

Rating: Buy
S&P 500: 1285

Norsk Hydro Long Life Natural Gas

<i>Symbol</i>	NHY	<i>Ebitda Next Twelve Months ending 12/31/06 (US\$m)</i>	7,570
<i>Rating</i>	Buy	<i>North American Natural Gas/Ebitda (%)</i>	0
<i>Price (\$/sh)</i>	110.00	<i>Natural Gas and Oil Production/Ebitda (%)</i>	64
<i>Pricing Date</i>	1/6/06	<i>Adjusted Reserves/Production NTM</i>	7.9
<i>Shares (mm)</i>	251	<i>EV/Ebitda</i>	4.6
<i>Market Capitalization (\$mm)</i>	27,600	<i>PV/Ebitda</i>	5.2
<i>Debt (\$mm)</i>	6,900	<i>Undeveloped Reserves (%)</i>	29
<i>Enterprise Value (EV) (\$mm)</i>	34,500	<i>Natural Gas and Oil Ebitda (\$/boe)</i>	21.50
<i>Present Value (PV) (\$mm)</i>	39,500	<i>Present Value Proven Reserves(\$/boe)</i>	12.20
<i>Net Present Value (\$/share)</i>	130	<i>Present Value Proven Reserves(\$/mcf)</i>	2.00
<i>Debt/Present Value</i>	0.17	<i>Earnings Next Twelve Months (US\$/sh)</i>	12.10
<i>McDep Ratio - EV/PV</i>	0.87	<i>Price/Earnings Next Twelve Months</i>	9
<i>Dividend Yield (%/year)</i>	2.8	<i>Indicated Annual Dividend (US\$/sh)</i>	3.07

Note: Estimated cash flow and earnings tied to one-year futures prices for oil.

Reported results may vary widely from estimates. Estimated present value per share revised only infrequently.

The Norwegian government owns 44% of the shares in Norsk Hydro.

Summary and Recommendation

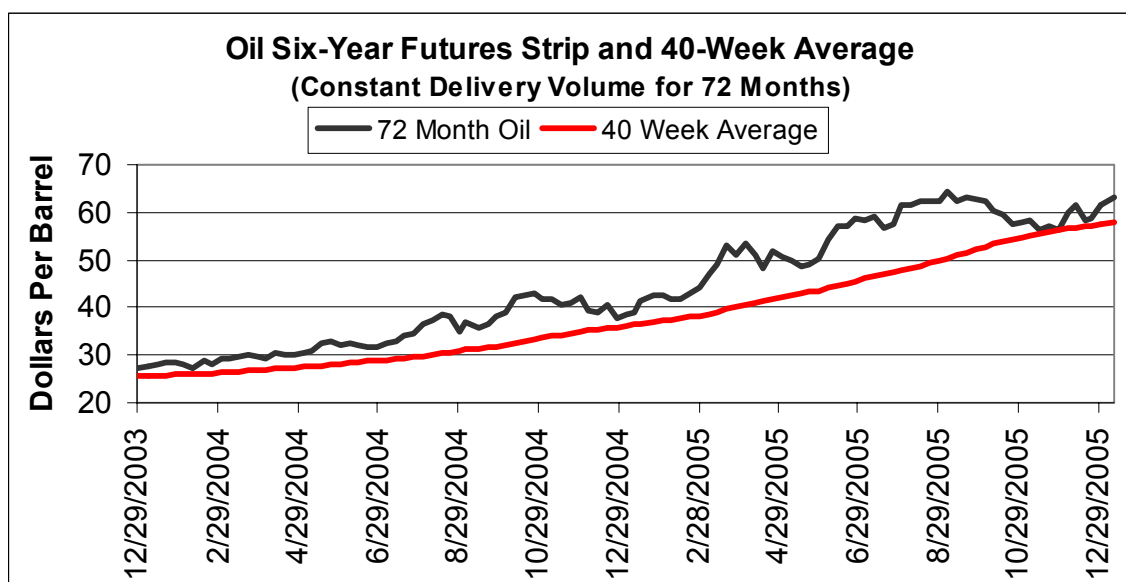
Buy-recommended **Norsk Hydro (NHY)** offers 18% appreciation potential to estimated net present value of \$130 a share. The company's jewels are natural gas reserves offshore Norway having an adjusted reserve life index of more than 15 years. The recently completed acquisition of Spinnaker Exploration expands the company's presence in the U.S. Gulf of Mexico. NHY is on the short list to be a partner of buy-recommended **Gazprom (OGZPF)** to develop a giant Arctic natural gas field in Russia. Hydro also discovered one of the largest new oil fields in the world last year, in Iran. Meanwhile more of today's value remains concentrated on oil and aluminum, commodities that are also experiencing strong price trends along with natural gas.

McDep Ratio Relates Oil Price to Opportunity

A McDep Ratio below 1.0 tells us that Hydro's market cap and debt, or enterprise value, is less than the estimated present value of its energy resources assuming a long-term real price of \$50 a barrel for Light, Sweet Crude Oil. Alternatively we could say that NHY stock is priced for \$44 oil, an approximation derived by multiplying \$50 times the McDep Ratio. Such a judgment also depends on estimated value for an aluminum business worth perhaps 33% of present value.

Meanwhile six-year oil futures are about \$63 a barrel. Momentum has been positive for more than three years as the current quote stays above the 40-week average (see chart [Oil Six-Year Futures and 40-Week Average](#)). Six-year oil has tripled in the four years we have been calculating it on a weekly basis. We do not need further gains in oil price to make money in buy recommendations. Yet our vision of \$150 oil in 2010 implies additional scope to exceed common expectations.

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The company's McDep Ratio ranks low among peer companies (see table [Rank by McDep Ratio](#)). Aside from the fundamental appreciation potential we outlined above, a McDep Ratio of 1.0 is an indication of takeover value. The McDep Ratio of buy-recommended **Burlington Resources (BR)**, increased to 1.0 immediately after buy-recommended **ConocoPhillips (COP)** announced its takeover offer. Because the Norwegian government owns 44% of Norsk Hydro, takeover potential is more limited.

Rank by McDep Ratio: Market Cap and Debt to Present Value

	Symbol/ Rating	Price (\$/sh) 6-Jan 2006	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
Producer/Refiners - Large Cap and Mid Cap							
Kinder Morgan, Inc.	KMI S2	95.48	135	12,930	33.00	0.71	1.54
Imperial Oil Limited (30%)	IMO B	103.16	102	10,540	84.00	0.10	1.21
Marathon Oil Corporation	MRO B	66.69	368	24,530	65.00	0.27	1.02
Petro-Canada	PCZ B	42.05	525	22,090	42.00	0.19	1.00
Suncor Energy	SU B	66.62	461	30,720	68.00	0.11	0.98
Lukoil Oil Company	LUKOY B	62.90	830	52,000	65.00	0.03	0.97
Norsk Hydro ASA	NHY B	110.00	251	27,600	130.00	0.17	0.87
PetroChina Company Ltd (10%)	PTR B	85.75	176	15,070	120.00	0.01	0.72
Gazprom (50%)	OGZPF B	80.20	1,013	81,200	120.00	0.03	0.68
<i>Total or Median</i>				<i>277,000</i>		<i>0.11</i>	<i>0.98</i>

Low Cash Flow Multiple

Unlevered cash flow multiples in single digits attest to low valuation (see table [Rank by EV/Ebitda](#)). Multiples may be low because investors do not think cash flow will last long at current levels. That depends on commodity price and reserve life. Cash flow estimated for the next twelve months, Ebitda NTM, reflects latest futures prices. Reserve life is measured as adjusted reserves divided by next twelve months production.

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Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

	<i>Symbol/ Rating</i>	<i>Price (\$/sh) 6-Jan 2006</i>	<i>Adjstd Resrvs/ Prod NTM</i>	<i>PV/ Ebitda NTM</i>	<i>EV/ Ebitda NTM</i>	<i>P/E NTM</i>	<i>Divd or Distrib NTM (%)</i>
Producer/Refiners - Large Cap and Mid Cap							
Kinder Morgan, Inc.	KMI S2	95.48		8.5	13.1	20	3.1
Suncor Energy	SU B	66.62	17.6	8.8	8.7	18	0.3
Imperial Oil Limited (30%)	IMO B	103.16	11.5	7.0	8.4	14	0.8
Gazprom (50%)	OGZPF B	80.20	20.0	11.0	7.5	13	0.5
Marathon Oil Corporation	MRO B	66.69	7.4	5.1	5.2	8	2.0
Petro-Canada	PCZ B	42.05	5.7	5.0	5.0	9	0.7
Norsk Hydro ASA	NHY B	110.00	7.9	5.2	4.6	9	2.8
Lukoil Oil Company	LUKOY B	62.90	19.8	4.5	4.3	7	1.6
PetroChina Company Ltd (10%)	PTR B	85.75	13.8	6.0	4.3	9	4.4
	<i>Median</i>		<i>12.7</i>	<i>6.0</i>	<i>5.2</i>	<i>9</i>	<i>1.6</i>

More Natural Gas Concentration than Peers

Each oil and gas stock has its own unique mix of energy resources (see table [Business Segments](#)). Norsk Hydro is more concentrated on natural gas than all but one peer. While we hold our present value estimates steady for months, prices of peer stocks may react in the short-term depending on relative changes in expectations for natural gas and oil. We recommend that investors have both natural gas and oil representation.

Home Country and Business Segments

	<i>Symbol/ Rating</i>	<i>Non- U.S. Domicile</i>	<i>North Amer. Natural Gas (%)</i>	<i>Rest of World Natural Gas (%)</i>	<i>Oil Prod'n (%)</i>	<i>Down- stream (%)</i>	<i>Total Present Value (US\$m)</i>
Producer/Refiners - Large Cap and Mid Cap							
Gazprom	OGZPF B	Russia		100			251,000
PetroChina Company Ltd.	PTR B	China	-	9	71	20	213,000
Lukoil Oil Company	LUKOY B	Russia	-	-	62	38	55,700
Norsk Hydro ASA	NHY B	Norway	-	29	38	33	39,500
Suncor Energy	SU B	Canada	5	-	89	7	35,200
Marathon Oil Corporation	MRO B		14	8	33	46	32,900
Imperial Oil Limited	IMO B	Canada	13	-	62	25	31,800
Petro-Canada	PCZ B	Canada	23	4	53	20	27,200
	<i>Median</i>		<i>5</i>	<i>6</i>	<i>62</i>	<i>25</i>	<i>686,000</i>

Static Present Value Justified by Dynamic Cash Flow

Present value analysis presumes that fundamental value is measured by the projection of cash flows years into the future and bringing them to the present applying a real discount rate, currently 7% a year. We generally hold present value estimates static until there is justification to make new commodity price assumptions.

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Next Twelve Months (NTM) cash flow represents the volumes and costs that form the base for future projections. Reserve life index tells how long cash flow will last. NTM cash flow and reserve life are the two main variables in our correlation by function for about 30 companies. Net present value indicated by the current combined correlation is about the same as our ongoing standard estimate for the company (see table Functional Cash Flow and Present Value).

Norsk Hydro					
Functional Cash Flow and Present Value					
	<i>NTM Ebitda</i>	<i>Adjusted</i>	<i>PV/</i>	<i>Present</i>	
	<i>(US\$mm)</i>	<i>R/P</i>	<i>Ebitda</i>	<i>Value</i>	
				<i>(US\$mm)</i>	
Natural Gas	1,050	14.1	11.0	11,500	29%
Oil	3,770	5.2	4.0	15,000	38%
Aluminum	2,750	-	4.7	13,000	33%
	7,570	7.9	5.2	39,500	100%
Debt (US\$mm)					6,900
Net Present Value (US\$mm)					32,600
Shares (mm)					251
Net Present Value (US\$/sh)					130
Over (-)/ Under (+) Correlation (US\$/sh)					0

Futures Prices Propel Estimated Cash Flow by Quarter

Cash flow for the next year is projected from a base through the latest reported quarter (see table Next Twelve Months Operating and Financial Estimates). Company disclosures provide the clues for future volumes and costs as well as geographic and quality differences in price. Futures prices from the New York Mercantile Exchange determine the industry oil benchmark for the next year in our model. Natural gas is sold mostly under long-term contract at terms usually undisclosed. The actual price for 2006 may be higher than our rough projection.

Kurt H. Wulff, CFA

Norsk Hydro
Next Twelve Months Operating and Financial Estimates

	<i>Q4</i>	<i>Q3</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Next Twelve Months</i>
	<i>12/31/04</i>	<i>9/30/05</i>	<i>12/31/05</i>	<i>2005E</i>	<i>3/31/06</i>	<i>6/30/06</i>	<i>9/30/06</i>	<i>12/31/06</i>	<i>12/31/06</i>
Volume									
Natural Gas (mmcf)	1,056	852	1,056	974	1,200	1,039	958	1,187	1,095
Oil (mbd)	415	399	422	403	432	432	432	432	432
Total gas & oil (mbd)	591	541	598	565	632	605	592	630	615
Price									
Natural gas (NOK/mcf)	34	39	42	40	45	45	45	45	45
Natural gas (NOK/Sm3)	1.20	1.36	1.47	1.13	1.60	1.60	1.60	1.60	1.28
Oil									
WTI Cushing US\$/bbl)	48.31	62.52	59.99	56.30	63.17	65.76	66.25	66.46	65.41
Kroner/\$	6.32	6.47	6.51	6.42	6.51	6.51	6.51	6.51	6.51
WTI Cushing (NOK/bbl)	305	405	391	361	411	428	432	433	426
NHY (NOK/bbl)	264	391	377	345	397	414	417	418	412
Total gas & oil (NOK/bbl)	246	349	340	315	358	373	378	372	370
Aluminum (US\$/tonne)	1,889	1,838	2,078						
Revenue (NOKmm)									
Natural Gas	3,303	3,020	4,046	14,223	4,897	4,331	3,993	4,950	18,171
Oil	10,072	14,338	14,650	50,907	15,448	16,439	16,562	16,615	65,064
Other	28,977	30,274	30,274	122,900	30,274	30,274	30,274	30,274	121,095
Total	39,049	44,612	48,970	177,853	50,619	51,043	50,829	51,839	204,330
Expense									
Production	7,395	10,542	11,479	39,528	12,633	12,931	12,781	13,487	51,832
Other	23,809	26,763	25,799	105,694	25,799	25,799	25,799	25,799	103,196
Total	31,203	37,305	37,278	145,222	38,432	38,729	38,580	39,286	155,027
Ebitda (NOKmm)									
Exploration and Production	5,980	6,816	7,217	25,602	7,712	7,839	7,775	8,078	31,403
Other	5,169	3,511	4,475	17,206	4,475	4,475	4,475	4,475	17,900
Total Ebitda	11,148	10,327	11,692	42,808	12,187	12,314	12,250	12,553	49,303
Exploration	518	199	199	946	199	199	400	400	1,198
Deprec., Deplet., & Amort.	6,417	3,570	3,570	14,202	4,270	4,270	4,270	4,270	17,080
Ebit									
Interest	230	104	104	679	150	150	150	150	600
Foreign Exchange	(1,606)	46							
Ebt									
Income Tax	1,956	2,243	2,737	8,898	2,649	2,693	2,600	2,706	10,649
Net Income (NOKmm)									
Exploration and Production	8,621	12,625							
Other Operations	(2,387)	348							
Non operating deductions	(2,601)	(8,808)							
Total	3,633	4,165	5,082	16,525	4,919	5,002	4,829	5,026	19,776
Shares (millions)									
Per share (NOK)	14.40	16.60	20.26	65.86	19.61	19.94	19.25	20.03	78.82
Ebitda Margin (E&P)	45%	39%	39%	39%	38%	38%	38%	37%	38%
Tax Rate	35%	35%	35%	35%	35%	35%	35%	35%	35%

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