctuations in supply and demand, which can have significant effects on commodity prices across essentially all of its core business areas and products – oil and gas, electricity, aluminum, magnesium, fertilizer products and petrochemicals – and, in turn, Hydro’s operating results and profitability.

Prices for oil and gas, for example, are subject to wide fluctuations in response to changes in the supply of and demand for oil and natural gas, market uncertainty and other factors that are beyond Hydro’s control. These factors include:

- \* political conditions in oil producing regions, particularly the Middle East;
- \* the ability of the members of the Organization of Petroleum Exporting Countries (OPEC) to agree and maintain oil price and production controls;
- \* actions of governmental authorities;
- \* the level of consumer demand;
- \* the price, availability and acceptance of alternative fuels; and
- \* overall global economic conditions.

The price of aluminum, similarly, depends on a number of factors, including general economic conditions, cyclical trends in end-user markets and supply and demand imbalances. A decrease or stagnation in the consumption of aluminum or an increase in overall worldwide aluminum production capacity above increases in consumption may lead to an oversupply of aluminum. In such situations, prices of primary and fabricated aluminum products tend to decrease. Oversupply may exist for an extended period because the primary aluminum smelting process is characterized by continuous operations with high fixed costs and therefore is not easily adjusted to lower demand.

At various times in recent years, including in 2001, markets for one or more of Hydro's main products have been characterized by falling prices, unstable exchange rates, weaker global demand and rising inventories. In this type of environment, Hydro's ability to maintain historic levels of profitability may depend to a great degree on its ability to reduce costs (including the costs of raw materials) and increase productivity levels, as well as reposition itself within higher value-added market segments.

***Hydro is exposed to market and credit risk in its use of derivative instruments.***

The financial performance of Hydro, a multinational company engaged in commodity-related businesses, is heavily influenced by fluctuation in the prices of its key products and exchange rates. In order to reduce the associated risks, Hydro uses a variety of derivative financial instruments and commodity contracts. All risk management activities are governed by clearly defined policies and management controls.

The decision as to whether and when to commence a hedge, along with the duration of the hedge, can vary from period to period depending on market conditions and the relative costs of the hedging instruments. The duration of a hedge is, in general, linked to the timing of the underlying transaction, with the connection between the two being constantly monitored to ensure effectiveness. With respect to Hydro's use of derivatives, Hydro bears the risk of market movements and the risk of default by the counterparties to such instruments. For a further discussion of these matters, please refer to **Item 11. Quantitative and Qualitative Disclosures about Market Risk.**

***Hydro's oil and gas operations are subject to higher effective tax rates than its other business activities.***

In October 1999 Hydro's management announced the intended strategic focus on Hydro's core business areas, including its oil and gas operations. Hydro derived approximately 91 percent, 77 percent and 90 percent of its overall operating income from its Oil and Energy business area in 2001, 2000 and 1999, respectively. Hydro's profits from domestic (that is, Norwegian) oil and gas production are subject to Norwegian income taxes at a marginal rate of 78 percent. Accordingly, to the extent Hydro's operating revenues and earnings from its domestic oil and gas activities represent a higher percentage of its overall operating revenues and earnings, the Company's effective tax rate will likely be higher.

***Hydro's future performance depends on the ability to develop additional oil and gas reserves that are economically recoverable.***

In general, production from oil and natural gas properties declines as reserves are depleted, with the rate of decline depending on reservoir characteristics. Hydro's Oseberg and Gullfaks fields (both located on the Norwegian Continental Shelf), which are among the largest contributors to the Company's oil production, are both in the decline phase of their oil production. Unless Hydro successfully replaces the reserves that it produces, its reserves will decline, eventually resulting in a decrease in oil and natural gas production and lower revenues and cash flow from operations.

Historically, Hydro has succeeded in increasing reserves, after taking production into account, through exploration and development activities. Hydro has conducted such activities through its interests in existing oil

and gas properties, as well as through interests in newly-licensed properties. Hydro is continually identifying and evaluating opportunities to acquire interests in oil and gas properties, with increasing focus and expenditures on locations beyond the Norwegian Continental Shelf (such as in deep water offshore Angola, Canada, the Gulf of Mexico and Russia). 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, Hydro cannot assure investors that it will be able to acquire interests in producing oil and gas properties that contain economically recoverable reserves or that any acquisition will be profitably integrated into Hydro's operations.

***Estimates of Hydro's oil and gas reserves are uncertain 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 represents only estimates. Reservoir engineering is a subjective and inexact process of estimating underground accumulations of oil and gas that cannot be measured in an exact manner. Estimates of economically recoverable oil and gas reserves depend on a number of variable factors, including historical production from the area compared with production from other producing areas, and assumptions concerning:

- \* the effects of regulations by governmental agencies;
- future oil and gas prices;
- future operating costs; and
- development costs.

Some or all of these assumptions may vary considerably from actual results. For these reasons, estimates of the economically recoverable quantities of oil and natural gas attributable to any particular group of properties, classifications of those reserves based on risk of recovery, and estimates of the future net cash flows from reserves prepared by different engineers or by the same engineers but at different times may vary substantially. Accordingly, reserve estimates may be subject to downward or upward adjustment. Actual production, revenues and expenditures with respect to Hydro's reserves will likely vary from estimates and those variances may be material.

***Hydro's exploration and production operations involve a high degree of business and financial risk.***

Exploration and development for oil and gas involves a high degree of risk that hydrocarbons will not be found or that they will not be found in commercial quantities. The 3-D seismic data and other appraisal technologies Hydro uses do not allow it to know conclusively prior to drilling a well that oil or gas are present or economically feasible to extract. The cost of drilling, completing and operating a well is often uncertain, especially when drilling offshore, and cost factors can adversely affect the economics of a project. Drilling operations may be curtailed, delayed or canceled as a result of factors outside of Hydro's control. Further, completion of a well does not guarantee that it will be profitable or even that it will result in recovery of drilling, completion and operating costs.

***Hydro's expansion of business activities in emerging geographic markets presents a higher degree of risk.***

Hydro is exposed to general financial, political, economic and business risks in connection with its worldwide operations. In recent years, Hydro has made investments and commenced activities in various emerging markets, including Angola and Brazil. While emerging markets offer strong growth potential, they also 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's increased oil and gas exploration efforts outside the Norwegian Continental Shelf may result in a greater portion of its oil and gas reserves being located in areas considered less politically and economically stable. These reserves, and the related operations, may be subject to political risks, including increases in taxes and royalties, the establishment of production and export limits, the renegotiation of contracts, the nationalization of assets, changes in local government regimes and policies, as well as changes in business customs and practices, payment delays, currency exchange restrictions and losses and impairment of operations by actions of insurgent groups. Although it is impossible to predict the likelihood of such occurrences or their effect on Hydro's operations, the occurrence of any one of these events could have a material adverse effect on Hydro's operations and financial results.

***The rapid liberalization of the European natural gas market creates uncertainties as to how the market will develop.***

The European Union (EU) is seeking to liberalize the European natural gas markets, which are today still fundamentally national markets, with the goal of opening up these national markets to competition and integrating them into a single market. The EU gas directive requires owners of gas pipelines to open up their transport systems, including systems within domestic markets, to third parties, such as distribution companies and large industrial customers, in order to bring greater competition to the European gas market. The gas directive prescribes that a minimum of 20 percent of national markets have been opened for competition by August 2000, and that this be increased to 28 percent by 2003 and 33 percent by 2008. In October 2001, the Norwegian government agreed to incorporate the gas directive in its legislation. In March 2001, the European Commission (EC) launched proposals for accelerating the liberalization process, aiming at full liberalization by 2005.

Presently, most of Hydro's equity (owned produced) natural gas volumes, which represent approximately half of total volumes sold, continue to be marketed under long-term gas sales contracts to customers in the EU. An important task for Hydro in 2002 will be to conduct price review negotiations for almost all of Hydro's long-term gas sales contracts. Hydro expects that this process may result in adjustments to the terms and conditions of these contracts.

The EU gas directive introduces uncertainty as to how the European gas market will develop. While it is too early to predict the full effects of the EU gas directive, Hydro anticipates that the market may be characterized by a broader range of contract types, and that a viable short-term market will develop and exist alongside a more long-term, bilateral market between producers and large users and distributors.

***Hydro has had proceedings commenced against it by the European Commission for violation of the competition rules of the EC Treaty and the European Economic Area (EEA) Agreement.***

In 1996 the European Commission (EC) began an investigation into the arrangements for the sale of natural gas from the Norwegian Continental Shelf, including the activities of the Gas Negotiating Committee (GNC), under European Union and EEA competition laws. The Norwegian government decided, as of the summer of 2001, to dismantle the system of collective Norwegian gas sales through the GNC, which had jointly negotiated the delivery of Norway's natural gas production, primarily under long-term contracts, to the European continent. Despite these actions, in the summer of 2001 the Competition Directorate of the EC commenced proceedings against all the gas producers on the NCS, adopting a "statement of objections" that alleged that the joint sale of natural gas by producers on the NCS, through the GNC, violated the competition rules of the EC Treaty and the EEA Agreement. Hydro has responded to the statement of objections, pointing out that the joint sales of natural gas through the GNC was not voluntary, but imposed by the Norwegian

government, and that the case against Hydro should therefore be discontinued. The Norwegian government has intervened in the proceedings with a separate submission which supports this position.

The EU's competition authorities have threatened to impose sanctions against Hydro and the other gas producers on the NCS for past conduct, including the imposition of fines. EU legislation would limit any fine to a maximum of 10 percent of a company's total worldwide turnover in 2001. In addition, the authorities have warned that the EU would like to see the elimination of provisions, deemed to have restrictive effects, within existing contracts entered into under the GNC system.

If Hydro is found to have violated EC/EEA competition laws, the other parties to the gas sales contracts negotiated by the GNC could, in accordance with Norwegian law, challenge the validity of such contracts and claim damages for any loss they can prove to have suffered based on general principles of tort.

At this time, no prediction can be made as to the outcome of the EC's proceedings, including the financial exposure associated with potential remedies should Hydro be subject to an adverse decision by the EC and the European Court of Justice.

***Hydro may not achieve all the benefits expected from the acquisition of VAW Aluminum AG.***

On January 6, 2002, Hydro entered into an agreement to purchase all of the outstanding shares of VAW Aluminium AG. The closing of the acquisition occurred in mid-March 2002. The combined aluminum activities of Hydro and VAW are expected to generate revenue and cost synergies that will enhance the competitive position of the overall business. However, Hydro will need to overcome significant challenges in order to realize the contemplated benefits and synergies from the acquisition of VAW, including the timely, efficient and successful execution of a number of post-acquisition steps to integrate the operations of the two companies, retain and assimilate the key personnel of each company and implement uniform standards, controls, procedures, policies and information systems. These steps will involve considerable risks and may not be entirely successful. These risks include:

- \* the diversion of management attention from Hydro's existing business operations;
- \* unanticipated expenses and potential delays related to the integration of personnel, and financial and other systems of the two companies;
- \* the impairment of relationships with employees, suppliers and customers; and
- \* potential unknown liabilities or liabilities which are substantially greater than Hydro anticipated based on its evaluation of VAW's business prior to the acquisition.

***In connection with Hydro's acquisition of VAW, Alcan Inc. has asserted a preemptive right to acquire VAW's 50% interest in Aluminium Norf GmbH (Alunorf), which owns Europe's largest rolling mill and is a key part of VAW's European rolling operations.***

As a consequence of Hydro entering into the share purchase agreement to acquire VAW, Alcan Inc., the Canadian aluminum company, asserted that it has a preemptive right, triggered by a change of control of VAW, to match any bid for VAW's 50% interest in Aluminium Norf GmbH (Alunorf). Alcan owns the 50% interest in Alunorf not held by VAW. Alunorf owns Europe's largest aluminum rolling mill, producing feed stock for the aluminum can industry and for automotive assembly. The rolling mill, located in Germany, is a key part of VAW's European rolling operations, representing about 80 percent of VAW's rolled products output.

Alcan has initiated court proceedings in Germany against VAW, seeking a declaratory judgment that affirms its asserted preemptive right. VAW disputes that a preemptive rights exists, and Hydro supports this position. No prediction can be made as to the timing of any decision in the court proceedings or the outcome of such proceedings.

***Hydro's Light Metals business is subject to the price of electricity and the price and availability of raw materials.***

Hydro's Light Metals business consumes large volumes of energy, mainly electricity, in producing primary aluminum. If energy costs were to rise, or if energy supplies or supply arrangements were disturbed, Hydro's operating results could be adversely affected. The principal raw material used in the production of aluminum is alumina. Because the price of alumina depends on supply and demand relationships on a world-wide level, the price of alumina is variable. Hydro may not be able to pass on the entire cost of the increase in alumina to its customers, which may result in declining margins and reduced profitability.

***Governmental and environmental regulations could adversely affect Hydro's business.***

Hydro's business is subject to laws and regulations, in each of the countries in which Hydro operates, governing the exploration for and development, production and marketing of oil and gas. Many laws and regulations require drilling permits and govern the spacing of wells, rates of production, prevention of waste, unitization and pooling of properties and other matters. These laws and regulations have increased the costs of planning, designing, drilling, installing, operating and abandoning Hydro's oil and gas wells and other facilities. In addition, these laws and regulations, and any others that are passed by the jurisdictions where Hydro has production, could limit the total number of wells drilled or the allowable production from successful wells, which could limit Hydro's revenues.

Hydro's operations are also subject to complex environmental laws and regulations adopted by the various jurisdictions in which Hydro operates. Hydro could incur liability to governments or third parties for an unlawful discharge of oil, gas or other pollutants into the air, soil or water, including responsibility for remedial costs. In its petrochemicals business, Hydro is a major producer of polyvinyl choride (PVC). PVC has been the focus of environmental groups due to alleged negative health and environmental effects arising from the production, use and disposal of PVC. Because the requirements imposed by laws and regulations are frequently changed, Hydro cannot provide assurance that the laws and regulations enacted in the future, including changes to existing laws and regulations, will not adversely affect its business.

***Fluctuations in currency exchange rates may cause Hydro's financial results to decline.***

Hydro is exposed to currency exchange risk with respect to the US dollar and certain other currencies in relation to the NOK, as a significant portion of Hydro's revenues are earned in these currencies and a significant portion of operating expenses are incurred in these currencies. Hydro also maintains a significant portion of its long-term debt in US dollars. Hydro's currency of accounting is NOK. Revenues and earnings denominated in other currencies are translated into NOK in preparing Hydro's consolidated financial statements. If such other currencies, particularly the US dollar, decline in value relative to the NOK, Hydro's levels of net operating revenues may decline. At the same time, the value of the US dollar-denominated debt will decline. Similarly, exchange rate fluctuations may affect the value in NOK of assets and liabilities denominated in other currencies.

***The ability of US shareholders to initiate legal action against the Company may be limited under Norwegian law.***

The Company is a public limited company incorporated under the laws of Norway. The rights of holders of the Company's ordinary shares, including ordinary shares underlying American Depositary Shares, are governed by Norwegian law and by the Company's articles of association. These rights differ from the rights commonly possessed by shareholders of US corporations. In particular, Norwegian law limits the circumstances under which shareholders of Norwegian companies may bring derivative actions. Under Norwegian law, any action brought by the Company in respect of wrongful acts committed against the Company would take priority over actions brought by shareholders in respect of such acts. In addition, it may be difficult for shareholders to prevail in a claim against the Company under, or to enforce liabilities predicated upon, US securities laws.

***The trading prices of the Company's ADSs depend in part on the US dollar exchange rate.***

The Company's ordinary shares trade in Norwegian kroner (NOK) and its ADSs trade in US dollars. Any dividends declared are also denominated in NOK. As a result, the trading prices of the Company's ADSs in US dollars may fluctuate as the US dollar/NOK exchange rate fluctuates, and any material decrease in the value of the NOK in relation to the US dollar may cause the trading prices of our ADSs to decline.

**ITEM 4. INFORMATION ON THE COMPANY**

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

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. Energy, in the form of hydroelectric power, natural gas and petroleum, has been the basis for Hydro's growth and is the common link among its core business activities. Hydro's operating segments consist of the three core business areas: Oil and Energy, Light Metals and Agri. Each business area is divided into sub-segments as follows:

<b><u>Business Area</u></b>	<b><u>Segments</u></b>
Oil and Energy	Exploration and Production, Energy, and Oil Marketing
Light Metals	Aluminium Metal Products, Aluminium Extrusion and Other Light Metals
Agri	Plant Nutrition, Gas and Chemicals and A/S Korn-og Foderstof Kompagniet (KFK)

In addition, Hydro is in the petrochemicals business and is engaged in other activities described in Item 4.B.

As a public company organized under Norwegian law, the Company is subject to the provisions of the Norwegian Act relating to public limited liability companies (the Norwegian Public Limited Companies Act). See the disclosure under **Item 10.B. "Additional Information - 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 Bygdøy allé 2, N-0240 Oslo, Norway; telephone number: 47-22-53-81-00. The Company's registered agent in the United States is Kendrick T. Wallace, Esq., whose address is c/o Norsk Hydro Americas, Inc., 100 North Tampa Street, Suite 3300, Tampa, Florida 33802; telephone number: (813) 222-5700.

Over the three year period ending December 31, 2001, Hydro's single-most significant capital expenditure was in connection with its acquisition in mid-1999 of all of the outstanding ordinary shares of Saga Petroleum ASA (Saga), an independent oil and gas exploration and production company based in Norway.

Hydro acquired Saga for total consideration of NOK 16.3 billion consisting of Hydro's issuance of 37.5 million of the Company's ordinary shares and a cash payment of NOK 4,629 million.

On January 6, 2002, Hydro entered into an agreement with the German utility and industry group, E.ON, which contemplated the acquisition by an indirect wholly-owned subsidiary of Hydro of E.ON's 100 percent share holding in VAW Aluminium AG, a major producer of aluminum primary metal, rolled products and other fabricated aluminum products headquartered in Germany. The transaction closed in mid-March 2002. The total purchase price paid by Hydro for the VAW shares was Euro 2,658 million (NOK 21 billion), including net interest bearing debt as of January 1, 2002 of Euro 757 million (NOK 6 billion) and interest of Euro 13 million on the cash portion of the purchase price as of the date of the agreement. In addition, Hydro assumed unfunded pension commitments of approximately Euro 450 million (NOK 3.6 billion).

For additional information concerning Hydro's principal capital expenditures, see the discussions with respect to each of the business segments under Item 4.B of this Annual Report, as well as the information incorporated by reference to the "Financial Review" section (pages 42 to 65) of the Company's 2001 annual report to shareholders, which has been filed as an exhibit to this Annual Report.

## ITEM 4.B. BUSINESS OVERVIEW

### OIL AND ENERGY

#### Exploration and Production

Exploration and Production is responsible for Hydro's worldwide oil and gas exploration, field development and operation of production and transportation facilities.

As is common in the oil and gas industry, Hydro participates in exploration and production activities with several co-venturers. Hydro's partners in these ventures include other oil and gas companies, state-owned oil and gas companies and other government entities. Contractual arrangements among partners are generally governed by an operating agreement, which provides for costs, entitlements to production and liabilities to be shared among the partners according to their respective percentage interests in the particular field or license area. One of the partners is normally appointed as the operator of the field activities and, as such, conducts operations under the overall supervision and control of an operating committee consisting of representatives from each participant in the field.

Operating agreements generally provide for liabilities to be borne by the partners according to their respective participating interests. Exploration and production licenses issued by the relevant government authorities enable the partners to initiate exploration and production activities. Such licenses generally provide that the partners are jointly and severally liable for their obligations to the government authorities under the applicable license.

As of December 31, 2001, Hydro has an interest in 106 licenses on the Norwegian Continental Shelf (NCS) and is operator of 50 of these licenses. Internationally, Hydro is involved in exploration and production activities in several countries, mainly in Angola, Canada, Libya, Russia, Iran and the US (in the Gulf of Mexico). The total average daily production in 2001 from licenses in which Hydro is the operator was approximately 1.3 million barrels of oil equivalents (boe). Hydro's average production of oil and gas in 2001 was approximately 421,000 boed. Information about Hydro's interest, the field operator, the timing of production start-up, production and reserves, for Hydro's most important fields is presented in the tables located on page 110 of the Company's 2001 annual report to shareholders.

In 2001, Hydro's oil production represented 78 percent of total oil and gas production, the same as in 2000 and 1999.

#### Strategy

Hydro will focus its exploration and production strategy for the coming years on:

- \* growing Hydro's Norwegian and international exploration and production activities;
- \* balancing Hydro's portfolio of interests in oil and gas fields, both geographically (i.e., between the NCS and international locations) and in terms of cost of development; and
- \* effecting cost improvements to improve profitability.

#### *Growing Production Activities*

It is Hydro's view that size is important to ensure cost-efficient operations and to have necessary capacity, both in terms of competencies and financial strength, to exploit new areas successfully.

Accordingly, an important element of Hydro's growth strategy is to concentrate its efforts and ensure that the new basins Hydro enters into have sufficient production potential and can be pursued aggressively.

In 2001, Hydro established a target compound annual growth rate in production of between 5-6 percent for the 2001-2005 period. Total oil and gas production in 2001 of 421,000 barrels of oil equivalents per day (boed) was in-line with forecasts, adjusted for lower customer gas off-take and lower international oil production due to delays in start up of new fields, specifically, Girassol (in Angola) and Terra Nova (in Canada). Hydro expects that it will be able to achieve this production growth within its existing portfolio based on its existing reserves and development projects. Hydro anticipates total production in 2002 of 430,000 boed, inclusive of the curtailment directed by the Norwegian government in response to OPEC's production cuts.

### *Balancing the Portfolio*

In 2001, approximately 96 percent of Hydro's oil and gas production was from the NCS, compared to 92 percent in 2000. The increase in the percentage of production on the NCS is attributable to the non-inclusion in 2001 of production from the UK fields in which Hydro acquired interests in the Saga acquisition, fields which Hydro sold in August 2000.

Hydro's position on the NCS was strengthened in 2001 with the successful startup of production at the Snorre B and Gullfaks satellites, and the obtaining of development approvals for the Kristin and Mikkel fields. In addition, satellite discoveries were made in the areas of the Snorre and Oseberg fields and the development plan for the Snøhvit fields was submitted for approval by the Norwegian governmental authorities. Hydro believes that there are other significant exploration opportunities in the less mature areas in the mid- and northern parts of the NCS, especially for gas.

As a result of reforms to Norway's energy sector in 2001, 15 percent of the assets of the Norwegian State's Direct Financial Interest (**SDFI**) were transferred to Statoil, the formerly 100 percent Norwegian state-owned oil company. Management of the balance of the SDFI assets has been transferred from Statoil ASA to Petoro AS, a government-created company. The Norwegian government is in the process of selling an additional 6.5 percent of the SDFI assets, with Hydro and 27 other companies having submitted bids for portions of those assets. Hydro's bids were for interests in Hydro-operated fields as well as fields in other of Hydro's core areas. Higher interests in fields would enhance Hydro's efforts to increase value and provide a better platform for portfolio optimization, including potential swap arrangements to pursue international ambitions. Awards are expected to be announced during the second quarter of 2002.

Notwithstanding the opportunities on the NCS, Hydro recognizes that, in light of its current market share and the maturity of the southern part of the NCS, its growth prospects appear to be greater internationally than on the NCS. As a result, Hydro has increased its exploration efforts outside the NCS. In 2001 Hydro's exploration expenditures were, for the first time in Hydro's history, higher internationally than on the NCS. In 2002, Hydro's anticipated international exploration expenditures of NOK 1,750 million are three times higher than planned exploration expenditures on the NCS. Hydro's technological competence, applying leading-edge reservoir and development solutions as operator of 12 oil and gas producing fields in a hostile environment offshore Norway, has provided a solid basis for international expansion in deep water areas.

Hydro will continue to focus its international exploration and production activities in four to six core areas, each with a potential to reach a minimum production level of 50,000 barrels of oil equivalents per day. Hydro aspires to build a portfolio which, in addition to deep water, offshore activities, includes low investment, onshore activities, to achieve a portfolio balanced with respect to geological and economic risk. In September 2001, Hydro included the Gulf of Mexico as an important part of its exploration portfolio through a farm-in arrangement with Conoco, which provided a 25 percent working interest in five firm and three contingent exploration wells. In 2002, Hydro anticipates that the major part of its international exploration expenditures

will be allocated to Angola, Canada and the Gulf of Mexico. Other areas of activity include Iran, Trinidad and Tobago, Libya and Russia.

### ***Cost Improvements***

Hydro continues to pursue cost improvements in its exploration and production activities as an integral part of its ongoing efforts to improve long-term shareholder value generation. Hydro's goal is to reduce its three-year average finding and development costs (excluding acquisitions and disposals) to USD 5 per barrel of proved reserves added through a combination of measures, including more focused exploration activities, a shortened time period between discovery and production, and more active portfolio management. In 2001, Hydro made progress in achieving this goal by reducing its three-year average finding and development costs to USD 5.9 per barrel of reserves added organically. Notable in 2001, the Norwegian governmental authorities approved for development the Kristin, Mikkell and Sigyn fields; in Angola, the partnerships approved for development the Rosa Lirio and Jasmin fields.

Cost improvements have been effected through a variety of measures. Hydro has divested interests in licenses of certain fields on the NCS which were no longer deemed to be within Hydro's core areas of interest, contributing to a reduction in exploration costs. Hydro has transferred to other companies a portion of its equity interests in other licenses, through farm-out arrangements, in exchange for the companies' carrying of some of Hydro's exploration costs. Additionally, Hydro entered into an agreement with Petroleum Geo Services (PGS) for the sale, effective as of August 1, 2002, of Hydro's share of the license that includes the Varg field, which is reaching the end of its economic life. The sale is subject to Norwegian governmental approval.

Notwithstanding the above-described cost improvements, average production cost per boe for international activities has increased in each of 2001 and 2000, reflecting the current lower volumes compared to the cost base, which is normal in a period of growth. However, production cost per boe for these activities is expected to normalize as the fields mature.

### **Competitive Strengths**

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

Hydro currently operates 12 platforms and 3 sub-sea installations, which represent a production of approximately 1.3 million barrels of oil equivalents per day, over one-third of Norwegian oil production. In terms of equity production and reserves, Hydro is the third-largest interest holder, following the SDFI and Statoil.

#### ***Promising International Positions***

Many of Hydro's key international exploration prospects will be tested in 2002. Hydro anticipates carrying out an extensive drilling program by participating in approximately 20 wells. Several of these wells will be drilled in recently acquired blocks which will provide invaluable information on Hydro's exploration portfolio.

#### ***Angola***

Angola's offshore oil production was around 780,000 barrels of oil per day in 2001. Over the past several years, Angola has become one of the world's leading deep water exploration areas and is perceived to have a significant future potential in the ultra-deep water exploration sector. Hydro has participated in Angola's oil and gas industry since 1991. Hydro enhanced its position in Angola in 2001 by signing a production sharing agreement (PSA) with the Angolan governmental authorities, acquiring a 30 percent interest in

the promising ultra-deep water Block 34. Hydro also signed a farm-in agreement to acquire a 10 percent interest in Block 25. Hydro intends to play a key role in the development of a national petroleum industry in Angola over the next 5-10 years. Training of Angolan nationals and transfer of management and technology competence from Hydro's activities on the NCS represent important elements of this strategy. This will be carried out under a technical assistance agreement entered into with Sonangol, the Angolan state-owned oil company. Under this agreement, Hydro will support and train Sonangol Pesquisa e Pruducão, S.A.R.L, Sonangol's upstream operating organization, as operator of Block 34.

### *Canada*

Hydro entered into a strategic alliance with Petro-Canada in 1996 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 actively explore for further oil discoveries on the Grand Banks. Hydro has since expanded the exploration effort to include the Scotian Shelf on Canada's east coast. Hydro has a substantial license portfolio in Canada. In 2001, Hydro was awarded two new licenses in the two bid rounds: Parcel 6 offshore Nova Scotia and Parcel 2 in Flemish Pass, offshore Newfoundland.

### *Russia*

Hydro's oil and gas business development in Russia, which has been ongoing for 12 years, has focused on the Northwest region of Russia. The progress for the Kharyaga field supports Hydro's more cautiously optimistic view for further business development in the area, as evidenced by the opening of the Exploration & Production International office in Moscow in September 2001.

### *Libya*

In Libya, Hydro has interesting non-operator positions in one producing field (Mabruk) and three exploration licenses in the Murzuq basin.

### *Iran*

Hydro established an office in Tehran, Iran during November 1999. In April 2000, Hydro entered into an exploration contract with the National Iranian Oil Company (NIOC) for the Anaran Block covering an area of 3,260 square kilometers and containing the Changuleh discovery. The contract has a term of 4.5 years, providing Hydro with the right to negotiate a buy-back agreement to develop reserves in the event of a commercial discovery.

### *Gulf of Mexico*

As disclosed above, in September 2001, Hydro entered into a farm-in agreement with Conoco (covering 55 exploratory leases) providing a 25 percent working interest in five firm exploration wells and three contingent exploration wells. Additionally, Hydro has an option through 2005 to participate in wells on other selective prospects currently held in Conoco's portfolio, with working interests ranging from 12.5 percent to 25 percent.

### *Trinidad and Tobago*

Hydro entered into a farm-in agreement with Petrobras in 2001, acquiring a 19 percent interest in the deep water Block 27 where the first well was spudded (that is, drilling commenced) in late 2001.

## Oil and Gas Terms

The following terms have the meanings indicated below unless the context indicates otherwise:

The following terms have the meanings indicated below unless the context indicates otherwise:

Term	Definition
"boe"	Barrels of oil equivalents.
"boed"	Barrels of oil equivalents per day.
"bcf"	Billion cubic feet.
"cf"	Cubic feet.
"condensate"	Light hydrocarbon substances produced with natural gas which condense into liquid at normal temperatures and pressures associated with surface production equipment.
"LNG"	Liquefied natural gas. A liquid composed chiefly of natural gas (i.e., mostly methane). Natural gas is liquefied to make it easy to transport if a pipeline is not feasible (as across a body of water). Not as easily liquefied as LPG, LNG must be put under low temperature and high pressure or under extremely low (cryogenic) temperature and close to atmospheric pressure to become liquefied.
"LPG"	Liquefied petroleum gas.
"NGLs"	Oil and gas condensate and natural gas liquids.
"proved reserves"	The estimated quantities of crude oil, natural gas and natural gas liquids which geological and engineering data demonstrate with reasonable certainty (using a 90 percent probability threshold) to be recoverable in future years from known reservoirs under existing economic and operating conditions.
"proved developed reserves"	Reserves that can be expected to be recovered through existing wells with existing equipment and operating methods. Additional oil and gas expected to be obtained through the application of fluid injection or other improved recovery techniques for supplementing natural forces and mechanisms or primary recovery are included as "proved developed reserves" only after testing by a pilot project or after the operation of an installed program has confirmed through production response that increased recovery will be achieved.
"proved undeveloped reserves"	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, but does not include reserves attributable to any acreage for which an application of fluid injection or other improved recovery techniques is contemplated, unless such techniques have been proved effective by actual tests in the area and in the same reservoir. Reserves on undrilled acreage are limited to those drilling units offsetting productive units that are reasonably certain of production when drilled. Proved reserves for other undrilled units can be claimed only where it can be demonstrated with certainty that there is continuity of production from the existing productive formation.

"Sm <sup>3</sup> "	Standard cubic meters. For purposes of converting quantities of natural gas cited in this Annual Report, 1 Sm <sup>3</sup> = 35.3147 cubic feet.
"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.
"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.
"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.
"reservoir"	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.

## Reserve Information

At the end of 2001, Hydro's share of proved developed reserves of oil and gas was estimated to be 1,276 million boe. Hydro's share of proved undeveloped reserves accounted for an additional 797 million boe. Total developed and undeveloped reserves amounted to 2,073 million boe, of which gas reserves accounted for approximately 51 percent.

The following table summarizes Hydro's net quantities of proved oil and gas reserves as of December 31, 2001, 2000 and 1999.

### Oil and Gas Reserves

<i>Oil in millions boe</i> <i>Gas in billions cubic feet (bcf)</i>	2001			2000			1999		
	Norway	Int'l <sup>(1)</sup>	Total	Norway	Int'l <sup>(1)</sup>	Total	Norway	Int'l <sup>(1)</sup>	Total
<b>Proved oil reserves, developed and undeveloped <sup>(2)</sup></b>	825	193	1,018	820	156	976	837	153	990
<b>Of which developed</b>	564	62	626	555	33	588	500	74	574
<b>Proved gas reserves, developed and undeveloped</b>	5,986	-	5,986	6,004	-	6,004	5,928	211	6,139
<b>Of which developed</b>	3,669	-	3,669	3,644	-	3,644	2,444	211	2,655
<b>Proved oil and gas reserves, developed and undeveloped (in million of boe)</b>	1,880	193	2,073	1,884	156	2,040	1,893	192	2,085
<b>Of which developed</b>	1,211	62	1,273	1,201	33	1,234	935	113	1,048

<sup>(1)</sup> For the definition of reserves under international activity, see page 110 in the Company's 2001 annual report to shareholders.

<sup>(2)</sup> For the definition of proved, developed and undeveloped reserves, see "Oil and Gas Terms" on pages 21-22.

Hydro's reserve replacement ratio in 2001 was approximately 122 percent. Positive developments in the reserve replacement ratio resulted from the maturing of technical resources into proved reserves, primarily in Norway and Angola, and revisions to recoverable reserve estimates for other fields in the portfolio. The increase also includes the effects of a change in the factor used by the Norwegian Petroleum Directorate to convert NGL volumes to oil equivalents. The reserve replacement ratio would have been 111 percent excluding this change.

An analysis of changes to proved developed and undeveloped reserves of oil and gas as of and for the three years ended December 31, 2001, 2000 and 1999 is incorporated by reference to the table in **Note 25 to the Consolidated Financial Statements** found on page 97 of the Company's 2001 annual report to shareholders. Information relating to the various fields comprising proved reserves as of December 31, 2001 and production of oil and gas for 2001 is incorporated by reference to the tables of proved reserves and production of oil and gas included in the section on operational data on page 110 of the Company's 2001 annual report to shareholders.

## Exploration

The following tables reflect the number of exploratory oil and gas wells drilled by Hydro as of December 31, 2001. The first table represents all the exploratory wells drilled during the years indicated, and the second table represents the exploratory wells in the process of being drilled as of year-end 2001.

### Drilling Activity

		Norway			International			Total		
		2001	2000	1999	2001	2000	1999	2001	2000	1999
Exploratory	productive <sup>(1)</sup>	8	6	5	7	6	5	15	12	10
	dry <sup>(2)</sup>	10	8	13	4	7	11	14	15	24

### Present Drilling Activities

As of December 31, 2001		Norway	International	Total
Exploratory	gross <sup>(3)</sup>		6	8
	net <sup>(4)</sup>	1	1	2

(1) Productive well: an exploratory deemed to be commercially viable.

(2) 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.

(3) Gross well: a well in which a whole or fractional working interest is owned.

(4) Net well: the sum of the whole fractional working interests in gross wells which equal 1.

### Norway

Hydro participated in 18 exploratory and appraisal wells that were completed on the NCS during 2001. Fourteen discoveries were made, of which eight were classified as commercial discoveries. In addition to these 18 wells, two exploratory wells were still in the process of being drilled at year-end 2001. One of these has since been classified as non-commercial in 2002. In 2002, Hydro plans to participate in 10 exploratory wells on the NCS, of which Solsikke is considered the most important. This well will be drilled at

a water depth of 1,800 meters, and will test a large gas prospect in the Haltenbanken area of central Norway. Hydro's interest in Solsikke was awarded in 2000 as part of the 16th licensing round.

In March 2001, the Norwegian governmental authorities awarded Hydro a participating interest in a license in the North Sea (located west of the city of Bergen) containing eight blocks. The blocks were announced in the 2000 North Sea licensing round. The licenses were awarded as a seismic option with no drilling commitments.

In March 2002, the Norwegian government announced the awarding of licenses in the 2002 North Sea round, with Hydro being awarded interests (ranging from 12.4 percent to 60 percent) in three exploration and production blocks on the NCS. Hydro will be the operator of two of these licenses. In addition, Hydro was awarded a seismic option on another block.

In December 2001, the Norwegian governmental authorities announced 32 blocks, all located in the Haltenbanken area, in the 17th licensing round, considerably less than expected following oil companies' nomination of 95 prospective blocks for consideration in the round. The deadline for submission of applications for the blocks is March 18, 2002; awards are anticipated in the second quarter of 2002. Several international oil companies have formed alliances to improve their prospects for securing desired blocks. Hydro is working with ExxonMobil, TotalFina Elf and BP for this purpose.

The evaluation of the Ormen Lange gas field, at a water depth of 1,000 meters, continued throughout 2001. The Ormen Lange gas field covers production licenses 208, 209 and 250. Hydro will be the operator for the development of the field, while Norske Shell will be the operator for the production phase. The plan for development and operation (**PDO**) is scheduled for the fourth quarter of 2003, approximately one year later than earlier estimates. The delay results primarily from further evaluations of the development solution in order to optimize the commercial results. Production is scheduled to begin in 2007. The total investment for the field development is estimated to be between NOK 25-30 billion excluding export solution.

### *International*

In 2001 Hydro's international exploration activities encompassed Angola, Canada, Russia, Libya, Iran, Trinidad and the US (in the Gulf of Mexico). Hydro participated in the drilling of 11 exploratory and appraisal wells that were completed during 2001. Seven discoveries were made, all expected to have a commercial potential. In addition, six wells were spudded in late 2001 and will be evaluated in 2002.

In Angola, Hydro has a 10 percent interest in Block 17, where the Girassol oil discovery was made in early 1996. Following the Girassol discovery, several discoveries have been made in Block 17 such as Dalia, Rosa Lirio, Cravo, Camilia and Jasmin. Cravo, Camilia and Jasmin were declared commercial in 2001. The Violetta well drilled in 2001 is the most recent discovery on Block 17. The exploration period has been extended to the end of 2002 and further exploration and appraisal activities are expected to continue. Hydro signed a PSA with the Angolan governmental authorities in 2001, acquiring a 30 percent interest in the promising ultra-deep water Block 34. Hydro also signed a farm-in agreement to acquire a 10 percent interest in Block 25. The first exploratory wells for both Blocks 34 and 25 are scheduled to be drilled in 2002.

In Canada, Hydro has developed a substantial license portfolio following its entering into a strategic alliance with Petro-Canada in 1996. Hydro participated in the drilling of two wells during 2001: the Terra Nova Far East well and the Annapolis well. The Terra Nova Far East well was a commercial discovery, while the Annapolis well was spudded in late 2001 and has not yet been evaluated. Hydro was awarded two new licenses through successful bids in 2001: Parcel 6 offshore Nova Scotia and Parcel 2 in Flemish Pass offshore Newfoundland.

In Russia, Hydro is involved in the early phases of several projects which aim to explore and develop oil reserves in the Pechora Sea and the onshore Timan Pechora area. Hydro is also part of a group, whose other members are TotalFinaElf, Conoco and Fortum, that has been engaged in the technical and commercial evaluation of the Shtokman gas field in the Barents Sea, at a water depth of some 320 meters. In 2000, the Russian governmental authorities approved Shtokman as a project for which a PSA can be negotiated; however, negotiations have not yet started.

In Libya, Hydro has a 20 percent interest in the Murzuq exploration licenses, NC186 and NC187, which during 1999 were amended to include a larger area, Murzuq north. Extensive seismic interpretations were conducted in both 1999 and 2000 by the operator, Repsol, to evaluate drillable prospects. By the end of 2001, five exploratory wells and one appraisal well had been drilled on the NC186 license. The field development plan for the largest discovery may be approved by the Libyan authorities in 2002.

During 2001, Hydro's activity in Iran consisted mainly of continuing the ongoing seismic program and preparatory work for the first exploratory well on the Anaran block. The well is scheduled to be drilled in 2002.

In Trinidad and Tobago, where Hydro has a 19 percent interest in the deep water Block 27, BP spudded the Catfish-1 exploratory well in 4,000 feet of water in December 2001. Catfish-1 is the fourth well drilled in the Trinidad and Tobago deep water under production sharing agreements entered into in 1998.

In the Gulf of Mexico, Hydro entered into a farm-in agreement with Conoco in September 2001, which provided Hydro with a 25 percent working interest in five firm and three contingent exploratory wells covering 55 exploratory leases. The first well, Harvard at Green Canyon 942, was completed during the autumn of 2001 and proved to be a dry well. The second well, Kate at Green Canyon 730, was spudded in December 2001, with expected completion in early 2002.

## Development

In 2001, Hydro invested NOK 7,763 million in the development of new and existing fields and transportation systems compared to NOK 7,926 million and NOK 8,433 million in 2000 and 1999, respectively.

Grane, Tune, Snorre Phase 2 and Terra Nova were the four most important development projects for Exploration and Production in 2001.

A summary of the fields under development is set forth in the following table:

### Development <sup>(1)</sup>

Field	Type of Field	Approved for Development	Production Scheduled to Commence	Total Estimated Investment	Hydro's share of	
					Total	Incurred to date
(In NOK billion)						
<i>Norway</i>						
Tune <sup>(2)</sup>	Gas/Condensate	December 1999	October 2002	3.0	1.0	0.7
Kvitebjørn <sup>(3)</sup>	Gas/Condensate	July 2000	October 2004	10.5	1.9	0.5
Grane <sup>(4)</sup>	Oil/Gas	June 2000	October 2003	16.8	4.7	1.4
Vale <sup>(5)</sup>	Gas/Condensate	March 2001	April 2002	1.1	0.35	0.28
Fram Vest <sup>(6)</sup>	Oil/Gas	March 2001	October 2003	4.4	1.2	0.14
Mikkel <sup>(7)</sup>	Gas/Condensate	September 2001	October 2003	2.5	0.3	0.05
Kristin <sup>(7)</sup>	Oil/Gas	December 2001	October 2005	18.3	2.5	0.02
Sigyn <sup>(7)</sup>	Gas/Condensate	August 2001	March 2003	2.1	0.26	0.04
<i>International</i>						
Terra Nova <sup>(8)</sup>	Oil	January 1998	January 2002	21.6	4.0	3.4
Kharyaga phase 1 & 2 <sup>(9)</sup>	Oil	October 1997/ October 2000	October 1999 / December 2003	3.0	1.1	0.7

<sup>(1)</sup> The table excludes the following fields: **Snorre Phase 2**, the **Gullfaks Satellites**; **Snøhvit**, **Askeladd** and **Albatross** and, in Angola, the **Girassol**, **Jasmin**, **Dalia** and **Rosa Lirio** fields. In 2001, **Snorre Phase 2** and the **Gullfaks Satellites**, located on the NCS, commenced production. The Snøhvit LNG development project, for which a PDO was submitted and was approved by the Norwegian governmental authorities in March 2002, consists of three fields: **Snøhvit**, **Askeladd** and **Albatross**. The fields are contemplated to be developed with sub-sea wells and templates, to be linked by pipeline to a LNG processing plant at Melkøya, an island located near Hammerfest, Norway. The processing plant is expected to have a capacity of 20.8 million Sm<sup>3</sup> per day. Output from the plant, consisting of LNG, NGL and condensate, is expected to be exported by ship to markets. Contracts for LNG have been negotiated with buyers in the US and in Spain. Full capacity is expected to be reached by October 2006. In Angola, the **Girassol** field was brought on stream in December 2001. The **Jasmin** field is a satellite to the Girassol field. The field was declared commercial in the middle of 2001. The development concept comprises a sub-sea tie-in to the Girassol floating production and storage offloading (FPSO) unit. The partnership approved the project in 2001 and governmental sanctioning is expected in early 2002. Production is expected to begin in 2003. The development concept for the **Dalia** field, located on Block 17 in Angola, comprises a sub-sea production system linked to a FPSO having a production capacity of approximately 225,000 boed. Dalia is expected to be sanctioned in 2002 and production is expected to begin in 2005. The development concept for the **Rosa Lirio** field is also a sub-sea solution with tie-back to the Girassol field. Rosa Lirio is anticipated to be sanctioned in 2002.

<sup>(2)</sup> The development concept for the **Tune** gas and condensate field comprises a sub-sea frame and four wells linked to the Oseberg D platform where the gas is processed for export. Drilling of the wells started in the autumn of 2001 and production is planned to commence in October 2002.

<sup>(3)</sup> Gas and condensate from the **Kvitebjørn** field will be produced on the Kvitebjørn platform. Gas and condensate will be exported to the Kollsnes gas terminal and the Mongstad terminal, respectively. Production is scheduled to commence in October 2004.

- (4) Pre-drilling of development wells for the **Grane** field commenced in August 2001 and the project is proceeding according to plan. Production is scheduled to begin in October 2003. Oil from the field will be exported in a new pipeline from the Grane platform to the Sture terminal in Øygarden, Norway. Gas will be imported from the Heimdal Gas Center, which is located in the vicinity of the Grane field, for injection to ensure optimum production of oil.
- (5) The **Vale** field will be developed by one satellite well which will be tied to the Heimdal Gas Center. Production from the Vale field had been expected to commence in December 2001, but has been delayed until mid-2002 as a result of extensive work needed to accommodate production from the Vale field to the Heimdal platform.
- (6) Oil and associated gas from the **Fram Vest** field will be produced by four sub-sea wells with production scheduled to commence in October 2003. The well stream will be piped to the Troll C platform for processing. Processed oil will be further transported to the Mongstad terminal while gas will be returned for reinjection for a period of approximately six years to facilitate oil recovery. After this period, gas will be transported to the Kollsnes gas terminal.
- (7) The development concept for the **Mikkel** field consists of four production wells from two sub-sea templates linked to the Åsgard B platform for processing. The Mikkel condensate will be exported from Åsgard C for offshore loading. The Mikkel gas will be transported to the Kårstø terminal through the Åsgard transport system. Production is scheduled to begin in October 2003. The development concept for the **Kristin** field consists of twelve production wells from three sub-sea frames linked to a dedicated floating production unit for processing. 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. The Norwegian government approved the PDO for the **Sigyn** gas/condensate field in August 2001. The field will be developed with a sub-sea template and three wells (2 in Sigyn West and 1 in Sigyn East) which will be linked to the Sleipner A platform for processing of the well stream. Production is planned to commence in the first quarter of 2003.
- (8) The **Terra Nova** field is located off the coast of St. John's, Newfoundland, Canada. Production from Terra Nova had been expected to commence in the autumn of 2001 but was delayed until January 2002 as a result of various technical challenges. Actual development costs of the field will exceed the previous cost estimate by approximately NOK 4,400 million as a result of increased hookup and commissioning costs on the unit (FPSO).
- (9) The first phase of the **Kharyaga** field, located in Northwest Russia, began production in 1999. Phase 2 is now under development and production is expected to commence in 2003.

The following table shows the number of development wells in which Hydro had interests as of December 31, 2001. These wells were drilled in 2001 in the fields listed in the above table summarizing fields under development.

Development wells	Norway	International	Total
Number of wells	9	5	14

## Production

The following table shows the number of gross and net productive oil and gas wells in which Hydro had interests as of December 31, 2001. A "gross" well is one in which a whole or fractional working interest is owned. The number of "net" wells is the sum of the whole or fractional working interests in gross wells. Productive wells are producing wells or those capable of production and deemed commercially viable.

### Productive Wells

Type of well	Norway <sup>(1)</sup>	International	Total	
Crude oil	gross	496.0	66.0	562.0
	net	61.2	13.4	74.6
Natural gas	gross	63.0	-	63.0
	net	7.4	-	7.4

(1) Nine 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.

## Production of Oil and Gas

The following table sets forth Hydro's share of average daily production of oil and gas for each of the two years in the period ended December 31, 2001.

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

Field	Hydro's share of average daily production in 2001			Hydro's share of average daily production in 2000		
	Total in thousands of boe	Oil in thousands of boe <sup>(2)</sup>	Gas in millions of cubic feet	Total in thousands of boe	Oil in thousands of boe <sup>(2)</sup>	Gas in millions of cubic feet
<i>Norway</i>						
Oseberg fields	99.0	83.5	84.1	83.8	78.4	29.8
Troll	69.7	34.5	203.3	73.6	32.2	237.0
Snorre fields <sup>(3)</sup>	67.4	64.1	16.9	55.1	52.7	12.4
Sleipner fields	32.1	13.1	106.8	31.4	10.8	110.1
Gullfaks fields	25.0	22.8	12.9	27.6	25.4	12.3
Ekofisk fields	27.4	22.9	24.1	26.7	22.0	25.2
Njord	11.4	11.4	-	15.2	15.2	-
Norne	17.6	16.1	8.4	14.5	14.5	-
Åsgard	23.2	16.5	37.6	14.1	13.2	5.5
Brage	10.6	9.9	4.0	12.0	11.3	3.6
Varg	8.6	8.6	-	10.5	10.5	-
Visund	8.9	8.9	-	7.9	7.9	-
Yme	0.5	0.5	-	4.9	4.9	-
Frigg	4.2	0.0	24.2	4.1	0.3	21.5
Heimdal	0.5	0.1	2.1	-	-	-
<b>Total Norway</b>	<b>406.1</b>	<b>312.9</b>	<b>524.4</b>	<b>381.4</b>	<b>299.3</b>	<b>457.4</b>
<i>International</i>						
Hibernia	7.4	7.4	-	7.2	7.2	-
Kharyaga	4.4	4.4	-	3.9	3.9	-
Mabruk	2.6	2.6	-	2.5	2.5	-
Girassol	0.4	0.4	-	-	-	-
Britannia <sup>(4)</sup>	-	-	-	9.2	1.9	39.4
Alba <sup>(4)</sup>	-	-	-	5.5	5.5	-
Gryphon <sup>(4)</sup>	-	-	-	2.6	2.6	-
Thistle fields <sup>(4)</sup>	-	-	-	1.1	1.1	-
<b>Total International</b>	<b>14.8</b>	<b>14.8</b>	<b>-</b>	<b>32.0</b>	<b>24.7</b>	<b>39.4</b>
Effect of new conversion factor <sup>(5)</sup>	-	-	-	2.6	2.6	-
<b>Total</b>	<b>420.9</b>	<b>327.7</b>	<b>524.4</b>	<b>416.0</b>	<b>326.6</b>	<b>496.8</b>

<sup>(1)</sup> All volumes are calculated based on the Norwegian Petroleum Directorate's current conversion factors. The conversion factor for NGL has been changed in 2001 from 1 ton = 8,177 boe to 1 ton = 11,951 boe.

<sup>(2)</sup> Includes crude oil and NGL/condensate.

<sup>(3)</sup> Includes Snorre, Tordis, Vigdis, Statfjord East, Syna fields.

<sup>(4)</sup> The Britannia, Alba, Gryphon and Thistle fields in the UK were sold in August 2000.

<sup>(5)</sup> The effect on average daily production for any individual field is relatively minor with the exception of Sleipner which would be 32.9 boe calculated using the new factor.

## *Norway*

**Oseberg Fields.** The Oseberg Fields consist of the Oseberg Field Center, Oseberg C and the two satellites, Oseberg East and Oseberg South. Oil and gas from the satellites are piped to the Oseberg Field Center for processing and transportation. Oil from Oseberg Field Center is brought ashore by the Oseberg Transport System pipeline to the Sture terminal in Norway. Oil production from the Oseberg Field Center and the Oseberg C platform are currently in the decline phase. Gas export from the Oseberg Field Center and the satellites began in 2000 and 2001, respectively. Tune, a sub-sea well template, is expected to come on stream in October 2002. The template is tied in to the Oseberg Field Center. The rich Tune gas arriving at Oseberg Field Center will be processed and routed in the Oseberg Gas Transport pipeline to the Heimdal terminal and further to continental Europe.

**Troll Field.** The Troll operations consist of two floating production units linked by oil pipeline to the Mongstad terminal in Norway and a gas platform linked by pipeline to treatment facilities located at the Kollsnes gas terminal in Norway. Gas from the Troll field represents a major part of Hydro's current developed gas reserves and gas production.

**Snorre Fields.** The Snorre fields include the Snorre, Tordis, Vigdis, Statfjord East and Sygna fields. Production of oil and associated gas from the **Snorre field** began in 1992. Snorre B 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. 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 due to increased water production. During 1998 and 1999 measures were taken to stabilize the production level. In 2000, water injection was implemented to increase the recoverable reserves from the field. STUJ, a neighboring structure to the Tordis field, came on stream in December 2001. Production of oil and gas from the **Vigdis field** began in early 1997. Oil from the Vigdis field is processed on the Snorre platform and piped to Gullfaks A for storage and transportation. The **Statfjord East** and **Sygna** fields started production in 1994 and 2000, respectively. Both fields are linked to the Statfjord C platform.

**Sleipner Fields.** Production of gas and condensate began at **Sleipner East** in late 1993. Production from the satellite fields, Gungne and Loke Trias, began in 1996 and 1999, respectively. Production from Sleipner West started in the middle of 1996. Gas from Sleipner is linked to Troll output for commercial and logistical purposes and condensate is transported to the Kårstø facilities.

**Gullfaks Fields.** The Gullfaks complex consists of three integrated platforms with concrete substructures linked to the Gullfaks West, Gullveig, Rimfaks and Gullfaks South fields. The fields have been developed in two phases. Production for the first phase started in 1986. Phase 2 production, consisting mainly of gas, began in October 2001. Oil is transported by tankers from the fields while gas is transported by pipeline to the Kårstø terminal in Norway.

**Ekofisk Fields.** Ekofisk is the oldest operating field complex within Hydro's portfolio, having commenced production in 1971. In 1984, subsidence of the seabed around the complex was observed as a result of gradually decreasing reservoir pressure. In 1987 and 1989, measures were taken to safeguard recovery, including water injection, raising the oil platform and reinforcing storage facilities. In 1998 the original platforms were shut down and replaced by new facilities (**Ekofisk II**). Start up problems relating to gas processing equipment have affected and continue to affect production efficiency relating to gas output. However, oil output has gradually increased each year. Abandonment of the satellite platforms has started and alternatives are being discussed for extending the lifetime of the centrally located Ekofisk I and Eldfisk platforms so as to increase both well potential and production capacities. In addition, de-bottlenecking of the Ekofisk II facilities is ongoing and increased gas processing capacity is expected to be available by the spring of 2002.

**Njord Field.** Production at the Njord field began in late 1997. The installation consists of a floating production unit combined with a tanker for storage and loading of oil. Gas produced is reinjected into the field to maintain reservoir pressure. An agreement related to the sale and lease back of the Njord B ship was entered into in January 2002.

**Norne Field.** Oil production at Norne started in late 1997. The installation consists of a combined production and storage vessel including gas handling facilities and a gas transportation pipeline. Gas production from the field began in February 2001. The gas is transported via the Åsgard Unit to the Kårstø gas terminal in Norway.

**Åsgard Unit.** The Åsgard Unit infrastructure covers the three fields, Midgard, Smørbukk and Smørbukk Sør. Oil production started from Åsgard in early 1999 and gas export from Åsgard B commenced in October 2000. Since the commencement of production, average gas export from Åsgard B has varied due to considerable technical problems. Beginning in the fourth quarter of 2000, Åsgard B experienced unforeseen technical problems resulting in substantially lower than expected production. In August 2001, the Åsgard B platform was shut down for repairs. Production at a lower rate commenced in January 2002. The repair work is expected to be completed by August 2002. Regularity arrangements have been entered into with several fields to fulfill Hydro's delivery commitments and redelivery of the gas is expected to resume in the fourth quarter of 2002.

**Brage Field.** Production from the Brage field began in late 1993. Oil from Brage is transported to the Sture terminal via the Oseberg Field Center. Production from the field is currently in the decline phase.

**Varg Field.** Varg is a minor field and nearly fully depleted. Operations are expected to be terminated at the field in mid-2002. Hydro has agreed to sell its production license (PL038), including its interest in the Varg field, to Petroleum Geo Services (PGS), effective August 1, 2002. The sale is pending Norwegian governmental approval.

**Visund Field.** The Visund field floating production unit came on stream in early 1999. Oil produced from Visund is stored in and shipped from Gullfaks A. Construction of a sub-sea installation for developing the northern reservoir of Visund commenced in 2000. One new well came on stream in February 2002 and another is expected to come on stream during the fourth quarter of 2002.

**Yme Field.** Production from the Yme field was shut down during May 2001 and all installations have been removed. The license has been returned and no further activities are planned.

**Frigg Fields.** Gas production from the Frigg fields, which started in 1977, has been in the decline phase for several years. It is currently anticipated that the reserves from Frigg will be fully depleted between 2002 and 2004. Future production will be insignificant. The full carrying value of Hydro's investment in the Frigg fields has been written down in prior years due to low remaining production and high operating costs.

**Heimdal Field.** Heimdal is currently operated as a gas processing and distribution center for several operators 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.

### *International*

**Hibernia Field.** The Hibernia field is located in the Grand Banks area off the east coast of Newfoundland in Canada. Oil production came on stream in November 1997.

**Kharyaga Field.** The Kharyaga field is located in Northwest Russia. The Russian authorities entered into a PSA under which production commenced in October 1999. Hydro's share in the PSA is 40 percent. However, in 2000 Hydro entered into a farm-out agreement with Lukoil which will reduce Hydro's share in the project to 30 percent. This farm-out is dependent on Russian Federation approval and therefore not reflected in 2001 accounts. Phase 2 of the project is scheduled to start production in 2003 and is expected to increase production by approximately 20,000 boed.

**Mabruk Field.** The Mabruk field is located in Libya. Production started in 1995. Hydro became owner of a 25 percent interest in the license through the acquisition of Saga in 1999. Hydro's interest is defined in the development and production sharing agreement entered into with the National Oil Company in Libya.

**Girassol Field.** The Girassol field is located in Angola. Oil production from Girassol started in December 2001. The installation consists of a FPSO vessel which is the largest of its type ever built with a processing capacity of 200,000 boed and storage capacity for 2 million barrels.

### Marketing of Production

Exploration and Production sells most of its oil and liquid gas production to Hydro Energy. In addition, Hydro Energy also markets dry gas for Exploration and Production on a commission basis.

### Transportation of Oil and Gas

See the disclosure in the business description of the Energy segment below under the caption "Increasing the Value of Hydro's Upstream Gas Portfolio" on page 37 of this Annual Report for information regarding the process of integrating the Norwegian pipeline system. The information that follows 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 December 31, 2001.

Pipeline	End Point	Length (km)	Hydro's interest (%)
Norsea Gas A/S (gas)	Ekofisk - Emden (Germany)	440	4.63
Norpipe Oil A/S (oil)	Ekofisk - Teesside (U.K.)	354	3.50
Statpipe (gas)	Statfjord - Ekofisk - Kårstø (Norway)	880	10.00
Oseberg Transport System (OTS) (oil)	Oseberg - Sture (Norway)	115	22.23
Zeepipe phases 1 & 2 (gas)	Troll - Sleipner - Zeebrugge (Belgium)	1,451	11.00
Europipe (gas)	Troll - Sleipner - Emden (Germany)	660	11.00
Frostpipe (oil)	Frigg - Oseberg (Norway)	82	13.75
Sleipner East NGL pipeline (NGL)	Sleipner - Kårstø (Norway)	245	10.00
Troll Oil 1 & 2	Troll - Mongstad (Norway)	165	9.73
Franpipe (gas)	Draupner (16/11 S/E) - Dunkerque (France)	840	11.65
Netra (gas)	Ettel (Germany) - Salzwedel (Germany)	292	6.10
Åsgard Transport (gas)	Åsgard - Kårstø (Norway)	730	11.60
Europipe 2 (gas)	Kårstø (Norway) - Dornum (Germany)	650	15.36
Oseberg Gas Transport (OGT)	Oseberg - Heimdal (Norway)	109	22.23
Vesterled	Heimdal - St-Fergus (UK)	364	13.86
Norne Transport	Norne - Åsgard (Norway)	130	8.10

Additional information relating to the transportation and processing infrastructure follows:

### *Norway*

A major portion of the pipeline complex on the NCS has been constructed over the last decade, including the different phases of **Zeepipe** and **Europipe** in 1993, 1996, 1997 and 1999 and **Franpipe** in 1998. In addition, each of the **Åsgard Transport** and **Oseberg Gas Transport** systems was completed in 2000; the **Vesterled** system started operations in late 2001.

The **Sture** terminal includes facilities for further processing of crude oil from the Oseberg fields and production of a propane and butane mix (LPG). These facilities (the SCUP facilities) are owned by three groups: OTS, Hydro, as 100 percent owner of the LPG facilities, and Vestprosess DA (**VP**). Hydro also owns a 17 percent interest in VP, a transportation system for condensate and NGL from Kollsnes and Sture to Mongstad, and a fractioning plant for refining of these products at the Mongstad plant. VP transports and processes products "as produced" from the Troll facilities at Kollsnes, from OTS, the SCUP facilities at Sture and from the Mongstad refinery.

### *International*

Crude oil from the Hibernia field in Canada is transported from the field in dedicated offshore loading tankers directly to market or to a terminal located at Whiffen Head, Newfoundland. 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. The terminal is to be expanded for Terra Nova.

Crude oil from the Kharyaga field is shipped 3,000 kilometers through the Russian pipeline system to Ventspils.

In May 1998, Hydro obtained a gas shipping license from the Office for Gas and Electricity Marketing (OFGEM) providing Hydro with the right to trade and ship gas in the UK market. Specifically, Hydro acquired a transport right for 0.5 billion cubic meters of gas in the Interconnector between the UK and Belgium. Operations began in October 1998 with gas trading between the European continent and the UK.

### **Government Regulation**

The exploration and production activities of Hydro, as is the case for other oil and gas companies, are subject to government regulations of various kinds in different countries. In Norway, the oil and gas industry is governed by laws defining the rights of the government and license holders. For many years, licenses were subject to a minimum state participation of 50 percent and to sliding scale provisions under which the Norwegian government could increase its share in any license varying with the planned production profile for that license. The sliding scale provisions have been abolished for licenses granted after January 1, 1993. Furthermore, the Norwegian government has decided that the sliding scale option will not be exercised for licenses for which development decisions have not yet been made. In addition, the Norwegian government's participation in new licenses is no longer fixed at 50 percent and may vary from license to license. In the 16th licensing round in 2000 the maximum government participation in any new license was 45 percent. The government still has the option to participate in future licensing rounds, but no maximum level has been indicated.

In 2001, 15 percent of the State's Direct Financial Interest (SDFI) on the NCS was sold to Statoil, the state-controlled oil and gas company, before Statoil's partial privatization. As disclosed above, a further 6.5 percent of the SDFI assets on the NCS is to be sold to other companies in 2002.

For licenses granted after July 1, 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 July 1, 1985, the conditions in the specific license apply.

Under the Norwegian Petroleum Act, the Norwegian government may, if vital national interests are at stake, direct the oil companies with interests on the NCS to reduce petroleum production. Due regard must be given to long-term gas supply agreements. The Norwegian government exercised its right under the Act in the period from 1987 to 1990. In the period from June 30, 1990 to April 30, 1998, there were no limitations on petroleum production. From May 1, 1998 until July 1, 2000, the government imposed a production regulation requiring production to be roughly three percent lower than previously planned. For the first half of 2002, daily oil production on the NCS will be reduced by 150,000 barrels of oil per day, which represents roughly five percent of the estimated average daily production for this period.

The Norwegian government can require that licensees participate in the removal of offshore oil and gas installations (platforms) on the NCS when production ceases or at the expiration of the concessions, whichever occurs first. Under Norwegian law, dismantlement and removal costs are not tax deductible. The Norwegian government is, however, required to reimburse participants for a portion of these costs. Costs will be reimbursed in the same proportion as the accumulated petroleum taxes paid by each company over the life of the field in relation to the accumulated petroleum tax base for the same period. Hence, with the tax regime applicable to the petroleum industry, the Norwegian government would carry the larger part of such costs. The cost of any dismantlement and removal will vary depending on the type of installation and the decision of the authorities regarding the timing, type and degree of removal. Licensees are responsible for closure of individual wells and all costs related to the decommissioning of installations on the NCS. These costs are treated as deductible expense for both ordinary tax and special petroleum tax purposes. The Norwegian government has the option to take ownership of an installation at no cost to it at the end of the applicable concession period. In such case, the Norwegian government would assume total responsibility for any well closure and decommissioning costs after this time, and removal costs of the installation. As a basis for estimating Hydro's future participation in well closure, decommissioning and removal costs of the installation, 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.

## **Taxation in Norway**

**Ordinary Taxes.** Profits from Norwegian oil production are subject to Norwegian income taxes at the rate of 28 percent. Investments in oil and gas production facilities are depreciated over six years using a straight-line method of depreciation (i.e., 16 2/3 percent per year). For investments related to large-scale liquefaction facilities for natural gas, a depreciation period of three years was introduced in 2001, providing for an annual depreciation rate of 33 1/3 percent. Depreciation starts when expenditures are incurred. Deductions for exploration and other costs can be taken in the year such costs are incurred. Revenue for tax purposes is based on market norm prices (as determined on a quarterly basis by a government-appointed board) 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.

**Special Petroleum Tax.** A special petroleum tax is levied on net income from oil and gas activities on the NCS at a rate of 50 percent, less an "uplift" deduction. For capital expenditures incurred after January 1, 1992, the "uplift" is equivalent to five percent per year of the original amount of the capital expenditure for a six year period starting when the expenditure occurs. Any "uplift" in excess of the amount deducted can be carried forward indefinitely. 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 can be carried forward with interest. The tax authorities determine the applicable interest rate.

**Thin Capitalization Rules/Allocation of Financial Costs.** Net financial costs previously have been allocated between offshore-related activities and other activities based on the relative net income from such activities. As of January 1, 2002, the allocation is based on the net tax values of the respective assets. Under the thin capitalization rules, the portion of interest expense which is deductible for ordinary and special petroleum taxes will be adjusted to reflect a debt-to-total capital ratio of 80 percent.

**Carbon Dioxide Emissions Tax.** Beginning January 1, 1991, the Norwegian government introduced a tax on carbon dioxide (CO<sub>2</sub>) emissions from platforms. From January 1, 2002, the tax has been set at NOK 0.73 per standard cubic meter of gas. The CO<sub>2</sub> tax, which is treated as part of operating costs, is a deductible expense for both ordinary and special petroleum taxes.

**Royalty.** A Norwegian government royalty varying from 10 percent to 16 percent of production was levied on fields approved for development prior to 1986. As of today, only four oil fields are subject to royalty payments, including two fields in which Hydro has an interest: Oseberg and Gullfaks. The royalty is being phased out. For Oseberg and Gullfaks, the royalty began to be reduced in January 2000 and will be eliminated at the end of 2005.

**Area Fee.** The area fee is a fee per square kilometer of license area. The rates increase over time, beginning with the award of the license. The rate structure was modified and the rate level reduced in 1998. As of January 1, 1999, the area fee is not applied during the first year after the license is awarded. The rate then increases to a maximum of NOK 70,000 per square kilometer per year approximately 16 years after the award of the exploration license.

## **Taxation Outside Norway**

Hydro's international oil and gas exploration activities are covered by the tax legislation of the respective countries where it is involved, and is also to a large extent regulated by production sharing agreements (PSAs). The PSAs are normally negotiable, and the terms are unique for each project. Under a PSA, a host government typically retains the title to the hydrocarbons in place. When a discovery is made, the PSA typically allows the contracting company to recover all its exploration, development and operating costs and receive a share of profits, subject to certain limits. Normally, contractors carry exploration costs and risk prior to a commercial discovery. The fiscal and contractual conditions vary. A short description of the fiscal/contractual regimes in countries where Hydro has production of hydrocarbons follows:

**Canada.** The fiscal regime consists of both royalty and provincial/federal tax systems. Hibernia and Terra Nova have unique royalty systems, and there are also generic royalty regimes for the Grand Banks and Scotian Shelf areas. East Coast royalty regimes are project-specific and a resource allowance of 25 percent of operating income is deductible for income tax purposes in lieu of royalty paid. The East Coast royalty regimes are progressive with gradually increasing gross royalty prior to project payout, and net royalty tiers payable subject to payout tests on cumulative net revenue after deduction of uplifted costs. 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 taxes are about 43 percent. Consolidation is allowed across all Canadian income, if previously arranged, for tax purposes.

**Russia.** The Kharyaga field is taxed based on a PSA. The gross revenues after royalty are split on a "cost oil" share for cost recovery and a "profit oil" share for allocation between the State and the contractors. Unrecovered costs in a given year can be carried forward for later recovery. The State's take consists of the gross royalty element, the "profit oil" direct State share and the "profit oil" tax rate of 35 percent. The "profit oil" is allocated between the State and the contractors according to a sliding scale based on the accumulated internal rate of return.

**Libya.** The Mabruk field is taxed based on a PSA. A royalty share of the gross revenues is allocated directly to the State. The remaining gross income after royalty is split between a “cost oil” share to recover cost and a “profit oil” share. Unrecovered costs in a given year can be carried forward until full recovery. The “profit oil” is allocated between the State and the contractors according to a sliding scale based on the cumulative production, and a payback factor. No additional profit oil tax applies on the contractors’ share of profit oil.

**Angola.** The producing field, Girassol, is taxed according to the PSA for Block 17 in Angola. A ring fence around each development area in the block applies for tax purposes. The State takes no direct participation for this block. The gross revenues are split between a “cost oil” share for cost recovery and a “profit oil” share for allocation of profit between the State and the contractors. Development costs are uplifted by a set percentage, and recoverable in yearly installments normally over a four-year period. Unrecovered costs in a given year can be carried forward for later recovery. Profit oil is split between the State and the contractors according to a sliding scale based on the accumulated internal rate of return. Petroleum income tax is levied at a rate of 50 percent of the contractor’s share of profit oil.

## Energy

Energy's business activities consist of Hydro's commercial operations in the oil, natural gas and power sectors. This includes:

- \* acting as a principal in marketing Exploration and Production's equity oil production, purchasing essentially all of Exploration and Production's oil production for resale;
- \* marketing Exploration and Production's gas production on an agent/fee basis;
- \* Hydro's refinery operations;
- \* operating the Company's interest in the extensive gas transport complex on the Norwegian Continental Shelf (NCS) and the sea borne transport of crude oil, NGLs and other petroleum products;
- \* production and sale of electricity generated at hydroelectric power plants in Norway; and
- \* sourcing, on the best possible terms, Hydro's power requirements for its European industrial facilities.

## Strategy

Energy's long-term strategy is to develop Hydro's position as an integrated energy company with a geographic focus on northwestern Europe, targeting the midstream market - larger industrial customers, local distribution companies, gas for power customers, trading counterparties, etc. Leveraging Hydro's upstream oil, natural gas and electricity activities, Energy intends to utilize its market knowledge to extract value from the sale and trading of products beyond that associated with commodity-based pricing, and to offer energy services to its target customers. As part of this strategy, Energy will seek to optimize its use of existing assets (i.e., reserves, transportation infrastructure, power generation and refining) to pursue opportunities from the continuing liberalization of European energy markets. Energy also intends to continue to pursue interesting opportunities within the renewable energy sector.

In the immediate future, Energy will focus its efforts on:

- \* maximizing the value of Hydro's Norwegian and international crude oil portfolio through, among other things, joint marketing and swap arrangements, to achieve better prices and margins by marketing fewer qualities of crude oil in larger volumes with reduced logistical costs;
- \* increasing the value of Hydro's upstream gas portfolio through efficient utilization of existing production and transportation capacity, and developing Energy's trading and portfolio management infrastructure, operational procedures and support systems, in view of the liberalization of European gas markets; and
- \* in the power sector, growing Hydro's business in the Nordic region through short- and medium-term commercial arrangements, increased trading activity and expansion of Hydro's energy services business.

### *Maximizing the Value of Hydro's Norwegian and International Crude Oil Portfolio*

The focus of Energy's marketing efforts with respect to North Sea crude oil is to achieve optimal prices by marketing fewer grades of crude, in larger volumes, while minimizing logistical costs. Swap arrangements provide one means of accomplishing this. Swap arrangements can produce significant savings in logistical costs, particularly with respect to production from Hydro's international crude oil portfolio which is currently relatively small and geographically scattered.

### *Increasing the Value of Hydro's Upstream Gas Portfolio*

A major focus for Energy in 2002 will be to increase the value of Hydro's upstream gas portfolio through, among other things, more optimal utilization of Hydro's production and transportation capacity and developing Energy's trading and portfolio management infrastructure, operational procedures and support systems. Energy will also work to increase market share in a more liberalized European gas market, particularly Northwest Europe, growing both by increased access to gas from fields in which Hydro has an equity interest and by sourcing gas in the market.

The European natural gas market has undergone rapid liberalization. The European Union (EU) gas directive of 1998 required owners of gas pipelines to open up their transport systems, including systems within domestic markets, to third parties, such as distribution companies and large industrial customers, in order to bring greater competition to the European gas markets. The gas directive prescribes that a minimum of 20 percent of national markets be opened for competition by August 2000, increasing to 28 percent by 2003 and 33 percent by 2008. In March 2001, the European Commission launched proposals for accelerating the liberalization process aiming at full liberalization by 2005. Although most EU member countries have transposed the gas directive into national law, implementation has been delayed in France and is incomplete in Germany, two of the biggest EU markets. EU infringement procedures have been initiated.

In October 2001, the Norwegian government agreed to incorporate the EU's liberalizing gas directive into its legislation. The Norwegian government had previously decided, as of the summer of 2001, to dismantle the system of collective Norwegian gas sales through the Norwegian Gas Negotiating Committee (GNC), which had jointly negotiated the delivery of Norway's natural gas production, primarily under long-term contracts, to the European continent. These long-term contracts have formed the basis for large-scale investment in the gas fields on the NCS.

Effective January 1, 2002, all gas sales are being negotiated by individual Norwegian producers. An important task for Hydro in 2002 will be to conduct price review negotiations for almost all of Hydro's long-term contracts, which may result in adjustments to the terms and conditions of these contracts.

The Norwegian government has determined that the thirteen pipeline joint ventures are to be merged into a single entity, in which the Norwegian state is to have a major stake. The Norwegian government has stated that the integration of the Norwegian gas pipeline system should allow for more cost-efficient operations and ensure that transportation tariffs do not obstruct field development options. A process is currently underway to value individual company interests in the various pipeline systems. The valuation process will determine each company's interest in the combined entity. In conjunction with the alteration in pipeline ownership, as of January 1, 2002, the operation of Norway's sub-sea gas export pipeline system was transferred from Statoil, as a co-owner of most of the pipelines in Norway, to a new state company, Gassco, to provide neutral management of the infrastructure.

As of December 31, 2001, the Norwegian gas pipeline system was capable of transporting about 86 billion cubic meters per year (8.3 billion cubic feet per day). This will increase in 2003 when the Vesterled pipeline to the UK, which opened in October 2001, reaches full capacity. If built, the planned Austerled pipeline to Poland would add another 10 billion cubic meters per year by 2008. In 2000, 50 billion cubic meters of gas were sold under long-term contracts. This is set to increase to about 72 billion cubic meters in 2006, and the former owners of the gas pipeline companies are guaranteed access to the gas pipeline system for these volumes. The entity formed to own the integrated Norwegian gas pipeline system will undertake the process of developing a transparent, nondiscriminatory capacity allocation system for the remaining capacity, based on principles articulated by the EU. What the EU considers a fair regime for access to pipeline networks is a cost-reflective but simple tariff structure. Network access tariffs based on distance and point-to-point capacity reservation are perceived not to give third parties leeway to change their gas

sources or customer base without incurring higher costs. High network tariffs are viewed as discouraging third-party access, impeding competition.

While it is too early to predict the full effects of the EU gas directive, Hydro anticipates that it may lead to the development of a broader range of contract types and a viable short-term market existing alongside a more long-term, bilateral market between producers and large users and distributors. Hydro intends to evolve its trading activities under the new regulatory regime, which may be characterized by more flexible and liquid markets, new market participants and a wider range of derivative products being traded - with attendant price, volume, performance and credit risks. Market developments in this direction have been evident in the UK for some time and similar developments are underway in Zebrugge in Belgium.

In view of the regulatory changes, Energy has established a Gas Infrastructure operating unit. The unit will focus on and coordinate activities relating to Hydro's interests in the existing gas transportation system, as well as identify and execute projects aimed at enhancing and expanding the system.

### ***Growing Hydro's Power Sector Business in the Nordic Region and European Markets***

Since the liberalization of the Norwegian electricity market in 1991, Energy has developed trading and marketing activities, along with analysis, portfolio and risk management systems. Energy's Nordic electricity portfolio includes owned generation facilities, long-term supply contracts, internal and external sales contracts and short-term optimization contracts. Energy has more recently begun to build up a European continental electricity portfolio based upon arbitrage opportunities between the Nordic and European continental markets and optimization of supply to Hydro's larger consuming plants. Energy is providing to Nordic customers energy services ranging from physical power supply to advanced portfolio management, including market analysis, price forecasting and risk management trading.

In 2002, Energy will pursue a selective growth strategy, with profitability having to be demonstrated to justify expansion into new markets and growth of Hydro's Nordic and Continental power portfolios. Energy will endeavor to strengthen its systems, model and control infrastructure to be able to increase its trading activities without increasing risk, and expand its energy services business.

### ***Pursuit of Renewable Energy Opportunities***

There is major political trend in Europe, driven by environmental concerns, toward the development of renewable energy projects (such as wind power or sunlight). Many of these projects are expected to be subsidized by national governments. Energy is putting emphasis on establishing Hydro as a significant player in hydrogen and other renewable energy sources. Hydro is involved in several demonstration projects for hydrogen and fuel cells. NOK 80 million of research and development funds is expected to be expended in this sector in 2002. In addition, Hydro has targeted wind generation as an interesting part of this market and plans selective investments to begin developing this business area. In 2001, Hydro acquired a 41.5 percent interest in Artic Wind, a joint venture between Hydro, Nuon International NV and Norsk Miljøkraft AS, formed for the purpose of developing a wind park in Havøygavlen in Norway. Nuon, one of the largest energy and water companies in the Netherlands, has an ownership in interest in the joint venture of 53.3 percent with the remaining interest owned by Norsk Miljøkraft. When completed, Havøygavlen will be the largest wind power project in Norway with an expected output of 118 GWh. The project is expected to commence production towards the end of 2002.

## **Industry Trends**

### ***Oil and Refining***

Although crude oil prices were exceptionally high in 2000 and high by historical standards in 2001, prices, in real terms, have trended downward since 1986, primarily as a result of lower production costs outside of OPEC due to technological progress. This trend is expected to continue. OPEC aims to function as a stabilizing force in the market, with varying levels of success. Its long-term price target is considered to be approximately USD 25 per barrel, significantly above the marginal cost of new production outside OPEC. This makes the price target unrealistic in the long term and results in cyclical periods of high and low prices from the interplay between market forces and actions taken by the cartel. This historical pattern is expected to persist for the next 10-15 years.

In the long term, refinery margins are expected to gradually improve as a result of a strong political drive to tighten product specifications on transportation fuels as a result of environmental concerns. This will require investment to upgrade refineries and will lead to increased costs at refineries.

### ***Growth in European Natural Gas Demand; Market for Norwegian Gas in the UK***

The demand for natural gas in Europe is estimated to grow from 380 billion cubic meters in 2001 to 500 billion cubic meters in 2010, fueled in large part by demand from the electric power industry. One of the last remaining undeveloped markets for natural gas in Europe is the Nordic region. Currently, roughly 60 percent of the gas consumed in Europe is supplied from indigenous European production, primarily in the UK, the Netherlands and Norway. Norway's share of European gas markets is approximately 12 percent, but the expectation is that this percentage will rise in future years, in part because of the liberalization of European gas markets.

The UK is the most likely market for Norwegian gas, as the UK is expected to see a fast growing gap between domestic supply and demand by 2005. According to some estimates, the need for imports will grow as much as 50 percent by 2010, a reflection of the UK North Sea moving from maturity to decline, and there is a rather urgent need to expedite the process of securing additional imports. Norway is the most logical source, given its close proximity. As of January 1, 2002, the only pipeline linking Norwegian fields to the UK's North Sea gas infrastructure is Vesterled, a spur line opened in October 2001, which can handle 11-12 billion cubic meters per year. Vesterled runs from the Heimdal platform's processing facilities to the St. Fergus gas terminal in Scotland via the Frigg pipeline system.

Scandinavia is the part of Europe with the least developed gas market. If this market is to be further developed, new pipeline supply routes must be put into place. The gas sales contract entered into between Norway and Poland in 2001 may serve as the impetus for such development. The GNC agreed in September 2001 to supply Poland (POGC) with 74 billion cubic meters of gas from Norway's offshore field over a 16-year period, beginning in 2008. As a result of the agreement, the construction of a new 1,100 kilometer natural gas pipeline system, referred to as Austerled, is being considered. It is currently contemplated that the pipeline system would run from the NCS to the Polish city of Niechorze, on the Baltic Sea, via Sweden, with branches to east Norway and Denmark. Petoro, the dedicated management company which was formed to manage the Norwegian State's SDFI assets, is expected to carry most, if not all, of the cost of building the Austerled pipeline system, if this project is pursued.

### ***Liberalization of European Electricity Markets; Gas for Power***

Liberalization of electricity markets in Europe continues. However, national governments have been allowing, and even promoting, noncompetitive practices - through artificial quantity limitations on cross-border

trade, cross-border tariffs and duties, etc. - in order to support their national industry in international competition.

Growth in power consumption in Europe is expected to be approximately 1 percent per year for the foreseeable future. Demand for gas for power in Europe is expected to grow substantially during the next 20 years. There are several factors influencing this trend, including the ongoing liberalization of electricity markets, implementation of environmental restrictions relating to CO<sub>2</sub> emissions, realization of expected demand growth and developments in oil and coal prices. Current market conditions in Continental Europe appear not to justify investment in new gas for power facilities. However, the Nordic region is experiencing a change towards much tighter electricity supply and gas for power production continues to be an interesting investment opportunity in the near term for this area.

## **Competitive Strengths**

### ***Integrated Energy Company***

By combining all commercial activities for energy products and services in one operating segment, Hydro has realized a competitive advantage through leveraging its commercial skills and contacts in each of the energy sectors. Hydro is able to build on experiences gained in one market in pursuing opportunities resulting from similar processes underway in new markets. Hydro's experience as a major producer and consumer of energy products has enabled it to provide services to major electricity customers in the Nordic Region.

### ***Major Gas Producer***

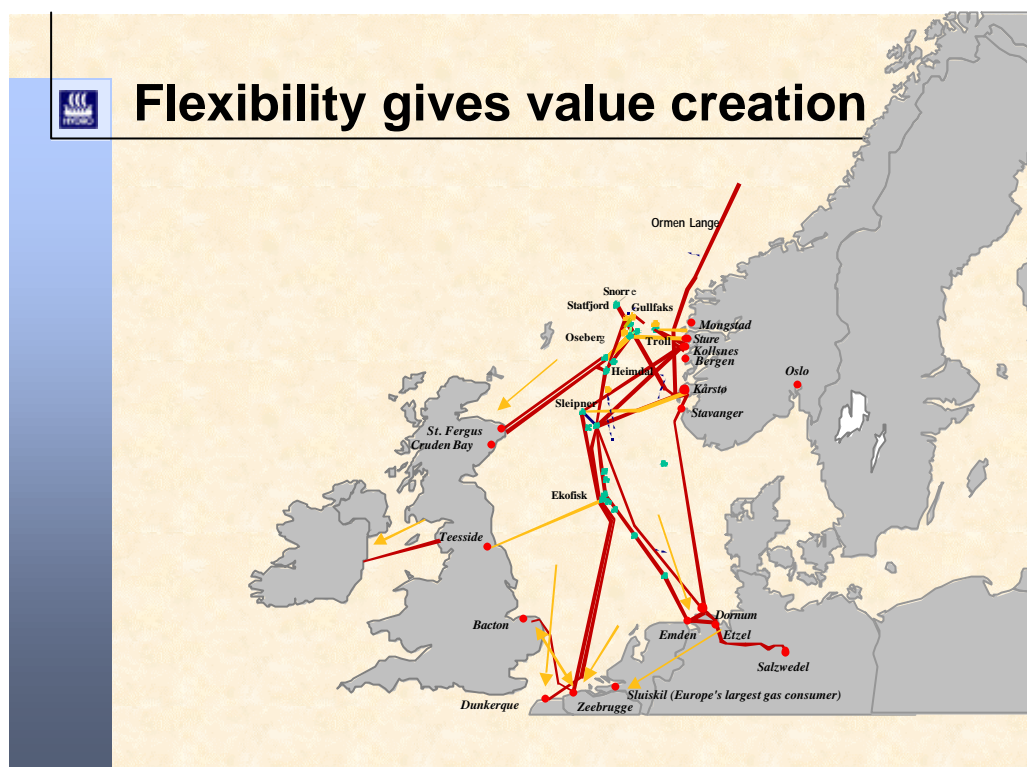
Because of location, transportation infrastructure and substantial reserves, both discovered and undiscovered, Norwegian gas is very competitive in the European region. Hydro is the third-largest producer on the NCS after Petoro and Statoil. Hydro has an interest in all the major gas fields and pipelines on the NCS. From 2001 to 2003, Hydro's gas production is expected to increase from 5.5 to 7 billion cubic meters. Hydro is also operator in the development phase of Ormen Lange, the second-largest gas discovery on the NCS and a major candidate for long-term supply of gas to Europe. This field is located in deep water and is considered one of the most challenging development projects on the NCS. Production is expected to begin in 2007.

Hydro has made substantial investments in gas export capacity from the Oseberg and Troll fields, together comprising a major portion of its proved gas reserves. Although currently underutilized, this capacity will enable Hydro to increase exports of gas significantly in the coming years as reservoir conditions allow more off take of gas without the need for further investment.

Hydro is currently investing in several gas or gas condensate fields (see Item 4.B. Business Overview -- Oil and Energy -- Exploration and Production -- Exploration on page 23). Some of these fields, including Tune, Vale and Mikkel, will be developed as satellites of existing fields taking advantage of existing transportation infrastructure. Others, including Kvitebjørn and Kristin, will be stand-alone developments to a greater degree but will also utilize existing processing facilities to some extent.

## Downstream Gas Position

Through its interests in the NCS gas transportation complex, Hydro has access to four landing points for gas in Europe, as illustrated below.



Hydro has long-term contracts of substantial commercial value. Hydro is also the largest industrial purchaser of natural gas in Europe. Hydro has already established a substantial position in the liberalizing European markets. The physical turnover of Hydro's gas trading activities exceeds deliveries made under long-term contracts to internal customers and third parties.

## Modern Refinery

With future planned investment in the Scanraff refinery, already one of the most modern in Europe, Energy is well-positioned to retain its competitiveness in this business area and meet the expected demand for enhanced product specifications in the European markets.

## Production - Electricity and European Commercial Activities

(in TWh)	2001	2000	1999
Power production	10	12	10
Acquired under long term contracts for production facilities	7	7	6

In 2001, about 9.8 TWh was produced by Hydro's own power plants or plants in which Hydro has an equity interest. This compares with 11.5 TWh in 2000 and 10.2 TWh in 1999. These supplies are fully integrated into the national electric power grid (inter-connection and power sharing) system, which further

secures supplies and gives added flexibility. Hydro is, therefore, in a good position to purchase or sell surplus power from or to other producers and utilities.

Energy has clear title concessions (which do not revert to the Norwegian government) for power plants with a generating capacity of 2.7 TWh per year. This represents approximately 31 percent of Hydro's normal production capacity. The remaining production capacity will revert to the Norwegian government without compensation at the expiration date of the concessions. This will take place in the period between 2018 and 2052.

Energy supplies electric power for Hydro's plants in Norway. To meet those needs, Energy has entered into long-term purchase contracts, the majority of which are with the State-owned power company, Statkraft. These long-term contracts provide assurance of the availability of 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 supply under existing contracts which terminate during the period 2006 - 2010. In addition, the 1997 Statkraft agreement provides an additional 1 TWh per year from 2000 to 2020. The price for these deliveries is based on a price formula tied to market prices.

### Oil Trading and Refining

Trading (000's tonnes)	2001	2000	1999
Crude oil/NGL	17,507	16,307	11,927
Oil products	2,912	2,795	2,660

Refining (000's tonnes)	2001	2000	1999
Gasoline	841	956	969
Diesel fuels, gasoils, etc.	897	915	880
Heavy fuel oil	440	516	476
Other	66	59	59
Total refining	2,244	2,447	2,384

Energy markets Exploration and Production's equity crude oil production. A limited portion of the production is occasionally channeled to Hydro's affiliated Scanraff refinery. Hydro holds a 21.5 percent share in the Scanraff refinery and a 50 percent share in the adjacent catalytic cracker for upgrading of products (Scancracker). In March 2002, Hydro announced its having entered into a memorandum of agreement with the Swedish company, Preem Petroleum, which contemplates the merger of Scanraff and Scancracker for purposes of increasing the refinery's operating efficiencies and simplifying future investments in the refinery. Upon consummation of the merger, Hydro will own a 25 percent interest in the new company. Scanraff is already one of Europe's most modern refineries with a crude oil capacity of ten million tonnes per year, of which Hydro's share in 2001 corresponded to about 2.2 million tonnes of petroleum products. Energy sells the remainder of Exploration and Production's crude oil production on a spot or short-term basis, generally at current world market prices, through its trading operations.

International trading activities include the sale of Hydro's crude oil, refined oil products and NGL production, as well as the supply of NGL feedstock, to Hydro's fertilizer and petrochemical plants. The volumes of these activities have increased partly due to Exploration and Production's increased oil and gas production over the past years.

### Marketing of Natural Gas Production

Natural gas produced from fields in which Hydro has an interest is mainly sold under long-term contracts. Pricing under such contracts is generally based on a market principle whereby the natural gas price is indexed to oil product prices in the end user market, mainly gas oil and low sulfur fuel oil. Following

the dismantlement of the GNC, future production not covered by existing long-term contracts will be sold on a company basis.

Natural gas deliveries from the NCS amounted to 51 billion Sm<sup>3</sup> in 2001. Hydro's share of these deliveries was approximately 11 percent. Based upon all present contractual commitments, the total committed gas sales from the NCS will be around 72 billion Sm<sup>3</sup> annually by 2006. Since not all of the contract volumes have been allocated to fields, Hydro's share of the future deliveries is uncertain. However, Hydro's share is expected to be between 10 and 11 percent of total deliveries.

### **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 2 percent declining balance (transmission and other electrical equipment). The depreciation base of fixed assets was revalued as of January 1, 1997. Intangible assets, including goodwill, are also deductible through tax depreciation for assets acquired through concessions that revert to the Norwegian government but not for concessions that are retained indefinitely by Hydro.

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

### **Electricity - Surtax on hydro-electric power plants (Norway)**

In 1996, a tax law was enacted in Norway for hydroelectric power plants which came into effect as of January 1, 1997. In addition to ordinary income tax, the major provisions of the law called for the introduction of a surtax. The surtax rate is 27 percent. The surtax is assessed individually for each hydroelectric power plant (ring-fenced taxation). Unlike the ordinary income tax, finance costs are not deductible, but to compensate for this an uplift is deductible. Uplift is a special tax deduction 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 capital which is not subject to surtax. The percentage used to calculate the uplift for 2001 was 10.2 percent.

Revenue for surtax purposes is based on market spot prices with certain exceptions. 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 adjustments. As most of Hydro's hydroelectric production is used for its own 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.

Losses can be carried forward indefinitely or until the plant reverts to the Norwegian government. Losses carried forward are adjusted for the uplift percentage each year.

The 1996 tax law also provides for an upward revision of the tax depreciation basis of assets. The higher basis will be deductible in future years in the form of increased tax depreciation both for ordinary income tax and surtax purposes. For additional information see **Note 10 to the Consolidated Financial Statements**.

Apart from the uplift deduction, the provisions for finance costs and the use of spot prices for revenue measurement, the elements of the ordinary tax and surtax base are identical.

A natural resource tax related to hydro-generated electricity became effective as of January 1, 1997. The rate for 2001 is NOK 0.013 per kWh. The tax is fully deductible from the Group's ordinary income tax.

## **Oil Marketing**

Oil Marketing is responsible for Hydro's marketing and sale of refined petroleum products (gasoline, diesel and heating oil) and electricity to retail 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. Oil Marketing markets a range of complementary energy products in addition to refined petroleum products, such as electricity, natural gas, biogas for cars, bioenergy for heating purposes and convenience store goods.

### **Strategy**

Oil Marketing's strategy for the foreseeable future is to:

- \* maximize Hydro's return on investments already made in its gasoline station chains. As part of this strategy, Oil Marketing will seek to optimize gasoline/diesel throughput per retail outlet by focusing on the most profitable stations and closing smaller and unprofitable outlets. Additionally, service stations with high profitability potential will be expanded to include a convenience store/fast food unit, and service stations with limited prospects will be converted into automatic stations (commonly referred to as "automate").
- \* allocate investments for new stations to build automate stations. Automate stations have been, and will continue to be, the fastest growing segment of the retail market.
- \* build a strong brand recognition and expand on profitable segments of the market. This will be achieved by focusing on sales to the most profitable segments and customers.

### **Industry Trends**

#### ***Decline of Heating Oil Market***

The heating oil market continues to decline. Over the past couple of decades, residential home heating oil demand in Western Europe has been falling by an average of around 1.62 percent per year, according to the Paris-based International Energy Agency, from around 83.62 million tons oil equivalent (toe) per year (1.7 million barrels per day) in 1980 to 67.3 million toe in 1999 (1.36 million barrels per day). Natural gas demand has been growing by roughly 5 percent per year during that same time period, from 53.55 million toe in 1980 (64.26 billion cubic meters) to 109.75 million toe (131.7 billion cubic meters) in 1999. This trend is anticipated to continue in the foreseeable future and could be accentuated by the enactment of new environmental regulations intended to combat climate change.

#### ***Increased Competition in the Service Station Segment***

Many industry experts believe that competition in the service station segment will continue to intensify as in the recent years. Several oil companies and food retailers have entered this segment by investing substantially in the convenience store concept. As a result, the convenience store/fast food unit concept will be of focus. The decision to build a service station with a convenience store selling food products is made after evaluating the location and profitability prospects. Service stations are often built along the main roads or in densely populated areas resulting in better prospects of attracting customers to buy products and services other than gasoline.

### **Competitive Strengths**

#### ***Extensive Service/Automate Station Network***

Hydro has invested significantly in automate stations. Additionally, Hydro continues to cater to its service station customers by introducing convenience stores. Hydro and Hydro Texaco operate both service

stations and automate stations in the retail segment. Accordingly, Hydro's established market position provides flexibility to maintain its competitiveness.

### ***Large Customer Base***

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

### **Sales and Distribution**

At the end of 2001, Hydro's retail network in Sweden comprised 592 gasoline stations and 112 Hydro Diesel service stations. In the Swedish gasoline market Hydro operates both Hydro and the Uno-X branded stations. Approximately 50 percent of the station network is Hydro-branded.

Hydro Texaco operates 401 gasoline outlets and 47 diesel sites in Norway, 477 gasoline outlets and 105 diesel sites in Denmark, and 38 gasoline outlets and 10 diesel sites in the Baltic countries with Hydro Texaco or Uno-X brands.

In all markets gasoline is sold through service stations and unmanned, automated stations. Gasoils are sold through automated diesel stations and through direct deliveries from depots to end consumers.

<b>Volumes (000's m<sup>3</sup>)*</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
Gasoline	1,500	1,534	1,486
Gasoil	2,084	2,042	2,218

\* Includes 100 percent of Hydro Texaco

Over the past several years, Hydro has gained market share in the Swedish gasoline market, reaching 12.3 percent in 2000. Hydro's market share declined slightly in 2001 to 11.6 percent. In the Swedish gasoil (heating oil and diesel) market, Hydro's market share increased to 14.6 percent in 2001 from 14.0 percent in the previous year. In 2001, Hydro Texaco's market share in Norway for gasoline and gasoil improved to approximately 20 percent and 16 percent, respectively. Hydro Texaco's market share in Denmark for both gasoline and gasoil remained unchanged in 2001 at approximately 16 and 20 percent, respectively.

<b>Market share (%) (for 2001)</b>	<b>Sweden</b>	<b>Norway</b>	<b>Denmark</b>
Gasoline	11.6	19.9	15.5
Gasoil	14.6	16.1	19.7

### **Capital Expenditures**

In 2001, the Oil Marketing segment had capital expenditures of NOK 106 million, related primarily to repairs and maintenance of depots and the existing retail network, and the construction of new automate outlets in Sweden. Hydro Texaco had capital expenditures of NOK 262 million in 2001, primarily related to repairs and maintenance and the construction of new outlets.

## LIGHT METALS

The most significant development for Hydro's light metals business area in 2001 occurred shortly after year-end: Hydro announced an agreement with the German utility and industry group, E.ON, to acquire E.ON's 100 percent share holding in VAW Aluminium AG. The acquisition was completed in mid-March 2002. The total purchase price paid by Hydro for the VAW shares was Euro 2,658 million (NOK 21 billion), including net interest bearing debt as of January 1, 2002 of Euro 757 million (NOK 6 billion) and interest of Euro 13 million on the cash portion of the purchase price as of the date of the agreement. In addition, Hydro assumed pension commitments of approximately Euro 450 million (NOK 3.6 billion).

Through the acquisition, Hydro has realized its strategy of becoming one of the three leading integrated aluminum companies in the world, along with the North American companies, Alcoa and Alcan, which have annual primary production capacities of approximately 4.4 million and 2.1 million tonnes, respectively. Hydro, following its acquisition of VAW, will produce roughly 1.4 million tonnes annually, while the supply of cast house products will be approximately 2.8 million tonnes as a result of Hydro's metal supplier concept and the range of arrangements it has in place with third party producers.

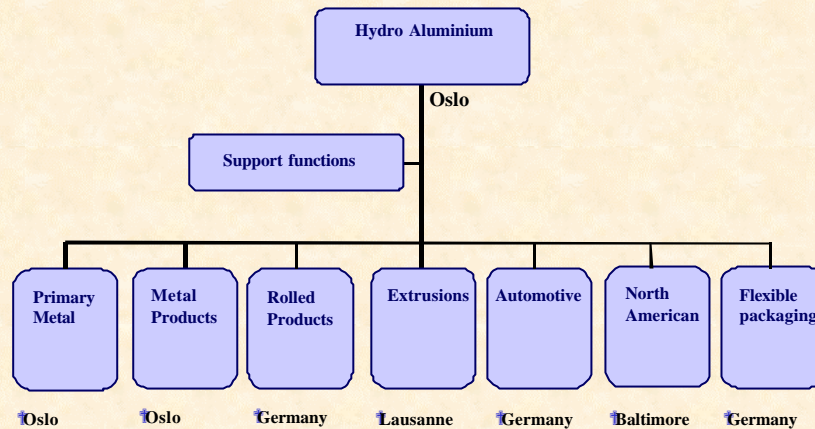
VAW represents an excellent strategic fit for Hydro both in terms of geography and product portfolio. VAW has operations in more than twenty countries with the major part of its activities located in Europe. In addition, VAW has important operations located in North America and the Asia/Pacific region. With VAW, Hydro is a clear leader in Europe and the companies' combined operations will extend to most of the key growth regions in the world. VAW is particularly strong in the area of rolled and cast products, complementing Hydro's substantial market position in extruded products and profiles. Hydro is already the largest producer of aluminum profiles in Europe, with a market share of roughly 15 percent in soft alloys. The market for rolled products, in which VAW is a leading player, is twice as big. VAW has an attractive product range, modern plants and size and strength in the rolled products area, where Hydro has previously been but a niche player.

The combined aluminum activities of Hydro and VAW are expected to generate revenue and cost synergies that will enhance the competitive position of the overall business. The synergy effects, together with other efficiency initiatives in Hydro's aluminum business, are expected to generate annual cost savings of approximately NOK 1.6 billion by 2004 compared to Hydro's and VAW's combined costs levels in 2001. This is expected to include staff reductions of approximately 1,100 globally, of which 300 are expected to be in Norway. However, Hydro will need to overcome significant challenges to realize the contemplated benefits and synergies from the VAW acquisition, including the timely, efficient and successful execution of a number of post-acquisition steps to integrate the operations of the two companies (a process initiated prior to the closing of the transaction), retain and assimilate the key personnel of each company and implement uniform standards, controls, procedures, policies and information systems.

During 2001, Hydro also initiated a process to identify potential for substantial improvements in terms of cost and efficiency within the light metals business area. The primary objective was to create a more integrated organization, better positioned for growth and to capture cost savings within the area of business administration. As a result of this process and in contemplation of the VAW acquisition, Hydro restructured its light metals business (which will be referred to as "**Hydro Aluminium**"), as illustrated below. The new organizational structure is effective as of January 1, 2002 with respect to Hydro's existing light metals operations and will be expanded to include the operations of VAW during the integration process, expected to be completed by July 2002.



## Organizational structure



Each of the business sectors is briefly described below:

<u>Business Unit</u>	<u>Description</u>
Primary Metal	Will focus on alumina and cost-effective production of liquid, primary metal for Hydro's mid- and downstream activities.
Metal Products	Will be responsible for all primary and remelt/recycling cast house operations outside North America, seeking to achieve the best possible margins in its part of the value chain by optimizing cast products and markets. Magnesium production and commercial activities will also be included in this sector.
Rolled Products	Will consist of VAW's and Hydro's existing rolled products organization except for certain cast houses that will be included in the Metal Products sector.
Extrusions	Will consist of global general extrusion and building systems activities except for activities in North America.
Automotive	Will consist of all of Hydro's automotive products activities relating to the automotive industry and VAW's automotive castings operations.
North American	Will consist of all of Hydro's light metals operations in North America, with the exception of the automotive and magnesium activities.
Flexible Packaging	To be organized as a separate sector with its own board of directors with a view toward future sale.

The new Hydro Aluminium will have a clearly defined overall support organization (e.g., strategy and industry analysis, research and development, communications and IS/IT, human resources, financial planning) to handle shared tasks and provide support functions for all the underlying business sectors.

The following discussion reflects Hydro's Light Metals business area as it was organized during 2001.

## **Aluminium Metal Products**

Aluminium Metal Products produces and sells primary aluminum products and processes scrap of various qualities into high quality, primary products. In 2001, Metal Products' total sales of aluminum, produced in its smelters, its remelters or provided through commercial arrangements (including physical trading of extrusion ingot) amounted to 2,257,000 tonnes, compared to 2,153,000 tonnes in 2000.

### **Strategy**

During 2001, Metal Products' business strategy focused on:

- \* leveraging its increasingly global metal supplier concept, including increasing its remelt activities and entering into commercial alliances and agreements;
- \* continuing the planned modernization/upgrading and cost reduction programs for Hydro's smelter system; and
- \* securing a sufficient supply of alumina.

### ***Metal Supplier Concept***

Beginning in the 1990s and continuing through today, Hydro has pursued a principle of multi-sourcing, which it refers to as the "metal supplier concept." In view of the limited expansion possibilities in Norway and high investment costs needed for new, green field smelters, Hydro's strategy has been to develop alternative metal sources - through remelt activities and commercial alliances. The results of this strategy are apparent. Virgin primary production in Norway today constitutes only about 34 percent of total sales volume and is expected to drop further to about 30 percent by 2005.

### ***Remelt Activities***

As part of Hydro's metal supplier concept, its desire to offer scrap remelt service to extend its product package to customers and to produce environmentally sound products economically, Metal Products has significantly increased its remelt activities. Metal Products remelted and recycled 425,000 tonnes of aluminum ingot and scrap in 2001, compared with 387,000 tonnes in 2000 (50,000 tonnes in 1991).

Over the past few years, Hydro has been establishing remelt plants for conversion of scrap metal into extrusion ingots in all major European markets. Facilities are located in Luxembourg, the UK, Germany and France, as well as at the metal plants in Norway. In addition, a new remelt and extrusion ingot cast house located in Azuqueca, Spain came on stream toward the end of 2001. The plant has an annual capacity of 60,000 tonnes and will serve the growing market for extrusion ingots in Spain and Portugal. In the prior year, Hydro purchased Deeside Aluminium, an extrusion ingot remelt plant in Wales. Deeside has an annual capacity of 38,000 tonnes.

Hydro continues to expand its remelt operations outside Europe, as well. Hydro constructed a remelt plant in Henderson, Kentucky, the first of its kind in the US. Plant construction, at a cost of USD 33 million, was completed during the latter part of 2000; the plant officially opened in May, 2001. It is based on Hydro technology and a concept that has proven successful in Europe, where Hydro has demonstrated its ability to produce primary quality billet from scrap. The Hydro Kentucky remelt plant has a capacity of 90,000 tonnes of billet per year. Output in 2001 was 37,000 tonnes; anticipated production in 2002 is 70,000 tonnes. In November of 2001, Hydro began construction of a second remelt plant in the US in Commerce, Texas. The anticipated cost of plant construction is USD 37 million. The new plant, expected to commence production

toward the end of 2002, will have an initial capacity of 90,000 tonnes per year. It will employ the same technology being utilized at the remelt plant in Henderson, Kentucky.

### ***Commercial Alliances and Agreements***

Hydro has entered into several commercial alliances and agreements that further its strategy of developing and leveraging its metal supplier concept with limited asset investment. To illustrate:

- \* In 1999, Hydro entered into a 10-year metal purchase contract for approximately one million tonnes of primary aluminum ingot from the Albras metal plant in Northern Brazil. The aluminum will be marketed through Hydro's worldwide metal supply system.
- \* Hydro has long-term commercial agreements and an investment interest in Slovalco a.s, a Slovakian primary aluminum producer. During 2001, Hydro increased its investment interest from 14.5 percent to 20 percent of Slovalco's outstanding shares, representing 40 percent of the voting shares. Hydro also acquired options to purchase additional shares currently held by the European Bank for Reconstruction and Development (EBRD). If exercised, Hydro's investment interest would increase to 65 percent, representing 80 percent of the voting shares. Hydro's long-term commercial agreements with Slovalco cover approximately 90 percent of Hydro's annual cast house production of approximately 140,000 tonnes. In 2001, Slovalco supplied 123,000 tonnes of primary aluminum products to Hydro under these agreements.
- \* Hydro has a long-term (through 2013) tolling agreement with Goldendale Aluminum Co., an American smelter based in the Pacific Northwest region of the US which has an annual capacity of approximately 160,000 tonnes. Goldendale's smelter production in 2001 was but 21,000 tonnes, compared to 149,000 in 2000. The curtailment in primary aluminum production was primarily attributable to the dramatic increase in market prices of electric power in the Pacific Northwest.
- \* Hydro has a long-term collaboration agreement with Talum, a producer in Slovenia, which provides Hydro with 45,000 tonnes of primary aluminum products per year.
- \* Hydro owns an investment interest of 33.3 percent in Pianmeca, a Venezuelan cast house. Pianmeca produces approximately 29,000 tonnes of extrusion ingots and 8,000 tonnes of wire rod annually on the basis of supply of liquid metal from the Venalum smelter, and will serve as a metal source for Hydro's growing aluminum market in the US. Hydro plans to increase production at Pianmeca through "de-bottlenecking" and production improvements.

Additional metal sources are provided through traditional commercial agreements.

### ***Modernization/Upgrading and Cost Reduction Programs in Hydro's Smelters***

Metal Products has implemented cost reduction programs, based on internal bench marking and the introduction of "best practices" work processes across units, that have made a significant contribution to stabilization in average cash costs, in nominal terms, at Hydro's smelters. Through relatively low capital investments, Metal Products has also achieved gradual production increases through amperage increase process improvements and incremental capacity add-ons.

During 2001, Slovalco decided to increase production capacity, based on Hydro's technology, adding approximately 37,000 tonnes of primary aluminum per year. The expansion plans are expected to be completed during 2002.

Hydro announced in 2000 a major modernization and expansion of the aluminum smelter in Sunndal. The new capacity will be introduced gradually from 2002 to 2004. Upon completion, scheduled in 2004, the plant will be the largest of its kind in Europe. The new capacity of 234,000 tonnes per year will increase the plant's total capacity to 321,000 tonnes of virgin metal per year in addition to upgrading the existing capacity of 87,000 tonnes. Developments are proceeding according to plan.

Plans for a 25 percent expansion of the Sørådal smelter, in which Hydro has an equity interest of 49.9 percent, were under way during 2001, with completion expected around the middle of 2002. When finalized, Sørådal will have a total primary aluminum production capacity of approximately 163,000 tonnes per year.

### ***Securing Supply of Alumina***

Alumina (aluminum oxide) and energy are the major raw materials for primary aluminum production. Alumina is produced from bauxite through a chemical process. It takes 4-5 tonnes of bauxite to produce two tonnes of alumina. Aluminum is produced through the electrolytic reduction of alumina. Approximately two tonnes of alumina yield one tonne of aluminum.

Sufficient alumina supply is important as a support strategy to allow Hydro to expand its primary aluminum production. Hydro has secured a major part of its long-term raw material supply through several equity investments covering approximately 65 percent of its alumina requirements for its wholly-owned primary metal production.

Hydro has a 35 percent equity interest in the Alpart alumina refinery in Jamaica that has an annual production capacity of 1.5 million tonnes. Alpart secures long-term supplies of bauxite from local sources. In 2001, the Alpart refinery provided Hydro with 530,000 tonnes of smelter-grade alumina.

During 2001, Hydro increased its equity interest in Alunorte, a Brazilian alumina refinery, from 25.3 percent to 32.3 percent. The increase relates to an expansion program to increase Alunorte's capacity from 1.5 million tonnes per year to approximately 2.325 million tonnes. When completed in 2003, Hydro's 50 percent interest in the project will have resulted in an increase in Hydro's overall equity interest to 34 percent. Hydro's share of annual production will increase to approximately 790,000 tonnes. Alunorte processes bauxite from the Tombetas mine located in the Amazon region of Brazil. Hydro has a 5 percent interest in Mineracao Rio do Norte S.A. (MRN), a mining company that extracts bauxite from the Tombetas mine. To meet Alunorte's bauxite needs, Hydro and Aluvale, its partner in the Alunorte refinery, have secured Alunorte's present and future requirements from MRN.

In 2001, Hydro informed Alcan Aluminium Ltd. and the Indian Aluminium Company (Indal), Hydro's partners in Utkal Alumina International Ltd. (UAIL), that Hydro was exiting from the contemplated project which aims to construct an alumina plant in Orissa, India (the Utkal project). In January 2002 Hydro entered into an agreement with Alcan and Indal to sell its 45 percent share of the Utkal project to them.

## **Industry Trends**

### ***Long Term Growth in Consumption***

2001 was characterized by a decline in global demand, production, shipments and pricing for aluminum. The drop in shipments, particularly in the US, was the largest in the last 20 years. The substantial capacity shutdowns due to the power situation in the Pacific Northwest region of the US and Brazil, which translated into a total production loss in 2001 of about 1.2 million tonnes, helped reduce the magnitude of the increase in stock levels (estimated at 350,000 tonnes in 2001) that would have otherwise resulted from the approximately six percent drop in Western world shipments.

The terrorist attacks in the US on September 11, 2001 resulted in a further dampening of consumer confidence in the US and compounded the effect of the downturn in the US economy, adding an element of risk and uncertainty regarding prospects in 2002. In view of the varying impact on different end-use market segments, it is unclear how the overall downturn in end-use consumption, expected to last until the second half of 2002, will affect individual upstream producers, such as Hydro. The aerospace market, in particular, though accounting for only about 300,000 to 400,000 tonnes of aluminum consumption per year, is expected to be dramatically down, given the announced intention of the major aircraft manufacturers to reduce the number of aircraft built. In the automotive sector, where use of aluminum in cars and light trucks has been steadily increasing over the past several years as auto makers seek to build lighter, more fuel efficient vehicles, analysts estimate that vehicle production could be off by roughly one million units in 2002. The auto industry has developed a level of responsiveness to the loss of consumer confidence and declining sales, such that the effect on aluminum consumption is relatively immediate. The building and construction market has demonstrated a greater resiliency over the last several months, but is now showing signs of weakness.

The longer-term prospects for aluminum companies remain more encouraging. During the last 50 years, the growth rate in the consumption of aluminum has been higher than any of the other competitive metals. Today more aluminum is produced than all other nonferrous metals combined. The estimated average long-term growth in total aluminum consumption in the Western world amounts to 2.7 percent per year, somewhat higher than the expected growth in GNP/industrial production of 2.5 percent per year. The demand for virgin, primary metal is estimated to be increasing by about 2.5 percent per year, taking into consideration the long-term growth in total aluminum consumption and the estimated increase in recycling of old, used scrap of more than 4 percent. The transportation sector is the primary source of the increased demand, accounting for roughly 31 percent of all shipments by volume in 2001, and this sector also shows the strongest growth. Weight reduction is the best way to improve fuel economy, emissions and performance. For these reasons, as well as improved corrosion resistance and recyclability, auto makers are turning to light-weight, high-strength aluminum. That includes the wave of hybrid gasoline/electric vehicles now coming to market. Other transportation sectors are increasing their aluminum use, as well, most notably railcars and airplanes.

Given the expected growth in consumption, along with the historical rate of permanently idled production due to obsolete capacity (roughly 50,000 tonnes per year), industry analysts estimate that 6 million tonnes of new primary aluminum capacity will need to be added during this decade to meet the expected demand.

### ***Restructuring in the Industry***

Important structural changes are taking place within the aluminum industry. Ownership concentration, defined as the share of primary aluminum capacity held by the six major companies in the Western world, has increased from 43 percent in 1995 to about 50 percent today, following the completion of the Alcan/Algroup (Alusuisse) merger and Alcoa's takeover of Reynolds Metals, both in the 2000. Over the same time period the Western world industry has become less state-influenced, with government-controlled production dropping from 25 percent in 1995 to about 15 percent in 2001. In early 2002, Hydro continued this trend by acquiring the German aluminum company, VAW. There are clear cost advantages associated with size, as a matter of the lower costs of production associated with larger smelters and the development and introduction of new smelting technology, such as the technology under development by, among others, Alcoa and Hydro, for replacement of carbon anodes with inert anodes in smelter pot lines.

Reinforcing the level of consolidation among primary metal producers is the increasing concentration of control of alumina suppliers. Alcoa, which controls roughly 50 percent of the world's alumina market, is likely to remain the major supplier of alumina (the main raw material for the production of primary aluminum), even after divestment of the alumina plants acquired from Reynolds as mandated by US and European Union antitrust/competition authorities. Alcoa is reported to be in the process of acquiring the Australian mining company, WMC Ltd.

## ***Geographic Imbalance Between Sources of Supply and Demand***

There are three main user regions for aluminum today, North America, Europe and Asia. The major producing regions are North and South America, Russia and Australia. Hydro expects an increasing imbalance between the major consuming and producing regions. In Europe, Hydro expects the need for imported metal to increase from about 2 million tonnes in 1996 to almost 3 million tonnes in 2005. In the US the same tendency can be observed. In Russia, the collapse of domestic consumption in the early 1990's created a flow of exports to the West. All major aluminum producing countries agreed upon a cut in domestic production in 1994 in order to avoid an economically and politically unacceptable market situation. The current capacity utilization in the Western world has still not returned to the early 1990's level. Further, in the Western world a gradual reduction in net imports from the Eastern world is expected, primarily due to a gradual recovery in consumption in Russia.

## **Competitive Strengths**

### ***Customer Service***

In light of the intensified competition brought about, in part, by the restructuring that has occurred in the aluminum industry, Hydro has strengthened its commitment to customer service and increasing the efficiency of its production systems. Metal Products' regional market teams have competencies within technical and commercial service, research and development, logistics, contract administration and scrap conversion. Market teams are organized in a manner such that each member of the team can communicate in the local language of the customer's respective professionals.

To enhance its existing service level, Metal Products implemented a new program in 2001 called "Hydro Billet Plus." The aim of the program is to reward the segment's most important customers and customers who wish to increase their business volume. The program includes a comprehensive service package including technical support, as well as activities aimed at helping customers manage their own business and market risks.

### ***Remelt Know-How***

The remelting and recycling of aluminum is not only an environmental-political issue, but also an important part of Hydro's business strategy. Conventional wisdom in the aluminum industry, particularly in the US, is that high quality metal can only be produced by primary smelting operations; scrap-based facilities are thought to produce alloys with less rigorous specifications. Ten years ago Hydro determined to channel its research and development efforts into technology and operating practices to achieve primary quality metal from scrap. By controlling the metal microstructure and cleanliness, through the use of Hycast molten metal degassing and filtration equipment, state-of-the-art homogenizing furnaces and cooling chambers, specific alloy series produced from scrap are of a quality on a par with primary metal, both in terms of physical properties and rate of extrusion.

### ***Duty Advantages***

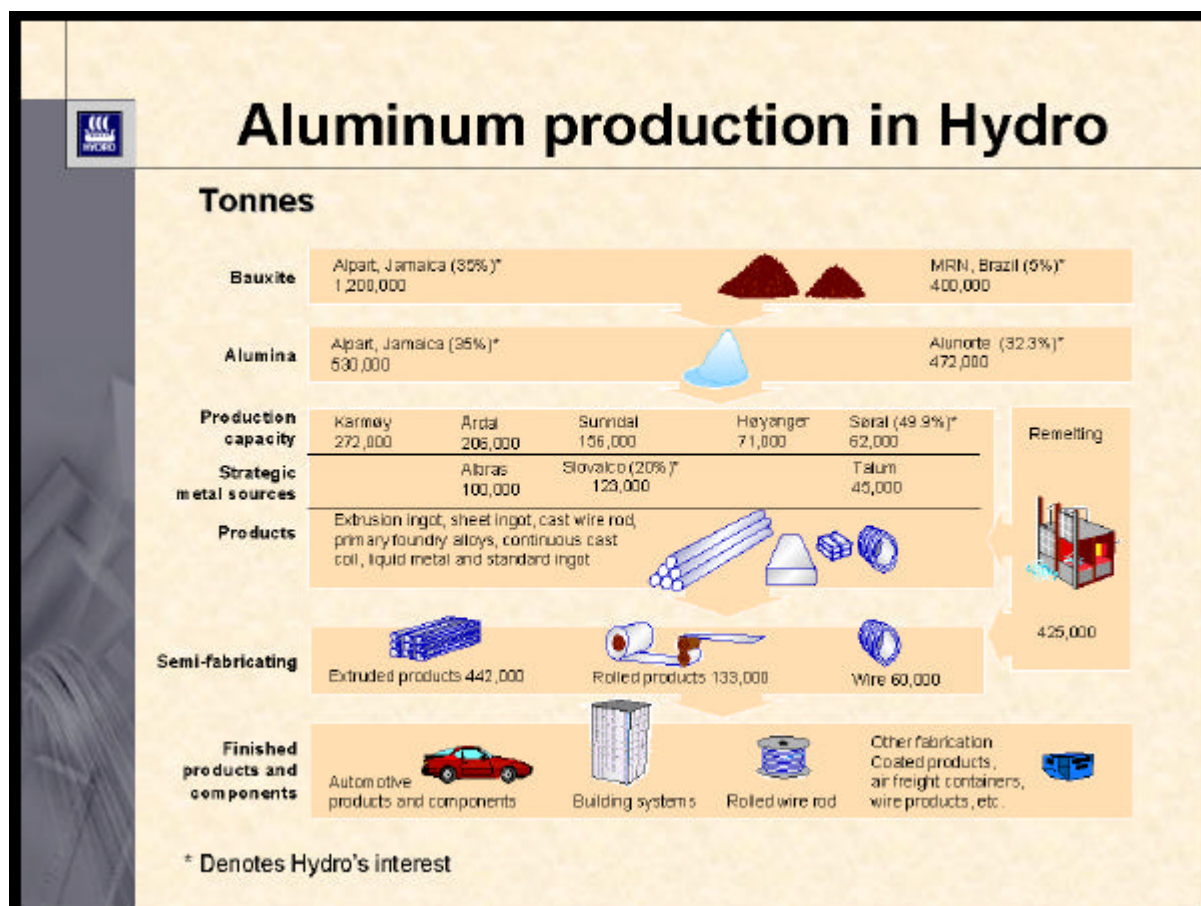
Aluminum produced within the European Economic Area and some other countries enjoys a duty advantage of formally 6 percent, effectively about 5 percent, of the metal price on sales to the EU.

## Production of Virgin Primary Aluminum

The process of separating the aluminum from the oxygen in alumina requires electrical energy. The smelting of one tonne of aluminum requires between 13 and 17-megawatt hours of electric energy. Hydro produces a significant part of the electricity required by its Norwegian primary aluminum smelters at its own hydroelectric generating plants, the basis for competitive aluminum production in Norway. Hydro produces its virgin primary aluminum at its five wholly- or partly-owned primary aluminum smelters in Norway, all of which operated at full capacity in 2001 and 2000. Production at these smelters and tonnage sourced from other main sources during the three most recent years is reflected in the table below:

Aluminum production (tonnes)	2001	2000	1999
<i>Primary Aluminum</i>			
Karmøy	272,000	270,000	267,000
Årdal	206,000	204,000	201,000
Sunnidal	156,000	154,000	149,000
Høyanger	71,000	72,000	71,000
Sørå (Hydro's 49.9% share)	62,000	62,000	58,000
<b>Total virgin primary aluminum production</b>	<b>767,000</b>	<b>762,000</b>	<b>746,000</b>
<i>Remelting</i>			
Slovalco	425,000	387,000	300,000
	123,000	114,000	88,000
<i>Average price primary aluminum (USD/tonne per LME 3-mo. price)</i>	1,454	1,567	1,387

The aluminum production process is depicted below:



## **Sales and Trading**

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

Hydro also engages in trading of aluminum and related raw materials. Aluminum trading activities consist of physical metal purchases and sales, as well as trading on the London Metal Exchange (LME). Hydro's raw material and metal traders sold 710,000 tonnes of primary aluminum products in 2001. The main trading product is standard aluminum ingot, which is also the global aluminum product on which price quotations on the LME and other metal exchanges are based. For additional information on derivative commodity instruments, see **Item 11. "Quantitative and Qualitative Disclosures about Market Risk."**

## **Capital Expenditures**

In 2001, capital expenditures for Metal Products were NOK 1,900 million, compared with NOK 2,560 million in 2000 and NOK 983 million in 1999. The largest investments in 2001 included the expansion activities relating to Alunorte, the construction activities related to the Azuqueca, Spain remelt and extrusion ingot cast house and the modernization and expansion activities relating to Hydro's aluminum smelter in Sunndal.

## **Aluminium Extrusion**

Hydro Aluminium Extrusion is the world's second largest extruder of aluminum in terms of volume. It is a market leader in aluminum extrusions in Europe and, following its purchase of Wells Aluminum based in Baltimore, Maryland (in the US) in the early part of 2000, the fifth-largest extruder in the US. Extrusion supplies custom-made general extrusions of soft alloy aluminum, surface treatments such as anodizing and powder coating, fabrication, components and finished products.

### **Strategy**

In 2001, Extrusion endeavored to continue to exploit its market positions in extrusions and selected downstream segments. In addition, Extrusion sought to leverage its technical competence through the transfer of manufacturing best practices developed in the European extrusion system to its extrusion network in North America. Extrusion also focused on enhancing its responsiveness to the exceptional market downturn, which was particularly severe in the latter part of the year, by implementing cost reduction measures reflective of the lower activity level.

#### ***Exploiting Market Positions in Extrusions***

Extrusion is the leading extruder of general extrusions in Europe, with a market share of roughly 15 percent in soft alloys. In 2001, Extrusion enhanced its position by concluding an agreement to acquire Technal, a French manufacturer of aluminum building systems used in the fabrication of a variety of products, such as doors and windows, for Euro 111.3 million (NOK 900 million), including the assumption of Euro 38.3 million in debt. The purchase was completed in January 2002. Technal's excellent market share in France and its presence in Spain, Portugal and the UK complements Hydro's position in the German and Italian markets. The acquisition augments Extrusion's current operations (through, among other things, the addition of an extrusion press in France), increasing its existing Building Systems activities by around 50 percent, making Hydro the European leader in building systems based on extruded aluminum. Building Systems has its own companies for the development, production and marketing of its three brands, WICONA®, DOMAL® and HYDRO MANUEL FERREIRA®, in Europe. The acquisition of Technal adds the well-known brand, TECHNAL®, as well as AS ®, complementing the current portfolio.

Extrusion also acquired Aldural, the Argentinean extruder, in 2001. Although the market in South America is relatively small compared to the European and North American markets, Aldural has a market share of approximately 10 percent in Argentina, making Hydro the third-largest extruder in South America. Aldural's extrusion plant in Buenos Aires provides a base to further exploit market opportunities in this region.

#### ***Transfer of European Extrusion Business System to North American Market***

Extrusion has developed a business system for improving performance based on benchmarking, identification of best practices, state of the art technology and deep process knowledge and understanding. This system has been used successfully in Extrusion's European operations resulting in considerably improved productivity. Transferring this approach to the North American operations is part of Hydro's strategy to realize synergies from the Wells acquisition in 2000. Due to the market decline and reduced volumes in 2001, targeted improvements were delayed to some extent.

#### ***Enhancing Responsiveness in the Face of a Market Downturn***

Global aluminum extrusion consumption decreased in 2001 by over 10 percent compared to an increase of 3.5 percent in the previous year. The overall fall in aluminium shipments exceeded the fall in general industrial production while consumer confidence reached the lowest levels since 1994 in the US and Europe. Extrusion consumption declined dramatically in North America, falling by over 20 percent (21.3%)

as a result of the general economic downturn and further aggravated by the terrorist attacks on September 11, 2001. European extrusion consumption declined to a lesser extent, falling by more than 6 percent compared to an increase of approximately 7 percent in the previous year. In Japan, extrusion consumption in 2001 fell by at least 10 percent after a positive growth of nearly 5 percent in the prior year. The rest of Asia experienced a downturn with some countries experiencing declines of more than 10 percent compared to the previous year. South America experienced growth of 3 percent in 2001, and further growth of 4 percent is projected for 2002.

In addition to sluggish demand in the electrical, telecommunications and machinery sectors, demand from the construction sector fell as a result of recession. The construction sector is still by far the biggest segment for extrusion consumption. There is, however, an upward trend in the industrial sector's percentage share of total extrusion demand in Europe. This will help make demand less sensitive to swings in building output.

The lower order levels and high overhead costs have resulted in industry participants, including Hydro, closing extrusion plants and/or scaling back production.

## **Competitive Strengths**

### *Integrated Aluminum Company*

Hydro is an integrated aluminum company with downstream activities consisting principally of extrusions, rolled products and other products. The integration with Hydro's primary aluminum production provides Extrusion with opportunities to optimize the interface between casting and extrusion technologies, enabling higher productivity in the extrusion process.

### *Decentralized Operations*

Extrusion is managed in a regional, decentralized manner to facilitate a close relationship to end use customers. By combining an entrepreneurial plant system with Hydro's global metal competence base (along with organization-wide process management best practices), Hydro is able to sell not only value-added products but also value-added service.

### *Global Competence for Local Needs*

Extrusion currently has a network of more than 80 manufacturing plants (with an annual production capacity of in excess of 500,000 tonnes) spread over Europe, the Americas and Asia, not counting the distribution centers of Building Systems. This worldwide network provides global competence for local needs.

## **Production and Products**

The conversion of aluminum billets into fabricated and finished products requires the application of a variety of intermediate processes. Roughly 50 percent of Extrusion's current sales consists of extruded products primarily for the building and construction markets while roughly 20 percent consists of products for the transportation market, including automotive products. The balance of Extrusion's sales consists mainly of products for the mechanical, electrical, electronic and consumer goods industries. The acquisition of Technal will increase substantially the relative proportion of sales to the building market sector.

The recycling advantages of aluminum, including low energy input for remelt material compared to primary aluminum, can significantly contribute to making aluminum the material of choice, especially in the automotive and building industries.

The production backlog of extruded products amounted to NOK 1,467 million at the end of 2001, compared to NOK 1,387 million at the end of 2000. The overall capacity utilization in 2001 was about 90 percent compared to slightly more than 90 percent in 2000. The overall decline in capacity utilization reflects the decline in all market areas in 2001.

### **Sales and Distribution**

Each of Extrusion's business units has its own marketing and sales organization and geographical sales territory. For a few geographical sales territories located outside the territories of the business units, there are sales offices connected to the business units. In addition, units of Building Systems and Nordisk Aviation Products have a number of distribution and/or service centers. Since most of Extrusion's products are custom-made, marketing and sales personnel address the customer directly in a business-to-business fashion.

### **Capital Expenditures**

In 2001, capital expenditures for Extrusion were NOK 710 million, compared with NOK 1,960 million in 2000 and NOK 558 million in 1999. Capital expenditures in 2001, primarily related to the acquisition of Aldural and rationalizing existing business activities, including the new press in Italy. Capital expenditures of approximately NOK 900 million relating to the purchase of Technal will be made in 2002.

## Other Light Metals

**Hydro Aluminium Rolled Products (HARP)** serves the European market for rolled products with an emphasis on small and medium-sized end users. HARP's main markets include the packaging, transportation and building industries. The operation has a distinct niche strategy within the market for transformer wire.

Rolled products' production activity is primarily located at Karmøy and Holmestrand in Norway. In 2001, the segment produced 133,000 tonnes of rolled products compared to 134,000 tonnes in 2000. The main raw material for the rolled products production process in Holmestrand is scrap metal which is recycled into sheet ingot.

**Hydro Automotive Structures (HAST)** delivers aluminum extrusion-based applications within crash management, body structures and subframes to the automotive industry. In addition to this innovative extrusion-based platform, HAST has casting competence focusing on motor, transmission and chassis applications.

The automotive industry, which is the main market for HAST's products, is extremely demanding in terms of quality, know-how and cost competitiveness. Hydro's extensive metallurgical expertise and research capabilities, together with a sound basis in the engineering characteristics of automobiles, provide a foundation for meeting these demands. Close cooperation with the major automotive companies in the development of product solutions like bumper beams, crash boxes, engine cradles and body structures has also enhanced the division's knowledge and experience in the industry. The division views its technological competence as a competitive strength which has enabled it to become a supplier of aluminum solutions to several original equipment manufacturers (OEMs).

The division has experienced strong growth in the automotive market, particularly in the area of crash management, where the division's bumper beams and crash box solutions are market leaders in Europe and are gaining ground in North America. The division also sees a significant potential in the aluminum subframe product area.

The division delivers products to major car manufacturers as well as several Tier 1 and Tier 2 suppliers. HAST has approximately 2,100 employees at 10 production and development facilities in Europe and the United States.

**Hydro Magnesium.** Hydro is the world's largest producer of primary magnesium. The industry in the Western world is comprised of fewer than 10 producers while there are numerous plants in China and three in the CIS. Magnesium shipments from China and from the CIS have reached approximately 190,000 tonnes or close to 50% percent of magnesium used. As of December 31, 2001, there were, excluding China, about 10 operating plants which produced an estimated 220,000 tonnes of magnesium. China was reported to be producing roughly 195,000 tonnes, 170,000 tonnes of exports and 25,000 tonnes of indigenous production. In 2001, Hydro Magnesium's combined production of primary and recycled magnesium was 102,000 tonnes.

The increased quantities of Chinese magnesium available in Western markets has resulted in significant downward pressure on magnesium prices over the past several years. The doubling of the European Union's anti-dumping duties in 2000 had limited effect. In 2001 the downward pricing pressure was exacerbated by the soft aluminum and automotive markets in North America and low growth in European demand. In view of these market conditions, Hydro decided in 2001 to terminate its primary magnesium production in Norway. A magnesium remelt plant will be operated on the site of the closed primary metal facility; the operation will utilize certain of the plant, equipment and expertise formerly engaged in the production of primary metal. The closure of the Norwegian operations reflects the Company's strategy to focus capacity within the higher margin alloy and remelt market sectors. Hydro's primary metal operations are now centered at its Becancour plant in Canada, which is capable of producing magnesium alloys in addition to pure

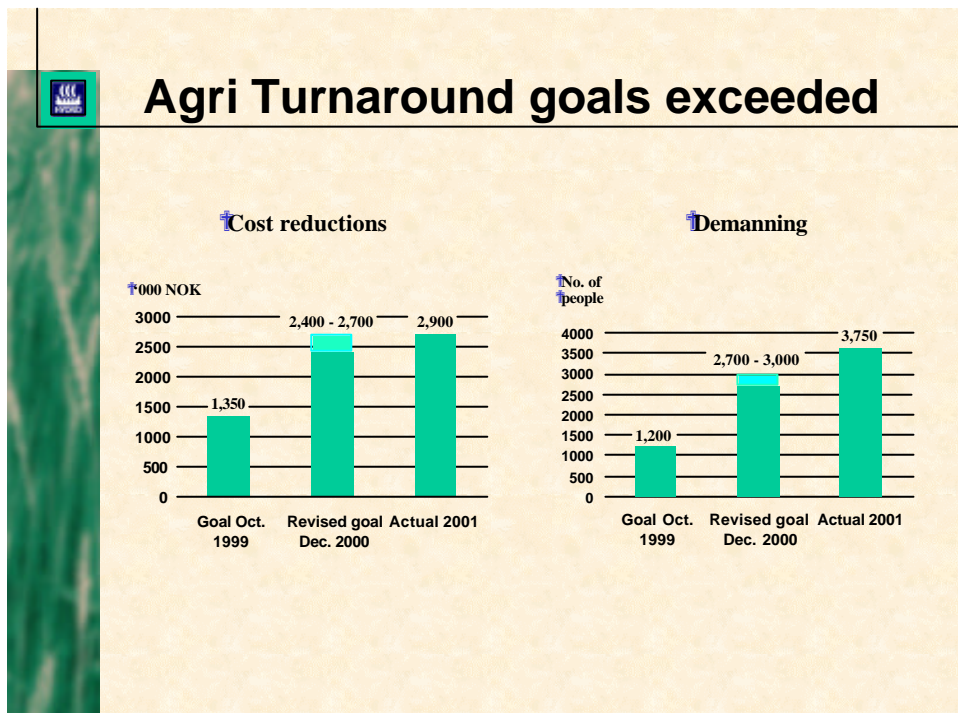
magnesium. The Becancour plant has a total annual production capacity of 45,000 tonnes of primary metal and a recycling capacity of up to 22,000 tonnes/year depending of the production scenario.

In 2001 Hydro completed its new magnesium foundry in Xi'an, China. The plant, which is expected to have a capacity of approximately 10,000 tonnes of metal and 400 tonnes of anodes, began a startup phase in late 2001. Commercial production levels are expected to be reached in early 2002, with total production of 6,000 tonnes of metal and 150 tonnes of anodes expected in the first year of operation. This first venture in China is expected to provide a foundation for additional activities in the future.

## AGRI

The Agri business area consists of Hydro Plant Nutrition (HPN), Hydro Gas and Chemicals (HGC) and a 62% share holding in the Danish company, A/S Korn og Foderstof Kompagniet (KFK). Plant Nutrition is the core of the area and by far the biggest, representing NOK 34 billion of the total Agri gross operating revenues in 2001 of NOK 48 billion. HGC is Agri's non-agricultural arm, using Agri's competence base to develop novel industrial applications for products from Plant Nutrition's fertilizer production system, whereas KFK is selling fertilizers in the Danish market as part of a large portfolio of products for the agricultural sector. As a result of the successful Agri turnaround process completed at the end of 2001, the interface between HPN and HGC has been streamlined to enhance synergies and reinforce HGC's focus on core HPN products. At the same time it has become clear that business and market developments have reduced the previously strong synergies between HPN and KFK, leading to Agri's decision to seek a new long-term industrial owner for KFK. Agri will, however, give full support to KFK through its still ongoing restructuring process and strategy development.

In 2001, Agri completed its turnaround process, exceeding targets set, establishing Agri as a leader in its industry and creating a strong foundation for new growth based on key strengths such as a global sales and distribution system, partial ownership interests in new production capacity close to growth markets, and continuous improvement as a way to maintain and further improve productivity of operations.



## Plant Nutrition

Hydro is the world's leading fertilizer company measured in terms of sales of finished fertilizer products. Plant Nutrition produces and sells ammonia and mineral fertilizer products, including nitrate fertilizer, complex fertilizer (NPK) and urea. Production facilities are located primarily in Europe, while sales and distribution of mineral fertilizer products are approaching an even balance between European and non-European markets. Through its 50%-owned Farmland Hydro venture, located in Bartow, Florida, one of the world's major centers of phosphate production, Plant Nutrition also produces and sells concentrated phosphates, specifically diammonium phosphate (DAP) and monammonium phosphate (MAP).

### Strategy

In 2001, Plant Nutrition's business strategy reflected a continued focus on the following main areas:

- \* productivity improvements and enhanced utilization of core assets;
- \* achieving critical mass in prioritized markets;
- \* positioning for growth in emerging markets;
- \* restructuring of the European mineral fertilizer business; and
- \* active asset portfolio management

#### *Productivity Improvements and Enhanced Utilization of Core Assets*

In 2001, Hydro Agri, of which Plant Nutrition is the dominant part, completed its turnaround project, achieving total manning reductions in excess of 30 percent compared to 1998 levels, as well as equivalent fixed cost reductions. During this period, production per employee increased by 550 tonnes or 20 percent, while fixed costs per tonne decreased by approximately NOK 30 or 10 percent.



Further measures were initiated during 2001 to drive fixed costs lower, including new organizational structures at certain production sites aimed at delayering and merging operational functions. In addition, actions aimed at improving capacity utilization were identified and targets established at specific sites for volume improvements. Measures were also implemented in 2001 in order to facilitate the adjustments required of individual employees as a result of the substantial manpower reductions and to increase their overall performance orientation and potential.

### ***Achieving Critical Mass in Prioritized Markets***

Plant Nutrition has identified specialty fertilizers (products, such as calcium nitrate and potassium nitrate, that are utilized in high value cash crops such as vines, fruits and leafy vegetables) as a growth area. In 2001, Hydro entered into a global sales and marketing agreement with Sociedad Quimica y Minera de Chile (SQM), a Chilean specialty fertilizer and industrial chemicals company, under which Hydro and SQM will market and distribute their complementary specialty fertilizer products utilizing their combined, worldwide commercial infrastructure. The relationship will allow both parties to reduce their sales and distribution costs and at the same time increase the range of products offered to customers. The agreement will make Plant Nutrition a leading player in the global market for specialty fertilizers.

In December 2001, Hydro entered into a 50-50 joint venture (known as NU3 NV) with NutriSI, a Belgium company which is 50 percent owned by SQM, for the production of specialty fertilizers. The joint venture will comprise Hydro's unit at Vlaardingen in the Netherlands and the NutriSI plant at Grobbendonk, Belgium. Both units produce water soluble NPK fertilizer and specialty liquids. NU3 will have a total annual capacity of 60,000 tonnes, making it the largest producer of specialty fertilizers in Europe. Products will be marketed by Hydro and SQM.

### ***Positioning for Growth in Emerging Markets***

In recent years, Plant Nutrition has pursued a strategy of increasing its mineral fertilizer sales in growth markets outside of Western Europe, with limited exposure to large fixed asset positions. During the 1990s, developments in the sourcing of products from joint ventures, third parties and local production were a natural part of the expansion of Hydro's overseas marketing system. This expansion created a sound basis for further growth and development by Plant Nutrition, including:

- \* the December 1999 acquisition of a 50 percent interest in Kynoch Fertilizer in South Africa followed by the acquisition of the remaining 50 percent interest in July 2001. Kynoch has a production capacity of approximately 250,000 tonnes of granulated complex fertilizer and approximately 450,000 tonnes of blended fertilizer.
- \* the July 2000 acquisition of Adubos Trevo S.A. (in Brazil), which has a production capacity of approximately 500,000 tonnes of granulated complex fertilizer and approximately 1,300,000 tonnes of blended fertilizer.
- \* the October 2001 decision by Hydro to participate in the Qafco IV ammonia and urea project.
- \* the entering into of a marketing agreement with Philphos (in the Philippines) to handle all NPK exports from the Philphos plant.
- \* entering into the sales and marketing agreement with SQM referred to above.

Steadily increasing third party sourcing, coupled with a nearly balanced position between European and non-European deliveries, demonstrate the substantial impact this strategy has had on Plant Nutrition's overall business.

### ***Restructuring of European Fertilizer Business***

The past three years have been characterized by difficult market conditions for the Western European fertilizer industry, including declining sales and diminishing profit margins. This has led to capacity rationalization and divestment of unprofitable activities. The European nitrate industry, in particular, has been plagued by structural over-capacity, prompting industry closures of 3 million tonnes (roughly 20 percent of total capacity) during 2000 and 2001, including approximately 1 million tonnes of Hydro's nitrate fertilizer capacity. This has resulted in a better balance and increased capacity utilization. Over the same time period, there has been far less reduction in production capacity of complex fertilizers (NPK) although a similar over-capacity situation exists for this product group. Hydro closed 500,000 tonnes of NPK production capacity in France during 2000. In 2001, BASF announced the intended closure of between 500,000-600,000 tonnes of NPK fertilizer production at its facility in Ludwigshafen, Germany, by March 2002, a move reported to have been motivated by BASF's desire to concentrate its NPK fertilizer production at other facilities. Capacity utilization is expected to improve accordingly.

Operating results in 2001 demonstrate that the measures taken in recent years have begun to yield positive returns. However, imports from developing countries with large reserves of natural gas and other raw materials, as well as from East European countries, continue to put pressure on European markets. In July 2001, the European Fertilizer Manufacturers Association (EFMA) succeeded in convincing the European Union (EU) of the need to secure more equitable competitive conditions by imposing anti-dumping measures on imports of urea from eight countries. In view of European market conditions, Plant Nutrition's strategy in Europe is to maintain a strong and profitable market position, producing high-quality products and offering reliable delivery systems, while contributing to a sustainable market balance.

### ***Active Asset Portfolio Management***

Contributing to Plant Nutrition's turnaround has been an increased focus on core business activities. Since 1999, Plant Nutrition has exited more than 30 substantial operations considered outside the segment's core area. In 2001, Hydro completed a substantial restructuring of its Central European operations, closing offices, consolidating activities and exiting unattractive market areas. In addition, targets for further divestment have been established and evaluations of specific activities are ongoing.

## **Industry Trends**

### ***Intra-regional Joint Ventures in the Fertilizer Industry***

Intra-regional joint ventures and other strategic alliances have become increasingly common in the fertilizer industry, as the costs associated with entry into new markets (including the costs of resource procurement) escalate. Participants in the industry, including Hydro, are seeking to compete more efficiently in the global mineral fertilizer marketplace through such ventures and alliances. Although such joint ventures and strategic alliances do not, in every case, result in the participants' fully realizing their objectives, this trend is likely to continue into the foreseeable future.

### ***Stable, but Increasing Global Fertilizer Consumption***

The population growth and national wealth development in the world has created (and is expected to continue to create) sustainable growth in mineral fertilizer consumption in the foreseeable future. The number of hectares per person is declining and mineral fertilizer is considered the only sustainable large scale nutrient source. The International Fertilizer Association forecasts a medium-term global nitrogen fertilizer consumption growth rate of 2.6 percent per year. The main growth in nitrogen fertilizer consumption has been in Asia and Latin America. The growth in fertilizer consumption is expected to be similar for nitrogen, phosphate and potash fertilizers.

### ***Cereal Consumption is now Higher than Production***

Consumption of the main cereals, wheat, maize and rice, has surpassed production resulting in declining inventories and higher prices. Higher cereal prices normally stimulate increased cereal production, driving the demand for fertilizer with resulting upward pressure on fertilizer prices.

### ***New Safety Regulations***

In 2001, a serious explosion occurred at a competitor's factory in Toulouse, France. As a result, certain plants in Europe have been affected by new regulations concerning operations and transport.

## **Competitive Strengths**

### ***Unique Combination of Size and Global Presence***

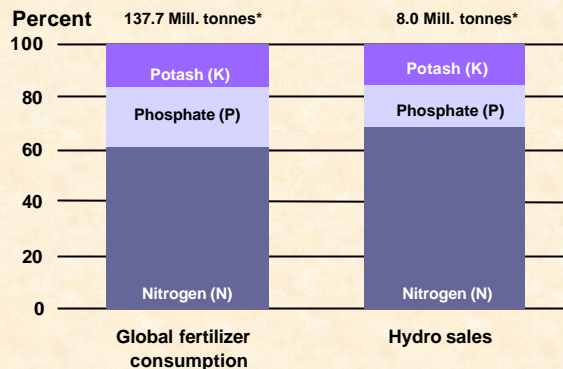
Plant Nutrition's business is global and substantial in size. Almost half of Plant Nutrition's sales are made outside its home market of Europe, a position which is unique in the industry. This protects Hydro's overall profit potential by reducing exposure to problems in one specific region. It also helps smoothen the effects of seasonality inherent in the mineral fertilizer business. Plant Nutrition's purchasing power ensures that Hydro obtains the best fertilizer prices when buying from other producers and reduces the need for heavy investment in new plant and equipment to support growth.

### ***Emergence as a top quartile company***

Reacting to the strong competition within the fertilizer industry, Plant Nutrition has steadily strengthened its results by cutting cost and improving productivity. As a result, Plant Nutrition is now within the top 25 percent of industry participants, in terms of gross return on assets, underscoring the sustainability of ongoing operations. Plant Nutrition's inherent strength in nitrogen and flexible sourcing of phosphate and potash raw materials contribute to strengthen the overall cost position. In addition, Plant Nutrition's market positions reflect a balance among the three main nutrients, nitrogen, phosphate and potash, proportional to global consumption. This is illustrated by the graphic below, which depicts the symmetry between Hydro's 2000 sales of the three main nutrients and global fertilizer consumption in 2000 (the most recent data currently available).

## Hydro Agri sales are well balanced among the three important nutrients

2000 sales



\* Nutrient tonnes

### *Global leadership in key intermediate and finished fertilizer products*

Plant Nutrition is the leading ammonia player in terms of production capacity, shipping and trade and storage capacity in deep sea ports. Ammonia is the key raw material for all nitrogen fertilizers. Plant Nutrition's ammonia plants are characterized by high technological and environmental standards. As a result, mandatory future investment in existing plants is expected to be relatively low. Plant Nutrition's extensive shipping and logistical network for ammonia enables Hydro to compete for contracts that few competitors are able to execute.

Plant Nutrition is the largest and most cost-effective producer of nitrates, the most important type of fertilizer in Europe. Plants are modern, efficient and well-located and the recent restructuring of the nitrate industry in Europe has resulted in a better market balance and improved prices.

Hydro is a world leader in deliveries of complex fertilizers (referred to as "NPK," because such fertilizers, which are obtained by chemical reaction, contain all the three primary nutrients, nitrogen, phosphorus and potassium, in a declared ratio). The majority of multinutrient fertilizers applied in Western Europe are complex fertilizers, as opposed to compound fertilizers (also obtained by chemical reaction but containing nutrients in different ratios) or blended fertilizers (obtained by the dry mixing of several materials). In purely agronomic terms, NPK complex fertilizers offer the most effective way of achieving balanced nutrition, since they contain a guaranteed grade or formula of primary nutrients in each granule and permit an even application due to their stable granule quality and consistent granule size. NPK complex fertilizers tend to be more expensive than mixtures or blends, but contribute to greater crop yield and quality, especially in the case of the high value-added fruits and vegetables segments (referred to in the industry as "cash crops"), where growers are willing to pay for these benefits and, therefore, historically have offered the best margins.

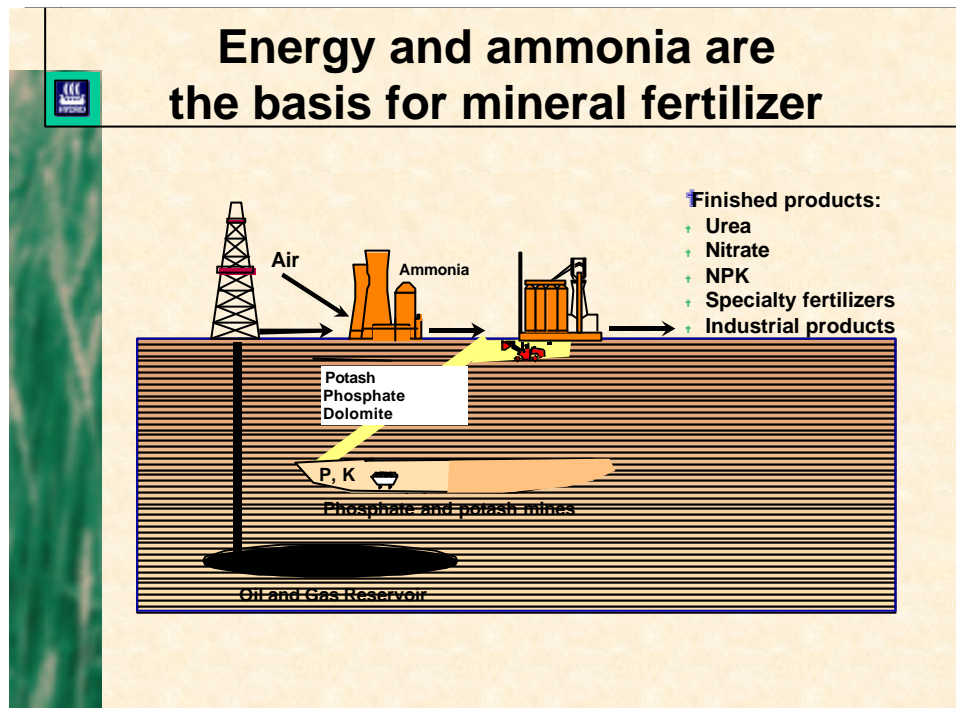
Calcium nitrate and potassium nitrate together comprise roughly 65 percent of the specialty fertilizer market, a market for which growing demand is driven primarily by the requirements of drip-feed agriculture and other applications on high value-added crops. Hydro's unique nitrophosphate production technology has enabled it to obtain a dominant market position. The recent agreement with SQM has enhanced Hydro's position within the potassium nitrate market.

## *A Global Marketing Network*

Plant Nutrition has a marketing network and distribution system in approximately 20 countries in Europe and an international marketing network and distribution system with chartered gas tankers, bulk blending plants, sales offices, terminals and bagging operations in more than 35 countries outside of Europe, ensuring a local presence on all five continents and sales in more than 100 countries.

### **Raw Materials and Production**

The most important raw material for Plant Nutrition's fertilizer operations is natural gas. Natural gas serves as a hydrogen source with which nitrogen is reacted to produce ammonia. Ammonia is used to produce a full line of upgraded fertilizer products, including urea and NPK.



Plant Nutrition purchases most of its annual consumption of natural gas from external suppliers. Plant Nutrition's annual consumption of natural gas in Europe amounts to about 140 million MBTU.

Plant Nutrition's major large-scale fertilizer production facilities, following the restructuring that has occurred in the last few years, include two plants in Norway and in Germany, three plants in France and in Italy, one plant in Sweden and one plant in the Netherlands. The bulk of the production equipment was put into operation during the 1980s and 1990s. At the end of 2001, Plant Nutrition's total production capacity was approximately 11 million tonnes per year. Plant Nutrition achieved production records in several of its plants in 2001 for both ammonia and fertilizer.

Plant Nutrition has a 49 percent interest in Trinidad Nitrogen Co. Ltd. (Tringen) in Trinidad and Tobago. Hydro operates and manages the two plants owned by Tringen (and a third plant in which Hydro is the sole owner) which have a combined annual ammonia capacity of approximately 1.3 million tonnes. Plant Nutrition has a long-term commitment for 227,000 tonnes of this volume while the remainder is marketed on a commission basis. The location of these plants is advantageous from the standpoint of access to long-term supplies of natural gas. In addition, Trinidad serves as an excellent strategic location for exports to the United States.

Plant Nutrition has a 25 percent interest (Qatar Petroleum has a 75 percent interest) in Qafco in Qatar. Plant Nutrition provides marketing support and technical assistance to Qafco. In 1994, Hydro entered into a ten-year marketing agreement to sell ammonia and urea produced by Qafco on a commission basis. This provides the segment with additional products for markets outside Europe. In 1997, Qafco's urea capacity was nearly doubled by the start-up of Qafco III, a new plant having a capacity of 730,000 tonnes of urea and 550,000 tonnes of ammonia. In September, 2001, the stakeholders in Qafco approved plans to construct Qafco IV, a new ammonia-urea complex at Messaiid, Qatar, at a cost of approximately US\$535 million (NOK 4,815 billion). Qafco IV will have a production capacity of approximately 1,100,000 tonnes of urea and 700,000 tonnes of ammonia and is expected to be in operation during the second half of 2004. In connection with the project, Hydro also signed a 13-year marketing agreement with Qafco to sell part of its urea production in international markets.

### **Seasonality**

The fertilizer industry is characterized by seasonal fluctuations. Generally in Europe about 80 percent of annual fertilizer use occurs in a six-to-eight week season. In contrast, production takes place evenly throughout the year. Approximately 65-70 percent of the annual sales of Plant Nutrition's European production of fertilizers occurs in the period from September to March. In order to assure that product is available at agricultural cooperatives and wholesalers in the peak period and to fully utilize the storage capacity of the total distribution system, Plant Nutrition seeks to sell products more evenly throughout the year. The combination of Plant Nutrition's distribution network in Europe and overseas smoothens seasonal demands for deliveries and allows for better capacity utilization in the distribution as well as the production system.

### **Capital Expenditures**

In 2001, capital expenditures were about NOK 657 million compared to NOK 1,093 million in 2000 and NOK 1,267 million in 1999. A significant proportion of the investment in 2001 related to maintenance and minor site investments, while a greater proportion of investments in 2000 related to the acquisition of Trevo.

## Gas and Chemicals

Gas and Chemicals markets numerous industrial products mainly originating from Hydro's fertilizer operations. The main products are industrial gases and nitrogen chemicals. The main industrial gas products include carbon dioxide (CO<sub>2</sub>), nitrogen, oxygen and argon, in bulk volumes and cylinders. Carbon dioxide is used in the production of soft drinks and beer, as well as for refrigerating, freezing and packaging of foods. Nitrogen functions as a refrigerant and freezing agent, and as an inert gas. Among its many applications, oxygen is used for medical purposes and in combustion processes. Argon is used in an assortment of industrial processes and in welding.

The most important nitrogen products are nitrates for civil explosives, Nutriox (TM) for the treatment of municipal and industrial waste water, and Reduktan for the removal of nitrogen oxide (NO<sub>x</sub>) from the emission gases of power plants, waste incinerators and ferries.

### Strategy

Gas and Chemicals' strategy is offer solutions to customers where existing assets and skill base provide Hydro with a competitive advantage. Hydro aims to optimize the use of the common production infrastructure within Agri by providing sophisticated product applications to customers. Increased environmental awareness presents an opportunity for further development of environmental process applications, including treatment of waste water and gaseous emissions.

Several non-core businesses not either drawing upon Hydro's main strengths or creating synergy with other Agri activities were divested or terminated during 2000 and 2001 in order to streamline the business. This included production of grain refiners, wax activities, sulfate production in Germany and a 50 percent stake in Hydrogas-Messer, an industrial gas joint venture in Sweden, as well as the fatty acids and esters operations.

### Industry Trends

#### *Consolidation within Industrial Gas Industry*

An ongoing regional consolidation within the industrial gases industry has not had any significant impact on Hydro's industrial gas business in part because Hydro operates as a strong regional player in Scandinavia and as a leading CO<sub>2</sub> company in Europe, with defined products aimed at selected markets.

#### *Increased Environmental Awareness*

Increased environmental awareness continues to have a positive effect on sales of Nutriox for water treatment and Reduktan for removal of NO<sub>x</sub> emissions for power stations.

#### *Increased Technical Nitrates Capacity*

Markets for technical nitrates for civil explosives are stable in Europe and growing overseas. New production capacity in certain of the growth areas is making imported material less competitive and has also resulted in supply/demand imbalance and pressure on prices and margins in Asia and South America. In other markets, substantial increases in gas prices have reduced competitiveness, leading to idled capacity.

### Competitive Strengths

Gas and Chemicals competes with large international chemical and industrial gas companies. Competition is generally based on product and application development, technical support, cost-efficient production

and logistical considerations. Most products are sold to industrial customers and are, therefore, sensitive to business cycles. Gas and Chemicals has a strong competitive position based on its market approach and skill base, the optimization of production and logistics infrastructure and sophisticated product applications.

### ***Strong Customer Focus***

Gas and Chemicals has a strong customer focus, working closely with its customers to develop new products and applications and guaranteeing just-in-time deliveries. Application development is mainly based on the product knowledge within the organization, but also through drawing upon Hydro's research and development competencies. In addition, Gas and Chemicals offers its customers quality products required in applications or processes with specific health, environment and safety-related aspects.

### ***Shared Production Infrastructure***

Gas and Chemicals has access to industrial products from several production plants within Agri in Europe. This improves production economies and logistics. The shared infrastructure also provides access to raw materials and facilities for local manufacturing of products for defined market needs.

### ***Sophisticated Product Applications***

Gas and Chemicals has developed several optimizing systems for installation at customer sites. The benefits obtained are optimized product consumption as well as reduced risk of unwanted effluent and emissions. Strict product quality control is very important for Gas and Chemicals since several of its products are used within the food segment. This is achieved through the implementation of Hazard Analysis Critical Control Points (HACCP), a quality control approach established by the World Health Organization now being adopted by the European Commission.

### ***Strong Position in Europe and Scandinavia in CO<sub>2</sub> and Related Applications***

Hydro's European gas business is focused on CO<sub>2</sub> and related products where Hydro is among the four leading market players. Hydro is the largest producer and distributor of CO<sub>2</sub> in Europe and operates its own, dedicated vessels for shipping CO<sub>2</sub> to distribution terminals. The European CO<sub>2</sub> and industrial gas markets are growing at approximately twice the rate of GNP. In Scandinavia, Hydro's market share for all industrial gases is approximately 20 percent. The Scandinavian market tends to reflect a more local orientation.

### **Raw Materials and Production**

Gas and Chemicals operates industrial gas businesses, including dedicated production facilities, in Sri Lanka, Thailand and Malaysia. Civil explosives are supplied to the mining industry through joint ventures established in Colombia, the Czech Republic and Russia.

Hydro Agri production facilities in Sluiskil and Porsgrunn have a combined production capacity of 600,000 tonnes of liquid CO<sub>2</sub> per year. In addition, Hydro has a long-term contract to purchase CO<sub>2</sub> in the UK, as well as contracts with other external suppliers in continental Europe. Total production capacity of technical grade ammonium nitrate from Hydro's plants in Kjøping, Pardies and Rostock amounts to 330,000 tonnes. Most of Gas and Chemicals' other products are intermediates in the production of fertilizers without any firm capacity restrictions.

## **Sales and Distribution**

Gas and Chemicals' distribution system for liquid CO<sub>2</sub> in Europe includes specially designed vessels, as well as terminals in Norway, the UK, Denmark, Sweden, Holland, Germany and Poland. The division has a distribution system that covers a major part of Europe, including both owned storage and terminals and customer installations. Due to good product and application knowledge in the division, health, environmental and safety issues are addressed throughout the distribution and delivery process. Gas and Chemicals also has a similar European-wide distribution system for Nutriox(TM).

## **Capital Expenditures**

Capital expenditures in 2001 totaled NOK 170 million, compared with NOK 240 million and NOK 259 million in 2000 and 1999, respectively. Expenditures have related principally to customer installations, logistics, gas cylinders and small production facilities.

## **KFK**

A/S Korn og Foderstof Kompagniet (KFK) is a publicly-held Danish company, in which Hydro holds a 62 percent interest, that is engaged in the production and sale of animal feed, as well as the trading of grain, feed stuffs, fertilizer and other agricultural related products. KFK operates in the Swedish market through its subsidiary, Svenska Foder AB. In addition, KFK produces and sells fish feed in the European and Chilean market through ownership of the Biomar Group.

In January 2002, Hydro announced its intention to pursue an active divestment program, seeking to generate NOK 10 billion by the end of 2003 from divestment of operations both outside and within its core business areas. KFK was identified as being a non-core business which will be prepared for divestment.

### **Strategy**

#### ***Expansion of Fish Feed Operations***

In recent years, KFK has focused on expanding its fish feed operations. The fish feed business is characterized by a few large companies covering approximately three-quarters of the global market. KFK is currently the third-largest fish feed supplier in the global market. The market is divided into feed for salmon (the biggest and fastest growing market) and feed for trout and other fish species. Until 2001, KFK's salmon feed activities had been limited to Europe. In May of 2001, KFK established a new production joint venture in Chile. As a result, KFK is now well-positioned in all the important salmon producing areas. In addition, in 2001 KFK completed construction of a new fish feed production facility in Greece and the upgrading of an existing fish feed production facility in the UK. In 2002, KFK intends to expand production at its factory in Karmøy.

#### ***Shift to Higher Margin Business Sectors***

In 2001, KFK undertook a fundamental assessment of its competencies, infrastructure and underlying business model. As a result of this assessment, KFK determined to shift its focus toward a broader and more active cooperation in the areas of care, nurturing and processing of livestock, particularly with large, professional producers. In October 2001, KFK acquired Dansk Primær Landbrug A/S (DPL) as an important step toward realizing this change in focus. DPL specializes in providing innovative support to the Danish pig production sector in terms of raw materials (in particular, newborn piglets), key processes like feeding and care, and end product processing, including addressing new demands for traceability following the recent epidemics of BSE (Bovine Spongiform Encephalopathy) and Hoof and Mouth disease in Europe.

#### ***Cost and Productivity Improvements***

KFK operates in a highly competitive environment characterized by over-capacity in the grain and feed stuff business in Denmark. KFK has a long history of rationalizing and improving production and administrative processes to reduce costs and improve productivity. In 1999, KFK closed two feed blending units in Denmark to increase the capacity utilization of its production facilities. These units represented approximately 15 percent of total capacity. Early in 2001, KFK reduced its capacity further by closing two additional feed blending units and reorganizing its remaining 19 units in order to gain efficiencies. In addition, KFK also consolidated its sales and distribution network through the closure in 2001 of 30 minor outlets in Denmark. Total manpower reductions related to these actions were 185 employees in 2001. KFK is developing its strategy with a strong focus on further, substantial improvements in terms of cost and productivity.

## **Industry Trends**

A substantial consolidation of agricultural activity has taken place within KFK's market in Denmark. Grain and feed stuff suppliers have not kept pace with the changes in the agricultural sector, although a number of acquisitions and mergers among such suppliers occurred in 1999 and 2000. KFK participated in this consolidation process by purchasing four privately-owned feed and grain operations, including Sjølund Mølle A/S, one of the largest private grain and feed stuff companies in Denmark.

Consolidation is also occurring, in Europe and globally, in both the salmon farming and the fish feed businesses.

## **Competitive Strengths**

KFK is the second largest feed and grain business in Denmark, operating an extensive network of modern feed plants and points of sale covering, at present, approximately 30 percent of the Danish market. KFK has a strong position among non-coop based farmers.

KFK's fish feed business, through its size and location, is well-positioned to be a competitive supplier to the main fish producing regions, both for salmon (in the Northern areas and Chile) and for other fish in the Southern areas.

## **Raw Materials and Production**

KFK produces feed stuff by combining locally purchased grain and other imported ingredients at 19 modern blending units across Denmark and Sweden. Grain trading is an integral part of the feed operations since grain is the most important input into feed blends. Locally purchased grain is also traded internationally. In addition, KFK is engaged in grain handling and drying. KFK also operates blending units for fish feed in Denmark, Norway, France, the UK, Greece and Chile.

## **Sales and Distribution**

KFK currently has a network of approximately 70 distribution points in Denmark selling directly to farmers and supplying approximately 30 percent of the Danish market with its products.

## **Capital Expenditures**

In 2001 capital expenditures for KFK were NOK 684 million compared to NOK 548 million and NOK 428 million in 2000 and 1999, respectively. Capital expenditures in 2001 related primarily to the new production facilities for fish feed and the acquisition of DPL.

## **PETROCHEMICALS AND OTHER ACTIVITIES**

### **Petrochemicals**

Hydro has recently announced its intention to pursue an active divestment program, seeking to generate NOK 10 billion by the end of 2003 from divestment of operations, both outside and within its core business areas. Among Hydro's larger non-core business areas targeted for divestment is its petrochemicals business. Hydro announced in February 2001 that market and industry conditions at that time were not conducive to a reduction in Hydro's ownership interest in its petrochemicals business. Since then, Hydro has operated its petrochemicals business to secure its industrial potential while endeavoring to identify a structural solution that will provide sufficient value for Hydro and its shareholders.

Hydro's petrochemicals business is involved in all stages of production of the plastic raw material, polyvinyl chloride (PVC), also known as vinyl, and its intermediate products, ethylene, chlorine and vinyl chloride monomer (VCM). Hydro Petrochemicals is the largest PVC supplier in the Nordic countries, with a market share of approximately 66 percent. In the UK, the segment ranks first with approximately 35 percent of the market. The petrochemicals industry in Europe is relatively fragmented, reflecting the industry's development on a national, rather than a European, basis. Hydro has an advantage in having close proximity to other Scandinavian countries and the UK, as well as long-term strategic relationships with customers in these markets.

### **Strategy**

For the last several years, Petrochemicals has focused on reducing costs and increasing asset productivity through de-bottlenecking, which has resulted in minor capacity increases. Since 1996, Petrochemicals has reduced staffing by approximately 46 percent (including activities sold) and reduced recurring fixed costs. The cost and productivity improvements have strengthened Petrochemicals' underlying competitive position. In the short-term, Petrochemicals will 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 will entail further staff reductions, reorganization of Petrochemicals' management group, improved supply contracts, increased productivity and improved margin management.

Capital expenditures in 2002 will be concentrated on productivity improvements and cost reduction programs, as well as environmental and maintenance investments. Capital expenditures in 2001 totaled NOK 347 million, compared to NOK 554 million in 2000 and NOK 555 million in 1999.

### **Industry Trends**

#### ***Restructuring of European Petrochemicals Industry***

In 2000 Western European production of PVC amounted to 5.5 million tonnes; worldwide production was estimated to be around 25 million tonnes. European producers' main challenge in recent years has been to rationalize operations to be able to compete with producers in the US and Middle East which have excess capacity for export. Compared with the United States, Asia and the Middle East, European producers have had cost disadvantages (e.g., the significant feed stock price differential between oil in Europe and natural gas in the Middle East) and inefficient capacity (e.g., older, smaller plants). Limited profitability has hindered new, large-scale construction.

Over the past several years, competitive pressures have led to alliances, restructurings and mergers within Europe. The consolidation has primarily taken the form of companies acquiring businesses considered non-core by their parent entities. In 2001 such activity included INEOS Capital Ltd.'s acquisition of a 64.5 percent interest in EVC International NV (a VCM/PVC manufacturer), BP's acquisition of a 51 percent

interest in Veba Oel (an integrated oil company with petrochemicals activities) and Dow Chemical's acquisition of Enichem's polyurethane business. Industry experts expect further consolidation in the coming years, which could help the European petrochemicals industry, which historically has been cyclical, become more competitive globally.

### ***Market for PVC: Demand follows Economic Growth***

Roughly 60 percent of all PVC produced is for the building and construction industry. PVC-based products are used for various types of pipes, floors, roofing materials, window profiles and cable insulation. PVC is also utilized in:

packaging for food products;  
medical products (e.g., blood bags, tubes, and bags for storage of intravenous fluids); and  
automotive applications (e.g., underbody seals).

Demand for products is closely tied to economic growth and is affected by global economic changes. Global and European demand for PVC is expected to increase in 2002 by 2-3 percent and up to 1 percent, respectively, depending on growth in GDP. However, with the addition of some new production capacity, an increase in PVC demand may not result in an immediate recovery in margins.

### ***Environmental Concerns***

There have been few materials that have come under as much scrutiny as PVC. The entire life cycle of the material has, at some point, been the target of objections and criticism. Hydro Petrochemicals is continuously working to improve its PVC products, particularly with respect to additives for PVC. Over the past several years, certain additives considered harmful to the environment have been phased out of Hydro's production. Hydro continues to seek to reduce emission levels, while expanding and improving the efficiency of production.

To date, the total demand for PVC does not appear to have been significantly altered as a result of the focus of environmental groups.

## **Competitive Strengths**

### ***Integrated Producer***

Ethylene and chlorine are basic raw materials for vinyl chloride monomer (VCM), the main intermediate material for PVC. 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 VCM. Petrochemicals has a secure supply for most of its remaining ethylene (62,000 tons) and chlorine (85,000 tons) needs through medium-term supply contracts. Petrochemicals' competitive position in vinyl is enhanced by a relatively well-balanced product chain, geographical concentration and a strong customer focus.

### ***Presence in Higher Growth Markets***

In June 2001, Qatar Vinyl Company Ltd. (QVC), in which Hydro has a 29.7 percent interest, completed construction of a petrochemical plant at Mesaieed Industrial City, south of Doha. The plant, built at a cost of approximately USD 700 million, has an annual capacity of 230,000 tonnes of VCM, 175,000 tonnes of ethylene dichloride and 290,000 tonnes of caustic soda. QVC is able to use surplus ethylene from

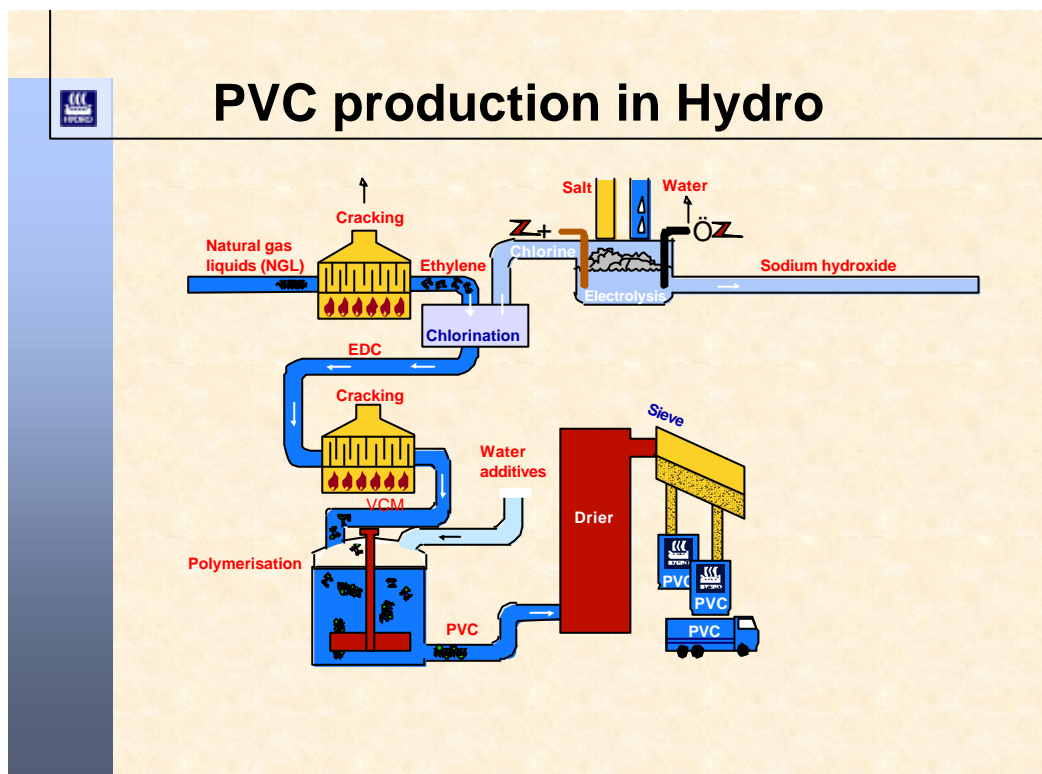
Qatar Petroleum as feedstock. The plant is expected to displace some US exports to customers in Australia, India, Japan, Malaysia, Indonesia and Thailand.

Hydro also has a presence in Asia. In China, Hydro has a 31.8 percent interest in Suzhou Huasu Plastics Co., Ltd., which produces PVC film and has a S-PVC capacity of 100,000 tonnes per year. Hydro is engaged in India through Hydro S&S and Medplast, which manufacture plastic raw materials and process PVC for the production of medical equipment.

Hydro also has a 26.2 percent interest in CIRES, a PVC resin and compound manufacturer in Portugal.

## Raw Materials and Production

PVC is the product of combining ethylene and chlorine. Oil or natural gas is refined and ‘cracked’ to produce ethylene. Salt dissolved in water is chemically decomposed by passing an electric current through it to produce chlorine, as well as caustic soda and hydrogen. The resulting ethylenechlorine compound, ethylene dichloride (EDC), is catalyzed to form a gas called VCM. Polymerization of the VCM by one of three processes – suspension, emulsion or bulk-polymerization – results in a fine-grained, white power or resin, known as PVC or vinyl.



In order to add unique physical characteristics to the vinyl, heavy metal stabilizers or plasticizers (primarily phthalates) are added that may give the material such properties as flexibility, light and weather fastness, fire and impact resistance, and color. The additives are mixed with the polymer, through a variety of methods, in a process called compounding. There are various methods for processing the vinyl for end-use applications, including extrusion (pipe and cable), injection molding (three-dimensional parts like valves), calendaring (film and sheet goods) and dispersion molding (such as coatings for carpet backing and floor tiles).

### Petrochemicals production

( tonnes)	2001	2000	1999	1998
<i>Base Products</i>				
VCM	591,000	536,000	539,000	512,000
Caustic Soda	279,000	271,000	272,000	270,000
<i>Polymers</i>				
S-PVC	465,000	445,000	451,000	403,000
P-PVC	72,000	76,000	68,000	68,000
Total Polymers	537,000	521,000	519,000	471,000
PVC Compounds	143,000	154,000	161,000	139,000

### Average market quoted prices North West Europe

	2001	2000	1999	1998
Ethylene - DEM/tonne delivered	1205	1301	829	845
VCM - Spot export FOB USD/tonne	345	562	418	315
S-PVC - DEM/kg delivered	1.28	1.68	1.22	1.21

#### Source: ICIS/LOR

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

Ethylene feedstocks for the Rafnes facility are supplied by long-term contracts for natural gas liquids (NGL) from a number of North Sea fields for approximately 50 percent of the required volumes. The remaining need is covered by spot purchases. Price formulas are linked to naphtha or oil prices. As such, oil prices are an important driver of ethylene costs. Petrochemicals' share of ethylene produced at Rafnes in 2001 was 216,000 tonnes. The Stenungsund plant purchases ethylene for its VCM and PVC production and chlorine for the production of ethylene di-chloride (EDC) which is being shipped to the Rafnes plant. The total production of chlorine in 2001 was approximately 248,000 tonnes. Chlorine feedstock in excess of Hydro's own production is covered by medium-term and spot purchases (approximately 85,000 tonnes). Announced plant closures in Europe are expected to reduce the chlorine supply towards the end of 2002.

At present, Petrochemicals transports raw materials and intermediates among its plants in Rafnes, Stenungsund and Aycliffe. Increased efficiency and lower transportation costs could be achieved by an even higher level of balance between input (raw materials) and output (final product) streams at the individual plants. Hydro Petrochemicals' management has developed technical plans which would allow for the increase in the balance at Rafnes by increasing chlorine production. Hydro has received the necessary permits from the Norwegian governmental authorities for increased production and modernization of Rafnes' chlorine and VCM plants. However, in view of Hydro's intended divestment of its petrochemicals business, no decision has been made on the timing of the potential investment.

## **Sales and Distribution**

PVC and PVC compounds are mainly sold by Hydro's own sales organization. Distribution is mainly by truck. Pipe grade suspension PVC (S-PVC) is considered to be a commodity product, while there is considerable product and price differentiation in other S-PVC applications. Paste PVC (P-PVC) accounts for about 10 percent of the total PVC market. This product is traditionally considered to be a specialty product influenced only to a limited extent by the S-PVC price development.

Caustic soda, a byproduct of chlorine production which is used by a variety of industries such as in aluminum and soap production, is sold to customers in Europe and North America 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.

## **Government Regulation**

As explained above, PVC has been the subject of environmental debate for a number of years. The EU completed a consultation process in 2000 by issuing a green paper on PVC. The paper included suggestions to adopt voluntary and/or other legislative measures related to PVC. Several important stakeholders were consulted in this process, including member state governments, representatives of the PVC industry and non-governmental organizations (NGOs), as well as the European Parliament.

As a member of the European Council of Vinyl Manufacturers (ECVM), Hydro and the other members of the ECVM have committed themselves to regulations which go beyond applicable national regulations by the specific adoption of environmental performance standards and improvement programs under the conditions of an ECVM industry charter for the production of VCM and PVC. This charter commits the members to stringent emission limits for the manufacture of VCM and PVC. A new charter has been developed for emulsion resin manufacture. In addition, the European PVC industry, including PVC resin manufacturers, plasticizer manufacturers, stabilizer producers and PVC converters have agreed on a voluntary commitment known as Vinyl 2010. This voluntary commitment is currently being reviewed by the European Commission and, following this consultation process, the European Commission is expected to publish a "communication paper" on PVC in early 2002. Hydro anticipates that it will be positioned to respond to measures which may be required.

Hydro intends to discontinue the use of mercury in its chlorine production in Sweden, in accordance with national and EU regulations. Hydro is evaluating alternatives to the existing diaphragm technology based on asbestos, which is being used in its Norwegian chlorine production.

## Other Activities

**Hydro Pronova** is responsible for commercializing products and businesses at the periphery of the Company's core business areas, with the objective of developing businesses and realizing their long-term potential as part of Hydro or outside of the Company.

Hydro Pronova is comprised of several activities including Omega-3 fatty acids, heparinized surfaces applied on medical devices and implants, formic acid and formates for use as animal feed additive, deicing agents and drilling fluid, packaging systems for transportation of bulk goods and cooling/heating systems based on transcritical (high pressure) CO<sub>2</sub> technology.

Hydro Pronova has developed a highly concentrated Omega-3 drug, Omacor™, for treatment of post- myocardial infarction (Post MI) and hypertriglyceridemia (HTG). The drug was approved for treatment of Post MI by seven European countries in 2001. Agreements have been signed with four major pharmaceutical companies to launch Omacor™ in Europe.

Hydro Pronova has global, exclusive rights to commercialize patented technology developed at the Norwegian Institute of Technology using transcritical CO<sub>2</sub> as a medium in cooling and heating systems. The technology, branded Shecco™, provides an energy efficient and environmentally friendly alternative to hydro-fluoride carbon gases in such systems. Hydro Pronova has signed agreements with Denso of Japan for the application of Shecco™ technology to water heating and to mobile air conditioning systems. The Shecco™ technology was nominated for the Financial Times 2001 Global Environmental Innovation of the Year.

In 2001, the formate-based feed additive, Formi, was the first animal feed additive to be approved as a growth promoter by the EU. At present, Formi is the only EU-approved growth promoter and represents a viable alternative to the much-contested antibiotic growth enhancers presently in use.

Heparin coatings reduce complications arising from artificial devices implanted during medical procedures. In 2001, Carmeda, a 100 percent-owned subsidiary of Hydro Pronova, extended its cooperation with Cordis, a subsidiary of the American pharmaceutical company, Johnson & Johnson, substantially increasing the number of intra-vascular stents coated with heparin using Carmeda proprietary technology.

**Technology and Projects** (HTP) provides project and engineering services to Hydro's operating segments.

**Industrial Insurance.** Industriforsikring a.s is a wholly-owned subsidiary which provides property, casualty and marine insurance for companies in the Group.

#### ITEM 4.C. ORGANIZATIONAL STRUCTURE

The following “significant subsidiaries,” as that term is defined by applicable rules of the Securities and Exchange Commission, are included in the consolidated financial statements of the Group:

Company Name	Country of Incorporation	Proportion of ownership Interest*
Norsk Hydro Produksjon AS	Norway	100 percent
Hydro Aluminium AS	Norway	100 percent
Saga Holding AS	Norway	100 percent
Norsk Hydro Danmark AS	Denmark	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. “Information on the Company - 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. “Information on the Company - Business Overview - 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 (fertilizers and PVC), Rafnes (petrochemicals), Karmøy, Årdal, Sunndalsøra, Holmestrand and Høyanger (aluminum) and Glomfjord (fertilizers). The Group owns clear title concessions to hydroelectric power stations with a generating capacity of 2.7 TWh per year. Generating capacity of approximately 8.7 TWh is operated under concessions from the Norwegian government which will expire without compensation in the period between 2018 and 2052. Hydro’s principal Agri and Light Metals production facilities abroad are located in Austria, Belgium, Canada, China, Denmark, France, Germany, Italy, the Ivory Coast, Luxembourg, the Netherlands, Poland, Portugal, South Africa, Spain, Sri Lanka, Sweden, Trinidad and Tobago, the United Kingdom and the United States. Hydro has an interest in an oil refinery in Sweden (Scanraff), a retail gasoline and fuel oil marketing network through an affiliated company in Denmark and Norway and wholly-owned operations in Sweden. Hydro also participates in a fertilizer complex in Qatar and alumina refineries in Jamaica and Brazil.

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 the current and preceding fiscal years. There were no environmental measures, implemented voluntarily or required by law, that had a significant effect on the utilization of Hydro’s main production facilities in 2001.

## **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**

#### **2001 Compared with 2000**

The comparative discussion of Hydro's financial condition and results of operations as of and for the years ended December 31, 2001 and 2000, as well as information regarding Hydro's material commitments for capital expenditures as of year-end 2001 and Hydro's research and development policies for the three-year period ended December 31, 2001, is incorporated by reference to the "Financial Review" section (pages 42 through 65) of the Company's 2001 annual report to shareholders. Such discussion, together with Hydro's consolidated financial statements as of and for the year ended December 31, 2001 and the related notes, included in the 2001 annual report to shareholders, has been filed as an exhibit to this Annual Report on Form 20-F in accordance with applicable rules under the Exchange Act.

#### **2000 Compared with 1999**

Hydro's net income in 2000 increased 309 percent to NOK 13,981 million (NOK 53.40 per share) from NOK 3,416 million (NOK 13.80 per share) in 1999. The substantial improvement was due to a combination of better market conditions and positive effects resulting from Hydro's implementation of its strategy, announced in the autumn of 1999, to focus on three core areas: Oil and Energy, Light Metals and Agri.

Hydro's acquisition of Saga Petroleum in July 1999 increased its oil production considerably. This, together with the steep rise in oil and gas prices during 2000, contributed to the significantly improved result over the prior year, despite the high rate of taxation (approximately 65 percent) on earnings derived from Hydro's oil and gas activities. Hydro Agri's extensive restructuring resulted in lower costs in 2000. At the same time, market conditions improved during the course of the year. Increased margins and volumes in Hydro Light Metals and Energy also contributed to the overall improvement.

#### **Operating Results**

Operating revenues increased by approximately 40 percent in 2000 to NOK 157 billion. The increase was principally due to higher prices and volumes in certain of Hydro's business segments and the effects of the high US dollar -- Norwegian kroner exchange rate.

EBITDA for 2000 was NOK 46,609 million, representing an improvement of NOK 24,665 million compared to 1999.

In the fourth quarter of 2000 Hydro changed the way it allocates pension costs to its Norwegian operations. Costs are now charged based on pension benefits accruing evenly over employees' service periods. Previously, costs were determined based on the number of years of service, resulting in a concentration of the total cost toward the end of employees' service periods. The change in the allocation of pension costs resulted in non-recurring charges to the segments with a corresponding credit reflected in Corporate Activities of NOK 1,824 million. Part of these pension costs was charged to external parties resulting in a positive effect to Hydro's fourth quarter operating income and EBITDA of NOK 470 million.

This change will result in slightly higher overall costs for the individual segments over the next several years but will not have any significant effect on the Group's consolidated results. The change described above affects only the allocation of pension costs to the business segments and does not affect the total pension costs for the Group. Pension costs are calculated and accounted for (on a Group level) in accordance with SFAS 87.

Earnings from non-consolidated investees of NOK 672 million in 2000 represented an increase of NOK 333 million compared to the prior year. The improvement was attributable to better earnings of businesses within both Hydro Light Metals and Hydro Agri.

Other income for both 2000 and 1999 consisted of gains on the divestment of operations.

### **Financial items**

Net financial expenses in 2000 were NOK 2,158 million, compared to NOK 1,551 million in the previous year. Net financial expenses in 2000 were affected by a charge for net currency losses of NOK 655 million mainly as a result of the higher US dollar - Norwegian kroner exchange rate. In 1999 net financial expenses were affected by a charge of NOK 377 million in connection with losses on Saga crude oil options.

Capitalized interest on plant under construction amounted to NOK 1,029 million in 2000 versus NOK 839 million in the previous year.

Net interest bearing debt at the end of 2000 was NOK 29.7 billion, a reduction of NOK 13.4 billion from the end of the previous year.

### **Taxes**

The provision for current and deferred taxes for 2000 amounted to NOK 16,178 million, representing 54 percent of pre-tax income. The corresponding figure for 1999 was NOK 4,337 million, equivalent to 55 percent of pre-tax income. The tax percentages for 2000 and 1999 were influenced by the gains on the sales of operations included in "Other income, net" which were taxed at a lower rate. Excluding the effects of these gains, the tax percentage would have been approximately 59 percent for 2000 and 62 percent for 1999. The reduction in taxes as a percentage of income before tax was due to the somewhat lower portion of Hydro's total income represented by oil and gas activities in 2000 compared to the prior year, despite the positive market conditions, attributable primarily to Hydro Agri's improved operating results.

## OIL AND ENERGY

Hydro Oil and Energy, which consists of Exploration and Production, Energy and Oil Marketing, had an EBITDA of NOK 30,641 million in 2000. This was an increase of NOK 17,062 million or 126 percent compared to 1999.

### Exploration and Production

EBITDA for Exploration and Production was nearly two and a half times higher in 2000 than in 1999.

### Revenues and market conditions

Exploration and Production's operating revenues increased in 2000 to NOK 35,494 million from NOK 17,406 million in 1999 (an increase of 104 percent). The increase was due primarily to higher crude oil prices and production volume growth, as well as higher gas prices. In 2000, Hydro realized an average crude oil price of USD 28.00 per barrel compared to USD 18.50 per barrel in 1999. The average realized oil price in Norwegian kroner was NOK 246 per barrel in 2000 compared to NOK 145 per barrel in 1999. Hydro's average realized gas price in 2000 of NOK 0.98 per standard cubic meter was approximately 69 percent higher than the average realized gas price in 1999 of NOK 0.58.

Exploration and Production sells most of its oil and liquid gas production to Energy. In addition, Energy also markets dry gas for Exploration and Production on a commission basis. Total internal sales amounted to NOK 26,058 million in 2000 compared to NOK 10,410 million in 1999, an increase of 150 percent. Internal sales to Energy represented 73 percent of Exploration and Production's operating revenues in 2000 compared to 59 percent in 1999. The increase resulted from the inclusion of Saga's production output in internal sales in 2000. Sales of dry gas and transportation tariffs, in addition to some external oil sales, accounted for the remaining 27 percent of Exploration and Production's operating revenues in 2000.

Hydro's total production of oil and gas in 2000 rose to 413,000 barrels of oil equivalents per day (boed) (which, based on a subsequent change in the Norwegian Petroleum Directorate's current conversion factor for NGL, has been restated to 416,000 boed), compared to 340,000 boed in 1999. The increase in production reflected the higher or new ownership interests in several fields following the acquisition of Saga Petroleum in July 1999, as well as the commencement of production in 2000 at Oseberg South, Åsgard B and Sygna. Oil production accounted for 78 percent of the total production in 2000, the same percentage as in 1999. Gas production rose to 14.2 million standard cubic meters per day in 2000 compared to 11.7 million standard cubic meters in 1999.

Ninety two percent of Hydro's oil and gas production in 2000 related to Norwegian-based activities, with the remainder produced from fields located outside of Norway. The sale of assets on the British Continental Shelf in August 2000 reduced production outside of Norway in the second half of 2000. Production from fields in Canada, Russia and Libya increased in 2000 compared to 1999.

Global oil production increased to approximately 76.7 million barrels per day in 2000 from an average of 74 million barrels per day in 1999, an increase of 3.5 percent. OPEC production increased by 1.4 million barrels per day (4.8 percent) in 2000, while production outside of OPEC increased by approximately 1.2 million barrels per day (2.7 percent).

In 2000, the Brent Blend crude oil price increased from USD 24 per barrel at the beginning of the year to almost record high levels of USD 38 per barrel in September. The higher price reflected the low levels of global crude oil and refined products inventories throughout the year combined with increasing demand in almost all regions of the world. Despite OPEC increasing its production quota four times in 2000, temporarily bringing down prices, the price rise continued, reaching a peak in September. From that point until the end of November, the price remained in the vicinity of USD 30 per barrel. During December, the

price fell dramatically toward USD 21 per barrel. The sharp drop in price reflected replenished crude oil and refined products inventories together with a more uncertain demand outlook. At year end 2000, the Brent blend crude oil price was approximately USD 23 per barrel after having stabilized following discussions among OPEC countries relating to production cuts.

Natural gas accounts for approximately 22 percent of total energy consumption in Europe. Continued growth is expected for the next 10 years mainly due to increased use of gas for power generation.

Norwegian natural gas deliveries account for approximately 10 percent of total gas consumed in Europe. From 1999 to 2000 natural gas exports from the Norwegian Continental Shelf grew by 6.9 percent to 48.9 billion standard cubic meters. Hydro's share of the exports was 9.4 percent.

## **Operating costs**

Hydro's average production cost (defined as the cost of operating fields and transportation facilities including CO<sub>2</sub> emission tax, insurance, gas purchased for injection and lease costs for production installations, but excluding transportation tariffs and depreciation) was NOK 25 per boe in 2000 compared with NOK 22 per boe in 1999.

Hydro's total expenditures for exploration of oil and gas and appraisal of discoveries amounted to NOK 1,799 million in 2000 compared to NOK 1,498 million in 1999, an increase of 20 percent. The increase related primarily to the acquisition of Saga Petroleum. Of the total exploration expenditures, Hydro expensed NOK 1,701 million in 2000 compared to NOK 1,202 million in 1999. This increase was attributable to higher costs related to non-commercial exploration wells in 2000 and the expensing of previously capitalized costs of wells on the Norwegian Continental Shelf.

Hydro acquired a number of attractive licenses both internationally and on the Norwegian Continental Shelf during 2000. The overall results from Hydro's exploration program in 2000 were disappointing, in part because of delays in the drilling program. Exploration activities outside of Norway represented 49 percent of total exploration expenditures.

Depreciation, including provisions for abandonment and well closure costs, averaged NOK 53 per boe in 2000 compared to NOK 49 per boe in 1999. The increase reflects the greater production in 2000 from fields with higher depreciation costs per boe, and increased depreciation related to excess value over book value of assets acquired from Saga in 1999, which represented NOK 11 per boe in 2000.

## **Energy**

### **Revenues and market conditions**

Energy's operating revenues increased in 2000 to NOK 44,591 million from NOK 20,365 million in 1999, an increase of 119 percent. The increase in operating revenues in 2000 was primarily due to higher crude oil and refined products prices, as well as higher gas volumes sold.

Internal sales in 2000 amounted to NOK 7,842 million, compared to NOK 4,237 million in 1999, an increase of 85 percent. These sales were mainly to Oil Marketing (NOK 3,185 million), Aluminium Metal Products (NOK 1,346 million) and Plant Nutrition (NOK 1,380 million).

Oil trading and refining activities accounted for 86 percent of operating revenues in 2000; sales of electricity, 7 percent; and sales from Energy's European gas trading activity, 7 percent.

Oil trading and refining EBITDA increased by 110 percent in 2000 compared to 1999. The improvement was mainly due to higher margins obtained at Hydro's partly-owned refinery in Sweden, which favorably affected EBITDA by NOK 264 million compared to 1999. The significantly higher refinery margins were a result of higher spot prices for gasoline and heating oil, primarily driven by the low level of global product stocks at the start of 2000. EBITDA from other oil trading and shipping activities increased by NOK 94 million compared to 1999. Shipping activities transferred from Exploration and Production at the beginning of the year contributed NOK 64 million to this increase.

Gross margins on electricity sales increased in 2000 by NOK 133 million over the prior year as a result of increased electricity production. Due to a very wet year in Norway, inflow into reservoirs in 2000 was above historical average allowing for higher net sales of electricity in the spot market. Average spot prices fell from 11.2 øre/kWh in 1999 to 10.3 øre/kWh in 2000.

Energy's growing European gas marketing activities showed significantly improved results in 2000 compared to the prior year. Margins increased by NOK 223 million compared to 1999. The improvement was mainly due to increased activity and favorable positioning between the UK and Continental Gas markets.

Energy's total traded electricity volume increased to 38.3 TWh in 2000 from 29.7 TWh in 1999. Electricity production from Hydro operated plants totaled 11.5 TWh in 2000, an increase of 11 percent compared to 1999.

### **Operating costs**

Refining costs per barrel, comprised of both fixed and variable processing costs, were at the same level as the previous year.

Power plant operating costs and other operating costs remained virtually unchanged from 1999. In 2000, Energy sold part of its national electric power grid assets, which favorably affected EBITDA by NOK 25 million.

Operating costs relating to the marketing of gas sourced from Norwegian fields amounted to NOK 88 million in 2000. These activities were transferred to Energy from Exploration and Production on January 1, 2000 as part of Hydro's internal restructuring process.

### **Oil Marketing**

With effect from January 1, 2000, Oil Marketing consists of Hydro's oil marketing activities in Sweden. Through its interest in the 50 percent-owned Hydro Texaco, the segment also participates in retail marketing activities in Norway, Denmark and the Baltic countries.

### **Revenues and market conditions**

Oil Marketing's operating revenues increased in 2000 to NOK 4,094 million from NOK 2,652 million in 1999, an increase of 54 percent. The improvement resulted primarily from significantly higher prices of refined products and a strong USD. In 2000, the average international market quotes for gasoline and gasoil increased by 62 and 70 percent, respectively, compared to 1999. Selling prices of refined products increased correspondingly, but at a slower rate.

The demand for gasoline in the Swedish retail fuel market declined by 1.5 percent in 2000 compared to 1999. Diesel consumption declined by 0.7 percent in the same period. Consumption of heating oil declined by 14 percent in 2000 due to mild weather. Based on information obtained from the Swedish Statistics Bureau (SCB), Hydro improved its market share in the Swedish market somewhat in 2000 compared to 1999.

Oil Marketing's share of net income in non-consolidated investees, consisting principally of Hydro Texaco, decreased by 82 percent. The reduced income was primarily caused by lower margins due to time lags between increased retail prices and international product prices, as well as losses on sale of service stations in the Baltic region.

### **Operating costs**

Total operating costs, consisting mainly of product variable costs of refined oil products, increased by 63 percent in 2000 compared to 1999, primarily due to increased oil prices. Fixed and other variable costs were at the same level as the previous year.

Oil Marketing's EBITDA decreased by 53 percent compared to 1999. The decrease was mainly caused by lower sales margins due to lags in the increase of retail selling prices compared to the increased cost of refined products and the write-down of product inventories due to oil price reductions toward the end of December 2000.

## **LIGHT METALS**

Hydro Light Metals consists of the segments Aluminium Metal Products, Aluminium Extrusion and Other Light Metals. Other Light Metals consists of Aluminium Rolled Products, Automotive Structures and Magnesium. In 2000, EBITDA for Hydro Light Metals was NOK 5,501 million representing an increase of 46 percent compared to 1999.

### **Aluminium Metal Products**

#### **Revenues and market conditions**

Aluminium Metal Products' operating revenues increased by 37 percent to NOK 33,534 million in 2000 from NOK 24,540 million in 1999. Internal sales to other segments within Hydro increased by 22 percent to NOK 6,377 million in 2000 from NOK 5,209 million in 1999. Internal sales were mainly to Aluminium Extrusion.

Operating revenues from the sale of Hydro's production of aluminum cast house products increased by 30 percent in 2000 compared with the prior year. The increase was due to increased prices and volumes. The average three-month price for primary aluminum on the London Metal Exchange (LME) increased by 13 percent to US dollar 1,567 per tonne in 2000 from USD 1,387 per tonne in 1999. Due to increased metal prices and effects of product premiums, as well as forward sales and a strong US dollar - Norwegian kroner exchange rate, Hydro realized average prices in 2000 in Norwegian kroner that were 28 percent higher than in 1999.

EBITDA included losses of NOK 250 million associated with Aluminium Metal Products' price hedging program in 2000, compared to gains of NOK 229 million in 1999.

Aluminium Metal Products' share of net income from affiliated companies was nearly three times higher in 2000 compared with the prior year. The increase resulted from increased margins realized by Sør-Norge Aluminium A/S (Søral), a 49.9 percent owned investment, and the acquisition of Alunorte, the largest producer of alumina in Brazil. Hydro acquired 26.7 percent interest in Alunorte in 2000. During 2000, the Board of Directors of Alunorte approved an expansion of the existing refinery. Hydro's overall interest in Alunorte will increase to 34 percent upon completion of the expansion which is expected in 2003.

Operating revenues from other activities (trading and marketing of aluminum and related raw materials) in 2000 increased by 43 percent compared to 1999. The increase was mainly attributable to increased prices and volumes. EBITDA for aluminum trading activities increased by NOK 580 million from the previous year. A large part of the increase was attributable to unusually good earnings from alumina trading tied to high activity levels and high prices. During 2000, a significant part of the Western world's alumina capacity was temporarily out of the market due to rebuilding after a production accident in 1999 at a major US producer. The resulting supply shortage temporarily drove prices to unusually high levels. The alumina supply/demand balance has subsequently improved with a return to historical normal price levels.

Shipments of primary aluminum in the Western world increased by approximately 3.5 percent during 2000 compared with 1999. Registered inventories were reduced by about 460,000 tonnes during the year, bringing stock level relative to consumption to a very low level. During the first half of 2000, the volume shipped was particularly strong while the second half was negatively influenced by a significant decline in US shipments. The market situation in Europe was favorable throughout the year. The Japanese market for primary aluminum showed improvement in 2000 compared to the prior year.

## **Operating costs**

Total operating costs in NOK per tonne of primary aluminum including raw materials and fixed costs increased by 12 percent in 2000 compared to 1999. Raw material cost per tonne produced increased in 2000 by 21 percent compared to the prior year, mainly due to higher alumina prices. Fixed costs increased by 7 percent compared with the previous year. EBITDA for 2000 included a one time pension charge of NOK 365 million.

Alumina and electricity are the most important components for the production of primary aluminum. In 2000, Hydro covered approximately 67 percent of the alumina requirements for its wholly-owned primary metal production from the Alpart refinery in Jamaica (in which Hydro has a 35 percent interest) and from the Alunorte refinery in Brazil. The balance was covered by long-term contracts. Therefore, the alumina cost was not significantly affected by the extraordinary high alumina spot prices experienced during the year. The alumina cost stated in NOK increased by 30 percent per tonne as a result of increases in the LME price, freight costs and a strong US dollar - Norwegian kroner exchange rate. Alumina contract prices are linked to LME aluminum metal price developments. Electricity prices per tonne were slightly higher in 2000 compared to 1999.

## **Aluminium Extrusion**

### **Revenues and market conditions**

Aluminium Extrusion's operating revenues reflected growth in all business areas in 2000. The most significant factors contributing to that growth were the acquisitions of the US-based Wells Aluminum in February 2000 and a majority interest in Hydro Aluminum Wuxi Co., Ltd., based in China, in July 2000. In addition, operating revenues were influenced by the increased price of metal and the strong US dollar.

In 2000, Extrusion Europe accounted for 51 percent of operating revenues. Extrusion North America, established in 2000 following the acquisition of Wells Aluminum, contributed 12 percent. Heat Transfer, which supplies tubing and components to the automotive market and Building Systems, each contributed 16 percent. Sales of general aluminum extrusions outside Europe and North America and Light Metal Wheels accounted for the remaining 5 percent.

Sold volumes of general extruded profiles increased by 26 percent in 2000. Global shipments of heat transfer products remained broadly unchanged, while shipments within the Building Systems business area increased by 12 percent.

Economic growth in Europe and the US contributed to increased extrusion consumption in 2000, particularly during the first half of the year. In Europe, the increase in extrusion consumption in 2000 was 5.5 percent compared with the prior year, while US consumption increased 1 percent. During the second half of 2000 growth in extrusion consumption slowed on both continents.

Growth in demand for extrusions in Europe continued to benefit from continued growth in transportation and construction sectors and positive trends in the main industrial sectors. In the US, growth was derived mainly from the general industrial sectors while growth from residential building was lower. A sharp reduction in demand from the truck and trailer business reflected an oversupply in the end market. The largest application areas within the automotive heat transfer tubing market continued to be radiators, condensers and liquid lines. The European market increased mainly due to more extensive use of automotive air conditioning systems.

EBITDA for Aluminium Extrusion improved in 2000 by 22 percent compared with the prior year, mainly due to the favorable market conditions during the first half of the year and the acquisition of Wells.

The favorable market conditions for Extrusion Europe and Building Systems led to increased volumes shipped and income realized. The strong US dollar compared to European currencies and price quotations on the London Metal Exchange put pressure on margins during the second half of the year.

As part of the continuing strategy to focus on core business activities, Hydro divested the Norwegian company, Fundo AS, during 2000. Fundo represented Hydro's light metal wheels business.

## **Operating costs**

High production volumes increased capacity utilization at Hydro's European extrusion plants. Productivity in manufacturing processes was improved in line with the segment's continuous improvement program. Capacity was also added through four new extrusion presses in France, Spain and Italy, with two of the new presses to be operative in 2001. In the US, capacity utilization decreased during the second half of 2000 due mainly to lower volumes shipped to the truck industry. Aluminium Extrusion has initiated a program to improve the manufacturing productivity of the Extrusion North America business area by transferring best practices from its European extrusion system. EBITDA for Wells Aluminum in 2000 was lower than expected due to lower shipments in the US during the second half of 2000.

Costs within the Heat Transfer business area in 2000 were higher than the prior year, mainly due to startup costs relating to new US capacity for welded tubes. In addition, normal price pressure from the automotive industry, combined with higher costs for metal, resulted in further pressure on margins.

Aluminium Extrusion's fixed costs increased due to its acquisition activity in 2000. However, operating extrusion costs in Europe per tonne decreased in 2000 by 2 percent compared to 1999.

## **Other Light Metals**

EBITDA in 2000 for Other Light Metals included a one time pension charge for employees in Norway of NOK 89 million. The major part of this was charged to Magnesium.

**Magnesium** had a considerably lower EBITDA in 2000 than in the previous year. Production and sales volumes achieved in 2000 were higher, while margins realized were markedly lower, mainly due to lower market prices. Demand for magnesium remains strong. However, increased exports from China have been the primary contributor to the price pressure experienced in the market.

In 1992, an anti-dumping duty of 21 percent was imposed on US imports of pure magnesium produced at Hydro's plant in Canada. The US Department of Commerce (**DOC**) requires three consecutive annual reviews with zero dumping margin before it will consider revocation of the duty. Despite having met the three-year requirement, the DOC decided in 1999 not to revoke the duty based on its determination that Hydro had not shipped sufficient "commercial quantities" during the previous three 12 month periods. Hydro will continue to pursue revocation via the annual review process. Hydro participated in a five year automatic review (Sunset Review) conducted by the DOC and the International Trade Commission (ITC), which in July 2000 ruled against revocation. A countervailing duty applicable to Hydro's imports of pure and alloyed magnesium from Canada to the US, originally at 7.61 percent, has been gradually reduced to 1.38 percent, and is expected to decline in future years. A separate Sunset Review ruled against revocation of this duty.

The trend of increasing demand for magnesium diecasting in motor vehicles is expected to continue, and will be the principal driver of growth for the foreseeable future. Based on announced projects and general interest from new potential entrants, the industry is considered likely to be adequately supplied to support anticipated growth. Hydro decided to build a 10,000 tonnes per year facility in China to convert locally available pure magnesium to high quality alloy ingot for export to its traditional markets for diecasting alloys.

The start up of Noranda's new 63,000 tonnes primary magnesium facility in Canada was expected to maintain the prevailing price pressure through 2001.

**EBITDA for Aluminium Rolled Products** was lower in 2000 than in the previous year. The decrease was due to one time effects and increased gas prices. Production and shipments were higher in 2000 than in 1999.

**EBITDA for Automotive Structures** demonstrated a marked improvement in 2000 compared with the previous year. The improvement was primarily due to the gain from the sale of Hydro's 40 percent interest in Autoplastics AB in the second half of 2000. EBITDA in 1999 included a loss of NOK 58 million related to the transfer of Hydro's plastic bumper systems activities to Sapa Autoplastics AB. Excluding these effects and other one time effects, EBITDA was on the same level as in 1999. A dedicated effort is being made to raise operating margins to a more desirable level by means of productivity improvement measures.

## AGRI

EBITDA for Hydro Agri, which consists of the segments, Plant Nutrition, Gas and Chemicals and A/S Korn- og Foderstof Kompagniet (KFK), was NOK 3,982 million in 2000 representing an increase of NOK 2,841 million from the prior year.

### Plant Nutrition

#### Revenues and market conditions

Operating revenues increased by 26 percent in 2000 compared to 1999, primarily due to increased volumes outside of Europe generated by Kynoch, a company formed by the South African company, AECL, in which Hydro purchased a controlling interest in December 1999 and by Adubos Trevo S.A. in Brazil (Trevo), in which Hydro agreed to acquire a 58 percent interest in July 2000. Higher fertilizer prices in Europe also contributed to the increased revenues.

The international market for urea was more volatile in 2000, but generally with higher prices than in 1999. The average Middle East urea price increased by 39 percent from 1999 to 2000. The price increase was attributable to increased demand for urea, together with higher energy prices which led to increased production costs for some producers. Due to the higher energy costs, some suppliers reduced production as a temporary measure.

European nitrogen fertilizer prices increased by 33 percent in 2000 compared to 1999. The increase was mainly due to higher prices of urea, as well as increased energy costs for producers. A stronger US dollar also made it more expensive to import products.

The average diammonium phosphate (DAP) price (US Gulf) dropped by 13 percent in 2000 compared with the previous year. Capacity closures in the US have not been sufficient to compensate for increased production capacity in India, Pakistan and Australia. Increased capacity combined with low consumption globally resulted in continued low prices.

Sales of Hydro produced fertilizers in Western Europe amounted to 10.6 million tonnes, unchanged from 1999. Total fertilizer sales, including sales of third party products, amounted to 11.9 million tonnes, an increase of 4 percent compared to 1999.

For the 2000 calendar year, total fertilizer deliveries to the most important markets in Western Europe were slightly higher than in 1999. Fertilizer deliveries in Western Europe during the first half of the 2000/2001 fertilizer season (July through December 2000) increased slightly from the corresponding period of the previous year.

According to the European Fertilizer Manufacturers Association, West European nitrogen fertilizer consumption increased by approximately 0.6 percent from 98/99 to 99/00. Phosphate consumption declined by about 3.4 percent and potash consumption declined by 4.6 percent.

On the global scene, population growth and national wealth development have created and are expected to continue to create a sustainable growth in fertilizer consumption in the foreseeable future. The International Fertilizer Association forecasts a global nitrogen fertilizer consumption growth rate of 2.2 percent per annum until 2004. The main growth in consumption of nitrogen fertilizers has been in Asia and Latin America. The growth is expected to be higher for nitrogen than for phosphate fertilizers.

The ammonia price (North West Europe) increased by an average of 50 percent from 1999 to 2000, mainly as a result of production cost increases due to the higher energy costs.

## Operating costs

Raw material costs increased in 2000 compared to 1999. Natural gas is the most important raw material for the production of ammonia and nitrogen fertilizer. In 2000 average gas prices in Europe, stated in US dollars, increased by 60 percent compared to 1999. The gas price is closely linked to the crude oil price in Europe, which remained at historically high levels throughout the year. Phosphate and potassium are also used in the production of complex fertilizer. Prices for phosphate and potassium chloride remained basically at the same level as in 1999, while the price for potassium sulphate was 10 percent lower.

The Hydro Agri improvement program launched in 1999 is ahead of plan. The original target was fixed cost reductions of approximately NOK 1,000 million (compared to 1998) to be achieved by the end of 2001. The target was subsequently revised upward to approximately NOK 1,350 million in fixed costs and NOK 400 million in variable costs. The fixed cost reductions target was exceeded in 2000 with savings of NOK 1,570 million compared to the cost level in 1998. The variable costs savings relative to market indices reached approximately NOK 500 million in 2000.

A significant part of the cost savings related to reductions in staffing levels, which amounted to 1,400 persons in the fertilizer business during 2000 compared to 1,000 - 1,100 in 1999. The reductions were achieved through closures of production facilities, as well as reorganization and rationalization of sales, marketing and business support activities. Plant Nutrition's operating results in 2000 included approximately NOK 460 million in redundancy and other costs related to the staffing reductions.

In December 1999 Hydro announced its plan to permanently close down approximately 1 million tonnes of nitrate capacity in Europe. This decision was based on Hydro's estimation of an over-capacity of 2.5-3.0 million tonnes in the European nitrate industry combined with a view of limited growth potential in the European nitrate market for the foreseeable future. The closures were implemented in 2000. The plants in Immingham in Great Britain and Landskrona in Sweden were closed in July and December 2000, respectively. Total restructuring costs related to these closures amounted to NOK 135 million in 2000. This was in addition to the provision of NOK 632 million taken in 1999. The costs in 2000 were mainly related to the reduction in personnel.

Hydro ceased production of nitrates at the Montoir plant in France in June 2000. In addition, Hydro discontinued production of complex fertilizer (NPK) at three plants in France, with a total production capacity of 500,000 tonnes, in the second half of 2000. This action was based on Hydro's estimation of the over-capacity of NPK in Europe, a significant part of which is in France.

Hydro also ceased potassium sulphate and hydrochloric acid production at Oberhausen in Germany at the end of 2000.

Operating income for 2000 included a reversal of accruals taken in 1999 totaling NOK 140 million. This related to estimated losses on long-term contracts for the purchase of ammonia from Tringen (Trinidad). The accruals were reversed due to the increase in the ammonia price.

Capital expenditures within Plant Nutrition were kept at a minimum, reflecting the financial position of Hydro Agri. Total capital expenditures in 2000 amounted to NOK 1,093 million, which is low from a historical perspective. A significant part of the capital expenditures related to the investment in Trevo. As of year-end 2000, Hydro anticipated that a greater percentage of capital expenditures in the foreseeable future would be made in emerging markets.

The financial situation of the farming industry in Central Europe has been difficult for several years. As a consequence, Hydro reduced activity in this region and closed down several offices.

## **Gas and Chemicals**

Gas and Chemicals markets numerous products which mainly have their origin in Hydro's ammonia and fertilizer production.

EBITDA decreased by 6 percent to a level of NOK 712 million including non-recurring items of NOK 22 million. Margins decreased by NOK 165 million offset by fixed cost improvements of an approximately equal amount. Non-recurring items related primarily to the sale of Hydro's 50 percent interest in Hydrogas-Messer, an industrial gas joint venture in Sweden, and a change in pension cost allocations. EBITDA decreased by 4 percent excluding these items.

### **Revenues and market conditions**

Operating revenues increased by 1 percent in 2000 compared to the previous year. Operating revenues increased by 4 percent in 2000 excluding the effects of the closure of nitrogen production in the United Kingdom, the divestment of Hydelko and its grain refiner production in Norway, and the transfer of part of the urea business to Plant Nutrition.

In 2000, operating revenues derived from nitrogen products increased by approximately 8 percent compared to the preceding year, primarily as a result of higher prices. Margins gradually decreased throughout the year due to the continuous increase in the cost of ammonia. Average margins were down 14 percent compared to 1999.

Hydro decided to discontinue production of potassium sulfate and hydrochloric acid in Oberhausen, Germany at the end of 2000. Remaining production together with related activities were sold at the end of the year. Exiting this business implied a reduction in annual operating revenues of NOK 240 million.

Operating revenues of industrial gases increased by 5 percent in 2000. European sales remained close to the 1999 level while carbon dioxide sales in Asia increased by 59 percent.

Oleochemicals' operating revenues increased by 18 percent in 2000 compared to the previous year due to higher prices and volumes.

### **Operating costs**

Raw material costs increased from 1999 to 2000. Ammonia and natural gas, the main raw materials for nitrogen chemicals, experienced a 50 percent price increase compared to 1999 and the price of ammonia ended the year at its highest level since January 1997. The price of urea for technical applications increased by 23 percent compared to 1999. Both urea and ammonia are primarily sourced from other Hydro units.

Hydrogas' raw material costs increased in 2000 due to the strong increase in energy prices. In terms of the year-to-year change in EBITDA, the increased raw material costs in 2000 had minimal effect since Hydro incurred additional costs in 1999 related to alternate raw material sourcing from Hydro's Sluiskil plant during the renovation of the Hydro's ammonia plant in Porsgrunn.

Logistical costs were negatively influenced by higher fuel prices as well as a less competitive overseas freight market. Fixed costs were reduced by 11 percent in 2000 compared to 1999. This improvement was attributable to divestment of non-core activities and the Hydro Agri improvement program, which streamlined operations and reduced staffing in all units. The staff reductions were completed in 2000 except for the announced sale of Oleochemicals, which was scheduled to occur in 2001. Total non-recurring items in 2000 of NOK 78 million consisted of the write-down of goodwill and assets related to carbon dioxide production in India, the sale of Hydrogas-Messer and a change in pension cost allocations. Operating costs

for 1999 included NOK 66 million related to write downs of a rare earth production facility in Norway and a hydrochloric acid recycling plant in Germany.

## **KFK**

### **Revenues and market conditions**

Operating revenues relating to grain and feed stuff activities increased by 12 percent in 2000 compared to 1999 as a result of acquisitions and increased sales from existing operations. Margins on feed compounds in the Danish and Swedish markets declined in 2000 compared with the prior year as a result of the continuing oversupply situation.

Operating revenues from fish feed activities increased by 15 percent compared to 1999. This was due to higher volumes resulting from additional capacity that came on-stream in 2000, as well as market growth. Margins in 2000 were reduced compared to the prior year due to increased competition.

### **Operating costs**

Raw material costs, representing approximately 70 percent of total operating costs, increased in 2000 compared to 1999. Energy costs increased in 2000 compared to 1999 as result of continued high oil prices. The escalating Bovine Spongiform Encephalopathy (BSE) crisis in Europe increased the price of raw materials for feed compounds. An overall increase in operating costs resulted from the acquisition of four grain and feed stuff companies, one of which was acquired in late 1999. This increase was partly offset by the divestment of a line of pet food activity.

## PETROCHEMICALS AND OTHER ACTIVITIES

### Petrochemicals

#### Revenues and Market Conditions

Petrochemicals' operating revenues in 2000 were approximately 17 percent higher than in 1999 due to higher average product prices. EBITDA was approximately 23 percent lower than in 1999. In 1999, EBITDA included gains on the sale of Mabo and Hydro Coatings in the amounts of NOK 149 and 234 million, respectively. The underlying increase in EBITDA was approximately 40 percent, mainly due to higher average product prices. This was partly offset by higher feed stock costs in the ethylene plant. A major maintenance shutdown in the ethylene, chlorine and VCM (vinyl chloride monomer) plants at Rafnes negatively affected EBITDA by approximately NOK 195 million. This was mainly attributable to the loss of revenue from the production stop, as well as the somewhat higher maintenance cost.

Global demand for PVC (polyvinyl chloride) was approximately 5 percent above demand in 1999 and approximately 8 percent above demand in 1998. The total West European consumption of PVC increased by 2 percent in 2000 versus 1999. Consumption increased in North America and Asia by 6 and 7 percent, respectively. Sales of PVC from the US to Asia were low due to weak margins, as well as higher domestic demand and relatively higher margins in the US market. Hydro did not generate any sales of VCM to Asia because of increased demand for VCM in Hydro's own production of PVC.

Hydro's average realized delivered price for S-PVC (suspension polyvinyl chloride) was 45 percent higher in 2000 than in 1999. However, the realized price for S-PVC decreased somewhat at the end of 2000, and the average price for the second half versus the first half of 2000 was 8 percent lower. The price increase in the first half of the year was mainly due to increased raw material prices (oil) in combination with higher demand in Europe for PVC, while the price decrease in the second half was due to a weakening of the global market and reduced demand in the US and Asia.

Hydro closed down its S-PVC plant in Singapore in December 1999 for economic reasons. The closed plant had a capacity of 25,000 tonnes. This reduction was offset by capacity increases at the European production plants resulting from process improvements and optimization of the product mix produced at the different plants.

Caustic soda prices were 3 percent lower in 2000 compared with 1999 due to a less favorable demand/supply situation, particularly in the first half of the year. On average, realized FOB prices for caustic soda were NOK 1,248 per tonne in 2000, compared with NOK 1,294 per tonne in 1999.

#### Operating costs

Total raw material costs for Petrochemicals were approximately 24 percent higher than in 1999. This was mainly due to increased prices for natural gas liquids (NGL).

Total fixed costs (excluding pension costs and other non-recurring costs) were reduced compared to 1999. This was mainly attributable to reduced staffing and continuously high focus on fixed costs in the organization.

## **Other Activities**

Other Activities include Seafood, Pronova, Industrial Insurance, and Technology and Projects.

EBITDA for Other Activities was substantially influenced by gains from the sale of operations. The divestment of the Hydro Seafood operation in the fourth quarter of 2000 generated a pre-tax gain of NOK 1,609 million. EBITDA for 1999 included a pre-tax gain of NOK 1,025 million on the sale of Pronova Biopolymer.

The sale of Hydro Seafood to Nutreco Holding included Seafood's operations situated outside of the UK. The sale of Hydro Seafood's British subsidiary, Golden Sea Produce Ltd. (GSP), was not sanctioned by the British competition authorities. In accordance with the agreement with Nutreco, GSP was to be sold to a third party in such a way that Hydro would receive the initial price agreed with Nutreco. The result relating to this part of the overall disposal was to be recorded upon conclusion of the sale. The expected pretax gain was NOK 340 million.

EBITDA for Corporate Activities in 2000 included earnings on the divestment of Hydro's ownership stake in Dyno which generated a profit of NOK 954 million. In addition, EBITDA was heavily influenced by a positive one-time effect relating to the change in method of allocating pension costs in the total amount of NOK 1,824 million. Earnings were also influenced by higher costs relating to the Company's new shared services' unit, Hydro Business Partner, including costs in connection with rationalization (approximately NOK 70 million for staffing reductions) and the relocation of certain services.

## **ITEM 6. DIRECTORS, SENIOR MANAGERS AND EMPLOYEES**

### **ITEM 6.A. DIRECTORS AND CORPORATE MANAGEMENT BOARD**

#### **Corporate Assembly**

In accordance with Norwegian law, the Company has established a Corporate Assembly which has a duty to exercise supervision over the Company to ensure that the objects of the Company are furthered in compliance with the law, the Company's articles of association, the resolutions of the shareholders adopted at annual general meetings and the resolutions of the Corporate Assembly itself. One of the principal functions of the Corporate Assembly is to elect and remove members of the Board of Directors. In addition, the Corporate Assembly must authorize major investments, changes in operations and major changes in the number or deployment of employees, all upon the recommendation of the Board of Directors. There is no set amount for an investment or expenditure to constitute a "major investment." Instead, that determination depends on the Company's resources and activities at the time of such investment. Currently, authorization of the Board of Directors is sought for investments of more than NOK 500 million. Accordingly, the authorization of the Corporate Assembly would be sought for investments of a greater magnitude.

The Corporate Assembly consists of 21 members. Holders of the Company's ordinary shares (including shares represented by ADSs) elect 14 members, plus four deputy members, at the annual general meeting of shareholders. The Group's Norwegian employees elect seven members, three observers and seven deputy members from among themselves. A deputy member attends a meeting of the Corporate Assembly in the event a member is unable to do so, but serves no other function. Each member of the Corporate Assembly is elected to serve for a period of two years. The terms of the 14 members elected by the Company's shareholders all begin in one year and the terms of the seven members elected by the employees all begin in the following year.

In 2001, each member or deputy member and observer of the Corporate Assembly was paid NOK 4,000 per meeting attended. The Corporate Assembly met three times in 2001. The Chairman and the Vice-Chairman of the Corporate Assembly were paid an additional NOK 65,000 and NOK 32,500, respectively, for serving in such capacities in 2001.

#### **Board of Directors**

The overall control of policy and management of Hydro is vested in the Board of Directors. The Board of Directors currently consists of nine members who are nominated and elected by the Corporate Assembly. Six Board members are elected by the shareholder representatives in the Corporate Assembly and three Board members are elected by the employee representatives in the Corporate Assembly. A four-member electoral committee of the Corporate Assembly, consisting of the Chairman of the Corporate Assembly, a member elected by the members and deputy members of the Corporate Assembly, and two members elected at the annual general meeting of the shareholders, makes recommendations as to the election of the shareholders' representatives on the Board.

For each member of the Board of Directors, there follows information regarding his or her age, the period during which the Board member has served as such, and information regarding his or her business experience outside of the Company (including directorships in other companies).

Name and Age of Director; Tenure as Director	Business Experience
Egil Myklebust, 59, Director since 1992	Mr. Myklebust assumed the position as Chairman of the Board of Directors of the Company on May 2, 2001 following his serving as President and CEO of the Company from 1991 to 2001. Prior to his serving as President and CEO, he held positions within the Company's legal department in both Norway and in the United States, including a period as Head of Corporate Secretariat. From 1987 to 1989 Mr. Myklebust held the position of General Director for both the Federation of Norwegian Employers and the Confederation of Norwegian Business and Industry (CNBI). Mr. Myklebust is currently serving as Chairman of the Board of Directors of SAS and as a member of the Board of Directors of Norske Skog ASA. Mr. Myklebust earned a Bachelor of Law degree at the University of Oslo in 1967.
Anne Cathrine Høeg Rasmussen, 65, Director since 1988	Ms. Høeg Rasmussen is a partner in the Norwegian law firm of Schjødt AS. She is also a director of K.A. Rasmussen as, Azco Nobel Car Finishes AS, Coflexip Stena Offshore AS, Technip Geoproduction Norge AS and Organon AS.
Borger A. Lenth, 64, Director since 1990	Mr. Lenth has served as the Deputy Chairman of the Board of Directors of the Company since May 2, 2001. Mr. Lenth was previously CEO of Christiania Bank and Kreditkasse from 1991 to 1997. He is also Chairman of the Board of Directors of Treschow Fritzøe ASA and BnBank ASA.
Ingvild Myhre, 44, Director since 2001	Ms. Myhre is the President and CEO of Telenor Mobil AS. She is also the Deputy Chairman of the Norwegian Defense Research Establishment, a director of the Board on Power and Democracy and the Board of the Research Park in Narvik, a director on the Board of Sonofon (in Denmark), and a director on the Board of the Norwegian Business Daily.
Gudmund Per Olsen, 43, Director since 1999	Mr. Olsen is employed by the Company as a principal engineer in the Exploration and Production segment.
Elisabeth Grieg, 42, Director since 2001	Ms. Grieg is the co-owner of the Grieg Group and the CEO of Grieg International AS. She is also a member of the Board of the Norwegian Shipowners' Association and of the Corporate Assembly in Orkla AS.
Odd Semstrøm, 57, Director since 1997	Mr. Semstrøm is employed as an operator at the Company's aluminum plant in Årdal.
Håkan Mogren, 57, Director since 2001	Dr. Mogren is the Chairman of Reckitt Benckiser plc. He is also the Deputy Chairman of Gambro AB and AstraZeneca PLC. He also serves as a director of Investor AB.
Per Wold, 59, Director since 1990	Mr. Wold represents the employee's union and is located at the industrial plant in Herøya, Porsgrunn.

## Corporate Management Board

The following table reflects information concerning each member of Hydro's Corporate Management Board, as of February 26, 2002, including his or her age and position, and brief background information regarding his or her business experience.

Name, Age and Position	Business Experience
<p>Eivind Reiten, 48, President and Chief Executive Officer</p>	<p>Eivind Reiten succeeded Egil Myklebust as President and CEO of the Company effective May 2, 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. Mr. Reiten served as President of Hydro Aluminium Metal Products from 1996 to 1998. This followed four years as President of Hydro's Refining and Marketing Division from 1992 to 1996. From 1991 to 1992 Mr. Reiten held the position of Senior Vice President, Special Projects, after a period as Minister of Petroleum and Energy for the Norwegian government from 1990 to 1991. Mr. Reiten held the position of President of the Energy Division from 1988 to 1990 following a two-year period as manager, and later, Vice President for Hydro Agri. During the seven-year period from 1979 to 1986, Mr. Reiten held several governmental posts including Junior Executive Office, Ministry of Fisheries, and Secretary to the Center Party's Parliamentary Group, State Secretary, Ministry of Finance and Minister of Fisheries. Mr. Reiten graduated from the University of Oslo with a degree in Economics in 1978.</p>
<p>Thorleif Enger, 58, Executive Vice President</p>	<p>Thorleif Enger has served as Executive Vice President for Hydro's Agri business area since 1997. Prior to that, he served as President of Hydro's Exploration &amp; Production Division from 1987 to 1996. Mr. Enger also was the Project Director of the Oseberg field for four years (1982 to 1986), following various positions with Hydro's Engineering and Exploration &amp; Production Divisions beginning in 1973. This followed several years as a senior research engineer for the Shell Development Company in the United States. Mr. Enger was educated at the University of Colorado in the United States, receiving bachelors, masters and doctorate degrees in the areas of engineering and structural mechanics.</p>
<p>Leiv Lea Nergaard, 57, Executive Vice President and Chief Financial Officer*</p>	<p>Leiv Lea Nergaard was the Executive Vice President and Chief Financial Officer of Hydro until March 1, 2002. He served in this position since 1988. From 1987 to 1988 he served as Vice President for Corporate Strategy and Control following his serving as Vice President for Financial Planning and Control, Corporate Staff (1984 to 1987). Mr. Nergaard also served as a General Manager at Hydro's fertilizer factory in Notodden, Norway from 1980 to 1984 and has eleven years' experience with Hydro's Aluminium Division from 1969 to 1980. Mr. Nergaard was educated at the Norwegian School of Economics and Business Administration.</p>

<p>John Ove Ottestad, 52, Executive Vice President and Chief Financial Officer*</p>	<p>John Ove Ottestad was appointed Executive Vice President and Chief Financial Officer for Hydro, effective March 1, 2002. Prior to this appointment, he 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). This followed eight years of serving in various corporate staff functions (e.g., financial planning and strategy) from 1977 to 1985 and two years experience as an engineer within Hydro's Oil and Gas Division from 1975 to 1977. Mr. Ottestad also served two years as an EDP scientist with the Norwegian Research Foundation, SINTEF. Mr. Ottestad graduated with a degree in Physics from the Norwegian Institute of Technology.</p>
<p>Alexandra Bech, 36, Executive Vice President</p>	<p>Alexandra Bech was appointed Executive Vice President as of January 15, 2002, after serving as Senior Vice President of Corporate Human Resources since 2000. Ms. Bech joined Hydro in New York in 1993 as the legal counsel for Hydro's US subsidiaries. Since then, she has served as Company Secretary and as Vice President of Strategy and Organization in Hydro's Automotive Structures division. Ms. Bech holds a Bachelor of Law degree from the University of Oslo and a Diploma in Legal Studies from Oxford University. She is admitted to the bar in the State of New York, US.</p>
<p>Tore Torvund, 49, Executive Vice President</p>	<p>Tore Torvund has served as Executive Vice President for Hydro's Oil and Energy area since 1997. Prior to this position, he served as Senior Vice President - Operations, in Hydro's Exploration and Production (E&amp;P) division from 1992 to 1997. During the period from 1982 to 1992, Mr. Torvund held several management positions within the E&amp;P division relating to drilling operations, field development and technology projects. From 1977 to 1982 Mr. Torvund worked with Elf Aquitaine on the Petronord study in France and the FRIGG development project in Norway. From 1976 to 1977 he worked as a reservoir engineer for the E&amp;P division in Norway. Mr. Torvund graduated with a degree in Petroleum Technology from the Norwegian Institute of Technology in 1976.</p>
<p>Jon-Harald Nilsen, 50, Executive Vice President</p>	<p>Jon-Harald Nilsen has served as Executive Vice President for Hydro since February 15, 2001. Prior to this position, he 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 the Market/Product Director for Hydro and held various managerial positions in financial planning and control for the Oseberg project, financial and market projects, and as an Assistant Export Manager for Bergensmeieriet from 1975 to 1985. Mr. Nilsen graduated from the Norwegian School of Economics and Business Administration in 1975.</p>

\* Leiv Lea Nergaard served as the Company's Executive Vice President and Chief Financial Officer and remained on the Corporate Management Board until March 1, 2002. John Ove Ottestad assumed this position on March 1, 2002.

No member of the Board of Directors or the Corporate Management Board has any family relationship with any other director or member of Corporate Management Board.

## ITEM 6.B. COMPENSATION

### Director Compensation Arrangements

#### *Compensation for Employee Directors*

Members of the Board of Directors who are also employees of the Company (or any subsidiary of the Company) received NOK 200,000 in additional compensation in 2001 for serving on the Board in addition to their normal salaries. In May 2001, Egil Myklebust retired as President and assumed the position as Chairman of the Board of Directors of the Company as of May 2, 2001. Mr. Myklebust received received NOK 288,750 for serving as Chairman of the Board from May 2, 2001 and his salary was reduced accordingly.

#### *General Compensation Rules for Non-Employee Directors*

Directors who are not employees of the Company or any subsidiary of the Company ("non-employee directors") received NOK 200,000 in compensation in 2001 and the Deputy Chairman received NOK 300,000.

### Compensation of Chief Executive Officer

The President received salary and other benefits, inclusive of remuneration as a member of the Board of Directors, of NOK 3,935,000 in 2001. In May 2001, Egil Myklebust retired as President but continued to be employed by the Company and, accordingly, forfeited the right to receive severance pay. In May 2001, Eivind Reiten assumed the position as President and CEO, but was not made a member of the Board.

Remuneration to the President includes remuneration to Egil Myklebust as member of the Board for 2000 and for the first four months of 2001.

### Grants of Stock Options in Last Fiscal Year

Senior officers and other key employees are eligible to participate in the Company's stock-based compensation plans, the 1999 Plan and the Executive Share Option Plan 2001 (the "**2001 Plan**"), both of which are intended to provide incentives to plan participants by providing them with opportunities to purchase ordinary shares of the Company's stock pursuant to options granted under the plans. The plans are administered by the Board of Directors and its sub-committee, the Compensation Committee. The Board and the Compensation Committee have the exclusive right 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.

During 1999, the Board granted to eligible participants in the 1999 Plan options exercisable for an aggregate of 165,000 ordinary shares at an exercise price of NOK 367.50 per share. Under the 1999 Plan, options are exercisable over the two-year period from January 1, 2001 to December 31, 2002. As of December 31, 2001, options exercisable for 161,500 ordinary shares were outstanding and remained exercisable under the 1999 Plan; options for 3,500 ordinary shares were exercised in 2001.

The 2001 Plan covers approximately 30 people in the Company's top management, including the President and CEO and members of the Corporate Management Board. During 2001, the Board granted to eligible participants in the 2001 Plan options exercisable for an aggregate of 92,000 ordinary shares at an exercise price of NOK 390.40 per share, as follows:

<u>Recipient</u>	<u>Number of Ordinary Shares Underlying Option Grants</u>
President and CEO	10,000
Other members of the Corporate Management Board	7,000
Other participants in top management	2,000 - 3,500

The options' vesting schedule is tied to shareholder return, as defined in the Plan, calculated over a three-year performance period beginning in May 2001. If shareholder return is less than 12%, none of the options vest. If the shareholder return achieved is between 12% and 20%, the corresponding percentage of options that vest increases linearly between 20% and 100%. The options are exercisable for two years following the three-year performance period. None of the options vested in 2001.

All the shares authorized for both the 1999 Plan and the 2001 Plan have been granted. For further information, see **Note 4 to the Consolidated Financial Statements**.

## **ITEM 6.C. BOARD PRACTICES**

See the table above under **Item 6A. "Directors and Corporate Management Board - Board of Directors"** for the period during which each Board member has served as such. Board members are elected for a two-year period.

Non-employee directors have no other service contractual agreements with the Company outside of the agreement governing their responsibilities as Board members. Employee directors have no other service contractual agreements with the Company outside of their employee contracts and the agreement governing their responsibilities as Board members.

### **Committees of the Board of Directors**

**Compensation Committee.** On October 12, 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 Compensation Committee currently consist of three members: Egil Myklebust, Ingvild Myhre, and Anne Cathrine Høeg Rasmussen. The members of the Compensation Committee are to serve in such capacity for two years, 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 Chief Executive Officer and other members of senior management;
- \* prepare and recommend to the Board proposals for compensation for the Chief Executive Officer, including base salary adjustments, awards under incentive plans and other benefits;
- \* review and advise the 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.

**Audit Committee.** On November 1, 2001, the Board of Directors constituted the Audit Committee, to consist of three members of the Board of Directors appointed by the entire Board and one additional member appointed by the employee representatives of the Board. The Audit Committee currently consists of four members: Borger A. Lenth, Elisabeth Grieg, Egil Myklebust and Gudmund Per Olsen. The Audit Committee oversees Hydro's internal audit, external audit and risk management activities.

## **ITEM 6.D. EMPLOYEES**

As of December 31, 2001, the Group employed approximately 35,600 people, compared with approximately 38,200 people in 2000 and 37,900 people in 1999. Approximately 20,000 of the Group's

employees were located outside Norway as of December 31, 2001, compared to approximately 22,000 at the end of 2000 and 20,200 at the end of 1999.

The number of people employed in each segment as of December 31, 2001 is as follows:

<b>Business Segment</b>	<b>Number of Employees</b>
Exploration & Production	2,724
Energy	438
Oil Marketing	240
Aluminum Metal Products	3,707
Aluminum Extrusion	8,839
Other Light Metals	3,698
Plant Nutrition	6,584
Gas and Chemicals	1,257
KFK	2,024
Other	6,100

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. Generally, Hydro seeks to achieve terms of employment comparable to that negotiated with the Norwegian employee organizations.

## ITEM 6.E. SHARE OWNERSHIP

The following table sets forth the beneficial ownership of ordinary shares as of February 26, 2002 by (i) each director and member of senior management, and (ii) all directors and members of Corporate Management Board of the Company as a group.

<b>Name of Beneficial Owner</b>	<b>Shares Beneficially Owned</b>
Egil Myklebust	3,715
Anne Cathrine Høeg Rasmussen	1,014
Borger A. Lenth	144
Gudmund Per Olsen	762
Odd Semstrøm	46
Per Wold	829
Thorleif Enger	15,809
Eivind Reiten	4,758
Tore Torvund	474
Alexandra Bech <sup>1)</sup>	593
John Ove Ottestad <sup>2)</sup>	8,155
Jon-Harald Nilsen	187
All directors and members of Corporate Management Board as a group (consisting of 15 persons) <sup>3)</sup>	36,486

<sup>1)</sup> Executive Vice President as of January 15, 2002

<sup>2)</sup> Executive Vice President and Chief Financial Officer as of March 1, 2002

<sup>3)</sup> Leiv Lea Nergaard who served as the Company's Executive Vice President and Chief Financial Officer and, remained on the Corporate Management Board until March 1, 2002 and had 12,679 shares as of February 26, 2002.

The total number of issued and outstanding ordinary shares of the Company as of December 31, 2001 was 257,634,172.

## Option Ownership

The following table sets forth the beneficial ownership of options to acquire ordinary shares as of February 26, 2002 by (i) each director and member of Corporate Management Board, and (ii) all directors and members of Corporate Management Board of the Company as a group.

Name	Number of Ordinary Shares Underlying Options Granted (#)		Exercise Price (NOK/Sh)		Expiration Date	
	1999	2001	1999	2001	1999	2001
	Eivind Reiten <sup>1)</sup>	7,000	10,000	367.50	390.40	December 31, 2002
Egil Myklebust	10,000	-	367.50	-	December 31, 2002	April 30, 2006
Thorleif Enger	7,000	7,000	367.50	390.40	December 31, 2002	April 30, 2006
Leiv Lea Nergaard <sup>2)</sup>	7,000	7,000	367.50	390.40	December 31, 2002	April 30, 2006
Jon-Harald Nilsen	3,000	7,000	367.50	390.40	December 31, 2002	April 30, 2006
Tore Torvund	7,000	7,000	367.50	390.40	December 31, 2002	April 30, 2006
Alexandra Bech	-	2,000	-	390.40	-	April 30, 2006
John Ove Ottestad <sup>3)</sup>	3,000	2,000	367.50	390.40	December 31, 2002	April 30, 2006
All directors and members of Corporate Management Board as a group (consisting of 15 persons) <sup>4)</sup>	44,000	42,000				

<sup>1)</sup> Eivind Reiten exercised 3,500 options that were granted in 1999 during 2001.

<sup>2)</sup> Leiv Lea Nergaard served as the Company's Executive Vice President and Chief Financial Officer and remained on the Corporate Management Board until March 1, 2002. John Ove Ottestad assumed the position as Executive Vice President and Chief Financial Officer on March 1, 2002.

<sup>3)</sup> Executive Vice President and Chief Financial Officer as of March 1, 2002

<sup>4)</sup> No other members of the Board had any options outstanding as of February 26, 2002. The options reflected in the above table were granted in 1999 and 2001.

## 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% of the Company's ordinary shares. As of February 26, 2002, the Kingdom owned 116,832,770 ordinary shares, representing 45.3% of the total number of ordinary shares issued and outstanding as of such date. There are no different voting rights associated with the ordinary shares held by the Kingdom.

The Kingdom acquired most of its interest in the Company in 1945. From that time and until July 1999, the Kingdom owned 51% 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. See **Note 2 to the Consolidated Financial Statements**.

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 Hydro.

As of February 26, 2002, Morgan Guaranty Trust Company of New York, as depositary of the ADSs, through its nominee company, Morgan Guaranty Nominees Limited, held interests in 16,704,701 ordinary shares (approximately 6.5 percent of the issued and outstanding ordinary shares as of such date) on behalf of approximately 651 registered holders of American depositary receipts ("ADRs"), evidencing ADSs. There were 285 holders of ordinary shares with addresses in the United States (not including the Depositary) as of the same date. These shareholders held 14,769,048 ordinary shares, equal to approximately 5.7 percent of the issued and outstanding ordinary shares.

## **ITEM 7.B. RELATED PARTY TRANSACTIONS**

### **Loans to Related Parties**

The following table sets forth information regarding loans extended by the Company to members of the Board of Directors and the Company's Corporate Management Board including (i) the largest amount outstanding since December 31, 2001, (ii) the nature of the loan, and (iii) the interest rate on the loan:

<b>Name of Loan Recipient</b>	<b>Largest Amount Outstanding since December 31, 2001 in thousands of NOK</b>	<b>Nature of Loan</b>	<b>Interest Rate</b>
Gudmund Per Olsen	51	General purpose*	7.0%
Odd Senstrøm	20	General purpose	7.0%
Egil Myklebust	4,624	Mortgage and general purpose	6.0-6.5%
Thorleif Enger	755	General purpose	7.0%
Leiv Lea Nergaard	365	General purpose	6.5-7.0%
Tore Torvund	457	General purpose	7.0%
Jon-Harald Nilsen	267	General purpose	7.0%

\* Includes interest-free loans for the purchase of the Company's ordinary shares.

## **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 Company's consolidated financial statements as of and for the year ended December 31, 2001 and the related notes thereto are incorporated by reference to pages 66 through 68, 71 through 102 and 110 of the Company's 2001 annual report to shareholders. Such financial statements, including the notes thereto, have been filed as an exhibit to this Annual Report on Form 20-F in accordance with applicable rules under the Exchange Act.

Reference is made to **Item 19. "Financial Statements and Exhibits"** for a list of all financial statements incorporated herein by reference.

#### **Export Sales**

See **Note 5 to the Consolidated Financial Statements** and the table on page 84 in the Company's 2001 annual report to shareholders listing the operating revenues by country of customer for export sales information.

#### **Legal Proceedings**

In 2001, the European Union competition authorities issued a "statement of objections" to Hydro and all other gas producers on the Norwegian Continental Shelf. The authorities claimed that the joint sale of natural gas by producers on the Norwegian Continental Shelf, through the Gas Negotiating Committee (GNC), contravenes EU legislation related to competition. Hydro, together with all of the other companies affected, is vigorously opposing the claims of the EU authorities. Hydro has responded to the statement of objections, pointing out that the sale of Norwegian gas was not voluntary, but was conducted in accordance with the Norwegian governmental authorities' regulations, and that the case against Hydro should therefore be dismissed. The Norwegian government supports this position.

The EU's competition authorities have threatened to impose sanctions against Hydro and the other gas producers on the NCS for past conduct, including the imposition of fines. EU legislation would limit any fine to a maximum of 10 percent of a company's total worldwide turnover in 2001. In addition, the authorities have warned that the EU would like to see the elimination of provisions, deemed to have restrictive effects, within existing contracts entered into under the GNC system. If Hydro is found to have violated EU legislation, the other parties to the gas sales contracts negotiated by the GNC could, in accordance with Norwegian law, challenge the validity of such contracts and claim damages for any loss they can prove to have suffered based on general principles of tort. At this time, no prediction can be made as to the outcome of these proceedings, including the financial exposure associated with potential remedies should Hydro be subject to an adverse decision by the EC and the European Court of Justice.

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 the long-term return to shareholders should reflect the added value created by the Group. This is expressed partly by dividends paid and partly by the long-term increase in the price of the ordinary shares. The Board's policy is that dividends paid should increase steadily in line with the growth of Hydro's profits. In determining the dividend, the need to maintain financial strength and flexibility is also considered, as well the possibilities for growth through new investments. Over time, the total return to shareholders should accrue to a greater extent from the increase in the price of the ordinary shares

than from dividends received. The Board of Directors considers it appropriate that the dividend over several years should average around 30 percent of the Group'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.

**ITEM 8.B. SIGNIFICANT CHANGES**

There have been no significant changes in Hydro's results of operations, financial condition or business prospects since December 31, 2001, other than any changes in Hydro's business prospects that may be associated with the acquisition of VAW Aluminium AG.

## 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 - Composite Tape.

#### Five Most Recent Fiscal Years

Year	Oslo Stock Exchange		New York Stock Exchange	
	High (in NOK)	Low (in NOK)	High (in U.S. Dollars)	Low (in U.S. Dollars)
1997	440.00	315.00	61 1/4	45 5/8
1998	391.00	227.00	51 3/4	30 1/2
1999	371.00	245.00	46 5/8	32 3/4
2000	415.00	296.50	45 3/8	35 1/2
2001	404.00	310.00	44.90	35.00

#### Quarterly Data for Two Most Recent Fiscal Years

Quarterly Period	Oslo Stock Exchange		New York Stock Exchange	
	High (in NOK)	Low (in NOK)	High (in U.S. Dollars)	Low (in U.S. Dollars)
First quarter 2000	367.00	296.50	45 3/8	35 1/2
Second quarter 2000	366.00	308.00	42 1/4	35 5/8
Third quarter 2000	415.00	340.00	44 1/2	38 7/8
Fourth quarter 2000	404.00	343.00	43 1/4	38 3/8
First quarter 2001	400.00	359.00	44.90	39.99
Second quarter 2001	404.00	367.00	43.55	40.50
Third quarter 2001	399.50	310.00	43.90	35.68
Fourth quarter 2001	378.00	310.50	42.00	35.00

#### Most Recent Six Months

Month	Oslo Stock Exchange		New York Stock Exchange	
	High (in NOK)	Low (in NOK)	High (in U.S. Dollars)	Low (in U.S. Dollars)
September 2001	393.00	310.00	43.60	35.68
October 2001	349.00	310.50	38.90	35.00
November 2001	356.00	331.00	39.91	37.82
December 2001	378.00	344.00	42.00	39.10
January 2002	395.00	386.00	44.29	44.00
February 2002	382.00	379.00	42.55	42.45

There were 285 holders of Hydro's ordinary shares with addresses in the United States (not including the Depository) as of February 26, 2002. These shareholders held 14,769,048 ordinary shares, equal to approximately 5.7 percent of the outstanding ordinary shares. As of February 26, 2002, a total of 16,704,701 ADSs (representing approximately 6.5 percent of the total ordinary shares outstanding) were held by approximately 651 registered 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, Amsterdam, Basel, Düsseldorf, Frankfurt, Geneva, Hamburg, London, Paris, Stockholm and, Zürich and London. The 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 Company's 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 Company's 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.

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. In addition, if shareholders have exempted such persons from liability or decided not to hold such persons liable for a certain matter, shareholders representing at least ten percent of the share capital or, if there are at least 100 shareholders, more than ten percent of the total number of shareholders can raise 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 not to hold such persons liable was adopted by the same majority of shareholders as required to amend the Company's articles of association (see the discussion under "Voting Rights" below), that decision is binding on the minority shareholders.

Neither Norwegian law nor the Company's articles of association contain 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 of the Company and applicable Norwegian law (including the Norwegian Public Limited Companies Act) in effect as of the date of this annual report.

### ***General***

The authorized share capital of the Company consists of one class of shares: 266,596,650 ordinary shares, nominal value NOK 20 per share, of which 257,634,172 ordinary shares were outstanding as of December 31, 2001. All outstanding ordinary shares are validly issued, fully paid and nonassessable.

### ***The VPS System***

The ordinary shares are registered in the Norwegian *Verdipapirsentralen* (the Norwegian Registry of Securities), referred to as the VPS. The VPS, established in 1986, is a certificate-less securities registry system created by an act of the Norwegian Parliament. In general terms, the VPS is a computerized bookkeeping system operated by an independent institution in which the ownership of, and all transactions related to, Norwegian-listed equity securities must be recorded. The Company's share register has been transferred to the VPS, and the Company's ordinary shares are registered in the VPS in accordance with Section 4 of the Company's articles of association.

All transactions related to securities registered with the VPS are handled through computerized book entries. The VPS confirms each entry by sending a transcript to the registered shareholder regardless of beneficial ownership. In order to effect such entries, the individual security holder must establish a securities account or accounts with one or more Norwegian account agents. Norwegian banks, the Bank of Norway, authorized securities brokers in Norway, bond issuing mortgage companies, unit trust managing companies, and Norwegian branches of credit institutions established within the European Economic Area are allowed to act as account agents. 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 suffered as a result of faulty registration or the amending or deletion of rights in respect of registered securities except in the event of contributory negligence on the part of the aggrieved party, in which case compensation owed by the VPS may be reduced.

A transferee or assignee of the Company's ordinary shares may not exercise the rights of a shareholder with respect to such shares unless the transferee or assignee has registered its shareholding or has reported and shown evidence of the share acquisition and the share acquisition is not prohibited by applicable Norwegian law or the Company's articles of association.

### ***Shareholder Meetings***

Under 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 Company's articles of association, the following business must be transacted at the annual general meeting:

approving the annual accounts and annual report for the prior fiscal year, including the distribution of dividends;

electing the shareholders' members and deputy members to the Corporate Assembly (if subject to election at the annual general meeting); and

dealing with any other matters listed in the notice convening the annual general 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 five percent or more 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 Company's articles of association provide 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 Company's articles of association. Under Section 10 of the Company's 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***

Holders of the Company's ordinary shares (other than the Company itself or any of its subsidiaries) 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 deemed elected.

Certain actions, including resolutions to:

- \* amend the Company's articles of association;
- \* approve a merger or demerger;
- \* increase or reduce the Company's share capital; or
- \* waive preemptive rights in connection with an increase in share capital

must be approved by at least two-thirds of the votes cast at the general meeting at which such amendment is considered and at least two-thirds of the share capital represented at such meeting.

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.

Under Norwegian law, the amount of any dividend distribution with respect to any fiscal year is limited to the profit for that year (determined in accordance with the approved profit and loss account for that year) and other equity, after deduction of:

- \* uncovered losses (i.e., losses from a prior year or years that could not be covered because of insufficient distributable equity);
- \* the capitalized costs of research and development, goodwill and the net deferred tax benefits reflected in the balance sheet for that year; and
- \* that part of the profit for the year which, by law or in accordance with the Company's articles of association, must be allocated to undistributable reserve or cannot be distributed as a dividend.

With respect to any license or entity in which the Company has an investment valued using proportionate consolidation or the equity method, the difference between the Company's share of the earnings of the license or entity recognized and the dividend received from such license or entity is allocated to the reserve for valuation variances. The reserve for valuation variances constitutes undistributable equity, and may not be distributed either as a dividend or as a distribution in connection with a reduction in capital.

Norwegian law does not permit the payment of dividends based on interim results of operations.

In accordance with Norwegian law, the Company cannot distribute any dividend if the equity, according to the balance sheet, amounts to less than 10 percent of the Company's total assets without following a creditor notice procedure for a reduction of the share capital. Further, no dividend may be distributed in any circumstance which exceeds an amount that is compatible with prudent and sound business practice and with due consideration of any loss that may have been incurred, or is expected to be incurred, after the balance sheet date.

Dividends have usually been mailed by the Company to shareholders entitled to such dividends approximately five to six weeks after they have been approved at the annual general meeting.

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 Depository.

### ***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 Depository and The Depository 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.

Effective January 1, 1995, legislation harmonizing laws in Norway with EU requirements eliminated restrictions on foreign ownership in Norwegian companies. Persons or entities, regardless of nationality, are required to notify the Ministry of Industry and Energy of the acquisition of shares, other ownership interests or voting rights in a Norwegian company (if that has company more than 50 employees, gross sales of more than NOK 50 million per year, or has received public funding for a project in excess of NOK 5 million) if

such acquisition results in the acquirer's ownership interest or voting rights in the company exceeding one-third, one-half or two-thirds of the total ownership interest or voting rights in that company. In such event, the Ministry may review the acquisition and may refuse to approve the acquisition if it has significant negative implications for the company, the relevant industry or society in general, or the Ministry may approve it subject to certain conditions.

### ***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 Company's 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 Preemptive Rights***

All issuances of ordinary shares by the Company, including bonus issues (share dividends), require an amendment of the Company's articles of association (which specifies the Company's share capital) and, thus, shareholder approval.

Holders of the Company's ordinary shares have preemptive rights to acquire or subscribe for additional ordinary shares to be issued for cash. Such rights may be waived by a resolution at a general meeting by the same vote as required to approve an amendment to the Company's articles of association. Shareholders, by the same majority as required for an amendment to the Company's articles of association, may also grant the Board of Directors a power of attorney to increase the share capital by a new subscription for shares, such power of attorney to specify, among other things, the amount by which the share capital may be increased, the term of the power of attorney, and whether or not shareholders are to have preemptive rights with respect to such share capital increase.

Shareholders' preemptive 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 preemptive rights (or not all shareholders exercise such rights in full), shareholders who have exercised their preemptive 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 preemptive rights have been exercised. Under Norwegian law, preemptive rights cannot be set aside in the Company's 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% of the increase for holders of the 83 unredeemed founder certificates, and
- \* 2.79% 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 Company's 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 stock repurchase plan by the company;
- \* 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.

### ***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 its shares or exercise any rights of share ownership unless a majority of the remaining shareholders approve, other than the right to receive dividends and preferential rights in the event of an increase in share capital. 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. Upon effecting the compulsory acquisition, the majority shareholder must offer the minority shareholders a specific price per share. 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.

### **Description of American Depositary Receipts**

The following is a summary of certain provisions of the Amended and Restated Deposit Agreement, dated as of October 1, 1987, as amended by Amendment No. 1 thereto, dated May 27, 1999 (the Amended and Restated Deposit Agreement, as so amended, being referred to as the “**Deposit Agreement**”), among the Company, Morgan Guaranty Trust Company of New York, as depositary (the “**Depositary**”) and holders from time to time of the American depositary receipts (“**ADRs**”) issued by the Depositary thereunder. 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.

The summary does not purport to be complete and is qualified in its entirety by reference to 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 Depositary (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 Depositary 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 Depositary’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 Depositary and any taxes or other fees or charges owing, the Depositary 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 Depositary's Office.

The Depositary 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 Depositary'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 Depositary, 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 Depositary 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 Depositary; provided, however, that the Depositary 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, combination or surrender of any ADR or transfer and withdrawal of ordinary shares, the Depositary or the Custodian may require payment from the presenter of 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 the ADR or ordinary shares and payment of any applicable fees payable by the holders of ADRs. The Depositary may refuse to deliver ADRs, 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 Depositary or the Custodian. The delivery, transfer and surrender of ADRs generally may be suspended during any period when the transfer books of the Depositary are closed, or if any such action is deemed necessary or advisable by the Depositary 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 any 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 Depositary's Office for the purpose of withdrawal of the ordinary shares represented thereby, together with all securities, property and cash received by the Depositary 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 Depositary'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 Depositary's discretion, the Depositary 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 Depositary.

Under the terms of the Deposit Agreement, the Depositary may refuse or suspend the surrender of outstanding ADRs only in connection with:

- \* temporary delays caused by closing the transfer books of the Depositary or the Company or 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 Depositary 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 Depositary receives any cash dividend or other cash distribution by the Company on any Deposited Securities, the Depositary 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 Depositary on account of taxes or other governmental charges and reasonable and customary expenses incurred by the Depositary, if any, in the conversion of currency.

The Depositary 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 Depositary (without liability for interest thereon) and added to the next sum received by the Depositary for distribution to holders of then outstanding ADRs.

If the Depositary receives any currency other than US dollars, the Depositary 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 Depositary 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 Depositary), the Depositary 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 Depositary 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, shall become payable or any distribution other than cash shall be made, or rights shall be issued, with respect to the Deposited Securities, or whenever the Depositary shall receive 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 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 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 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 furnished by the Company to the Custodian of shareholder meetings (or adjournments thereof), 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 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 ADR holders 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 ADRs (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 therein.

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. Hydro is of the view that, with the exception of the Share Purchase Agreement, dated January 6, 2002, entered into in connection with the acquisition of VAW Aluminium AG (a copy of which has been filed as an exhibit to this Form 20-F), all material contracts entered into by the Company or any member of the Group during this time period have been entered into in the ordinary course of business. A summary of the principal terms of the VAW acquisition, as reflected in the Share Purchase Agreement, is provided in **Item 4.B. Business Overview - Light Metals of this Annual Report**.

## ITEM 10.D. EXCHANGE CONTROLS

Under Norwegian foreign exchange controls currently in effect, transfers of capital to and from Norway are not subject to prior government approval except for the physical transfer of payments in currency, which is restricted to licensed banks. Thus, non-Norwegian resident shareholders may receive dividend payments without a Norwegian exchange control consent, but such payments must be made through a licensed bank.

## ITEM 10.E. TAXATION

The following summary outlines certain United States federal income tax consequences in connection with the acquisition, ownership and disposition of the Company's ordinary shares or ADSs. It applies to holders of ordinary shares or ADSs that hold the same as capital assets for tax purposes. This section does not apply to certain 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 organizations, 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 section is based on the Internal Revenue Code of 1986, as amended, 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 laws are subject to change, possibly on a retroactive basis. In addition, this section 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 he 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 United States court 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 United States person for United States federal income tax purposes.

You should consult your own tax advisor regarding the United States 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 United States 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. Exchanges of ordinary shares for ADSs, and ADSs for shares, generally will not be subject to United States federal income tax.

### *Taxation of Dividends*

Dividends distributed are subject to taxation in Norway as general income at a flat rate, currently 28 percent. A non-Norwegian shareholder is subject to a withholding tax at a rate of 25 percent on dividends distributed by Norwegian companies, unless the shareholder is carrying on business activities in Norway and such shares are effectively connected to such activities. The withholding tax of 25 percent is normally lower according to tax treaties between Norway and the country in which the shareholder is resident. The Treaty

rate is 15 percent. The 15 percent withholding rate under the Treaty will apply to dividends paid on shares held directly by U.S. holders.

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 the gross amount of any dividend paid by the Company out of its current or accumulated earnings and profits (as determined for United States federal income tax purposes). You must include any Norwegian tax withheld from the dividend payment in this gross amount even though you do not, in fact, receive the amount withheld as tax. The dividend is ordinary income that you must include 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.

The amount of the dividend distribution that you must include in your income as a U.S. holder will be 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 in excess of 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 in excess of your tax basis, 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 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 and 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 20 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, and the gain is 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, or (ii) 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 stock 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.

In general, if you are a U.S. holder, the Company will be a PFIC with respect to you if for any taxable year in which you hold the Company’s ordinary shares or ADSs: (i) at least 75 percent of the Company’s gross income for the taxable year is passive income, or (ii) at least 50 percent of the value, determined on the basis of a quarterly average, of the Company’s assets is attributable to assets that produce or are held for the production of passive income.

Passive income generally includes dividends, interest, royalties, rents (other than certain rents and royalties derived from the active conduct of a trade or business), annuities and gains from assets that produce passive income. If a foreign corporation owns at least 25 percent by value of the stock of another corporation, the foreign corporation is treated for purposes of the PFIC tests as owning its proportionate share of the assets of the other corporation, and as receiving directly its proportionate share of the other corporation’s income.

If the Company is treated as a PFIC, and you are a U.S. holder that did not make a QEF election or a mark-to-market election, as described below, you will be subject to special rules with respect to: (i) any gain you realize on the sale or other disposition of your ordinary shares or ADSs and (ii) any excess distribution that the Company makes to you (generally, any distributions to you during a single taxable year that are greater than 125 percent of the average annual distributions received by you in respect of the shares or ADSs during the three preceding taxable years or, if shorter, your holding period for the ordinary shares or ADSs).

Under these rules, the gain or excess distribution will be allocated ratably over your holding period for the ordinary shares or ADSs, the amount allocated to the taxable year in which you realized gain or excess distribution will be taxed as ordinary income, the amount allocated to each prior year, with certain exceptions, will be taxed at the highest tax rate in effect for that year, and the interest charge generally applicable to underpayments of tax will be imposed in respect of the tax attributable to each such year.

Special rules apply for calculating the amount of the foreign tax credit with respect to excess distributions by a PFIC or, in certain cases, QEF inclusions.

The special PFIC tax rules described above will not apply to you if you have made or make a mark-to-market election. In that case, you will generally include as ordinary income each year the excess, if any, of the fair market value of your ordinary shares or ADSs at the end of the taxable year over your adjusted basis in your ordinary shares or ADSs. You will also be allowed to take an ordinary loss in respect of the excess, if any, of the adjusted basis of your ordinary shares or ADSs over their fair market value at the end

of the taxable year (but only to the extent of the net amount of previously included income as a result of the mark-to-market election). Your basis in the ordinary shares or ADSs will be adjusted to reflect any such income or loss amounts.

The special PFIC tax rules will also not apply if you elect to have the Company treated as a qualified electing fund, or QEF, and the Company provides certain required information to you. The Company has made no determination, if it were to become a PFIC, whether it would provide U.S. holders with the information that is required to make a QEF election effective. If you are a U.S. holder that makes an effective QEF election, you will be currently taxable on your *pro rata* share of the Company's ordinary earnings and net capital gain, at ordinary income and capital gain rates, respectively, for each of the Company's taxable years regardless of whether or not you receive distributions. Your basis in the ordinary shares or ADSs will be increased to reflect taxed but undistributed income. Distributions of income that had been taxed previously will result in a corresponding reduction of basis in your ordinary shares or ADSs and will not be taxed again as a distribution to you.

If you are a U.S. holder and you own shares or ADSs during any year that the Company is a PFIC, you must file Internal Revenue Service Form 8621.

### ***Backup Withholding and Information Reporting***

Dividend payments, or other taxable distributions, made within the United States to you generally will be subject to information reporting requirements and backup withholding tax at a rate of 30 percent if you are a non-corporate United States person and you (i) fail to provide an accurate taxpayer identification number, (ii) are notified by the Internal Revenue Service that you have failed to report all interest or dividends required to be shown on your federal income tax returns, or (iii) in certain circumstances, fail 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 Internal Revenue Service 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 that you are a non-U.S. person, under penalties of perjury, 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, United States 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 United States 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 United States trade or business,

unless the broker has documentary evidence in its records that you are a non-United States 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 amounts withheld under the backup withholding rules that exceed your income tax liability by filing a refund claim with the United States Internal Revenue Service.

#### **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 Company's 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 December 31, 2001 is incorporated by reference to the "Financial Review - Risk Management" section (pages 61 through 65) of the Company's 2001 annual report to shareholders. This section of the annual report to shareholders has been filed as an exhibit to this Annual Report on Form 20-F in accordance with applicable rules under the Exchange Act. All statements other than historical information incorporated in this Item 11 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.

## 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 December 31, 2001, and the related notes thereto, which are made a part of this Annual Report (by virtue of being incorporated by reference to pages 66 through 68, 71 through 102 and 110 of the Company's 2001 annual report to shareholders), as well the schedule to the consolidated financial statements listed in Item 19(a), have been audited by Deloitte & Touche AS, independent public accountants, as indicated in their report. Reference is made to Item 19 for a list of all financial statements incorporated herein by reference 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:**

Independent Auditors' Report

Schedules to the Consolidated Financial Statements for the Years Ended December 31, 2001, 2000 and 1999:

Schedule VIII - Valuation and qualifying accounts and reserves

See pages 133 and 134.

**The following financial statements are incorporated by reference to pages 66 through 68, 71 through 102 and 110 of the Company's 2001 annual report to shareholders:**

	<u>Pages*</u>
Consolidated income statements for the years ended December 31, 2001, 2000 and 1999	66
Consolidated statements of comprehensive income for the years ended December 31, 2001, 2000 and 1999	66
Consolidated balance sheets at December 31, 2001 and 2000	67
Consolidated statements of cash flows for the years ended December 31, 2001, 2000 and 1999	68
Notes to the consolidated financial statements	71-102, 110

\* Page references are to the Company's 2001 annual report to shareholders.



## **INDEPENDENT AUDITORS' REPORT**

To the Board of Directors and shareholders of Norsk Hydro ASA  
Oslo, Norway

We have audited the consolidated balance sheets of Norsk Hydro ASA and subsidiaries as of December 31, 2001 and 2000, and the related consolidated income statements, statements of comprehensive income, and cash flows for each of the three years in the period ended December 31, 2001. Our audits also included the schedule to the consolidated financial statements included at Item 19(a). As described in Note 1 to the consolidated financial statements, these financial statements and the financial statement schedule have been prepared on the basis of accounting principles generally accepted in the United States of America. These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Norsk Hydro ASA and subsidiaries as of December 31, 2001 and 2000, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the consolidated financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

DELOITTE & TOUCHE AS

Oslo, Norway  
February 28, 2002

Norsk Hydro ASA and subsidiaries  
 Schedule VIII - Valuation and qualifying accounts and reserves

(Amount in NOK million)

Description	Balance at beginning of period	Additions		Deductions <sup>2)</sup>	Balance at end of period
		Charged to costs and expenses	Charged to other accounts <sup>1)</sup>		
Year-end December 31, 2001					
Allowance for doubtful accounts	970	413	(31)	214	1,138
Restructuring allowance	117	700	(3)	90	724
Environment accruals	2,228	424	(12)	261	2,379
Year-end December 31, 2000					
Allowance for doubtful accounts	792	254	94	170	970
Restructuring allowance	191	135	4	213	117
Environment accruals	2,246	496	(357)	157	2,228
Year-end December 31, 1999					
Allowance for doubtful accounts	650	302	(21)	139	792
Restructuring allowance	-	188	3	-	191
Environment accruals	1,378	532	591	255	2,246

<sup>1)</sup> Includes amounts recognized in business combinations and foreign currency translation adjustments.

<sup>2)</sup> Deductions primarily represent uncollectible accounts charged against the allowance for doubtful accounts and expenditures related to and reductions of restructuring allowances and environmental accruals.

## Glossary

### Terms Relating to the Group's Businesses and Operations

Term	Definition
"ADR"	American Depositary Receipt, evidencing a specified number of ADSs
"ADS"	American Depositary Share, representing one deposited ordinary share
"Company"	Norsk Hydro ASA, a Norwegian public company limited by shares
"CO <sub>2</sub> "	Carbon Dioxide
"Hydro/The Group"	The Company and its consolidated subsidiaries
"DAP"	Diammonium phosphate fertilizer
"Deposit Agreement"	Deposit Agreement, dated as of January 3, 1986, as amended and restated as of October 1, 1987, and as further amended by Amendment No. 1 thereto, dated May 27, 1999, among the Company, the Depositary and the holders from time to time of the ADRs
"Depositary"	Morgan Guaranty Trust Company of New York, as depositary of the ADSs
"kWh"	Kilowatt hour
"MAP"	Monammonium phosphate fertilizer
"NPK"	Complex fertilizers
"ordinary share"	Ordinary share, par value NOK 20 per share, of the Company
"PVC"	Polyvinyl chloride, a plastic raw material
"tonne"	One metric tonne (approximately 1,000 kilograms or 2,205 pounds)
"TWh"	Terawatt hour (one billion kilowatt hours)
"VCM"	Vinyl chloride monomer, the main raw material for PVC
"VPS" or "VPS System"	The Norwegian Verdipapirsentralen.

## 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.

NORSK HYDRO ASA

Date: March 15, 2002

/s/ John Ove Ottestad  
John Ove Ottestad  
Executive Vice President and  
Chief Financial Officer