

## **Steel Shortage**

### **Summary and Recommendation**

Surprising stories of steel shortages provide another related indicator of a strong long-term outlook for the value of resources in Buy-recommended oil and gas producers including **Encana (ECA)**, **Encore Acquisition Company (EAC)** and **Lukoil (LUKOY)**. Only nine months ago, steel consumers were anticipating price increases (see *Meter Reader*, [A Trailer Load of Nails](#), February 24, 2004). Now we read in the top story in the *Wall Street Journal* of November 26 that Nissan, the automaker, will shut down production of popular models for five days because of a steel shortage. The anecdote is a clue that when new energy supply facilities made largely of steel are built over the next few years, the cost may be in a different league, higher than historical quotes.

### **The Shortage Thesis Returns**

During the 1970s it was popular to point to shortages of energy, commodities and most real assets as indicators of specific investment opportunities. Ultimately most of the shortages were cured, but not until the next decade. Along the way fortunes were made and eventually some of the gains were lost. During the 1980s and 1990s the shortage thesis found little adherence.

Today's shortages, a long time in building, could be eliminated quickly with a steep recession. Who wants that? Let economic growth continue to create the better life for Asians and Eastern Europeans, for example, that leading economies enjoy. Shortages are an indication of critical investment needed for growth.

### **Liquefied Natural Gas Moves to Market through Steel**

Natural gas, the cleanest form of widely used fossil energy is in short supply in North America. The price increases that have occurred have been necessary to balance demand and supply. Imported liquefied natural gas (LNG) is an attractive source of new supply that counts the Fed Chairman Mr. Greenspan among its champions. Much of the news in the natural gas industry concerns plans to build receiving terminals for the U.S. market.

LNG is a steel-intensive business as is oil production, transportation and refining. After being tapped underground by steel pipes, the gas is cooled hundreds of degrees in giant liquefaction facilities that seem to be practically all steel, much of it high-performance alloy. Then it is transported in tankers that cost multiples of conventional oil tankers and

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again are constructed of high-performance alloys. Receiving terminals are a minor part of the investment, but have occasionally run into massive cost overruns. Again most of the equipment is made of steel.

The largest LNG projects are planned for the Middle East, an area of doubtful security. The longer distance from markets requires even more tankers because of voyage times.

Grandiose projects often cost much more than almost anyone would admit at the outset. Think Alaskan Pipeline, nuclear power plants and Boston's Big Dig. The signs are popping up for higher cost LNG. Steel may not be cheap. If steel is more expensive, nearly every other cost factor may be under pressure.

Add the trend in the dollar that denominates the value of whole projects. Finally, long-lead-time, capital intensive projects are sensitive to interest rates. The higher the interest rate the more costly the project and the higher the product price needed to justify the commitment.

The positive side for the economy is that while the price of new supply of clean energy may be higher, it is worth it. The effort ought to have a multiplier effect on economic activity. Investors in existing supply would also benefit or no one would build new capacity. In many cases the investor in a new facility may be an existing producer.

### **The Trend of Futures Captures Unfolding Scenario**

We can only imagine the future broadly with less than complete understanding of all the detail that unfolds. Futures prices are a clue to a moving consensus of where we may be headed. It looks like an energy future with higher value for oil and gas is gradually gaining more adherents. Expectations expressed in average futures price for the next six years continue to rise as evidenced by the current quote being above the 40-week average (see chart [Six-Year Commodity Price Meter](#)).

Six-year futures are indicative of present value of future cash flow while one-year futures are indicative of next twelve months cash flow (see chart [Six-Year and One-Year Natural Gas and Oil Futures](#) ). Stock prices appear to be lagging futures.

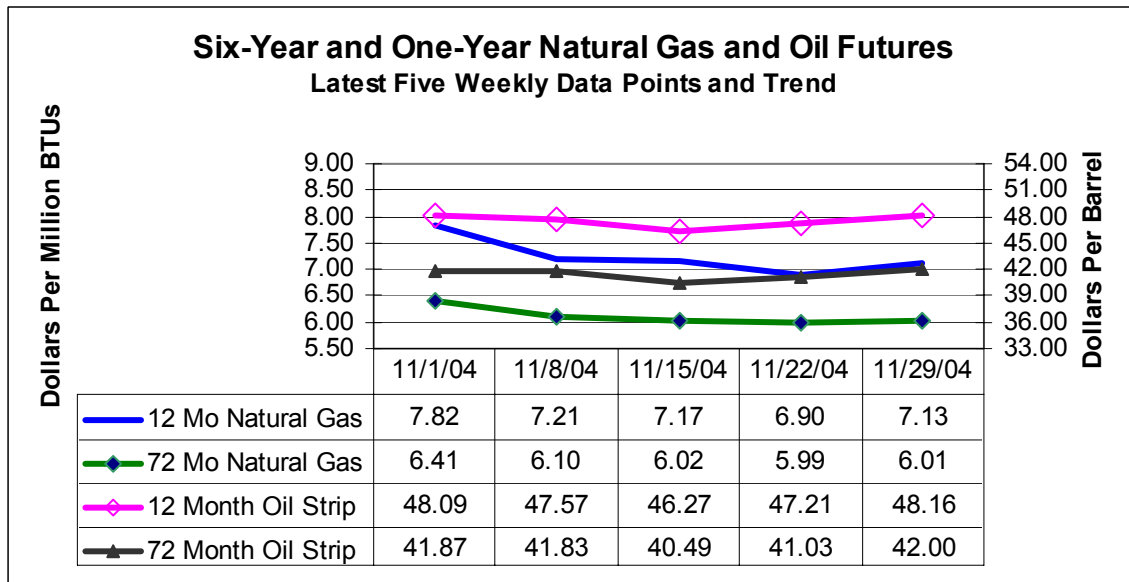
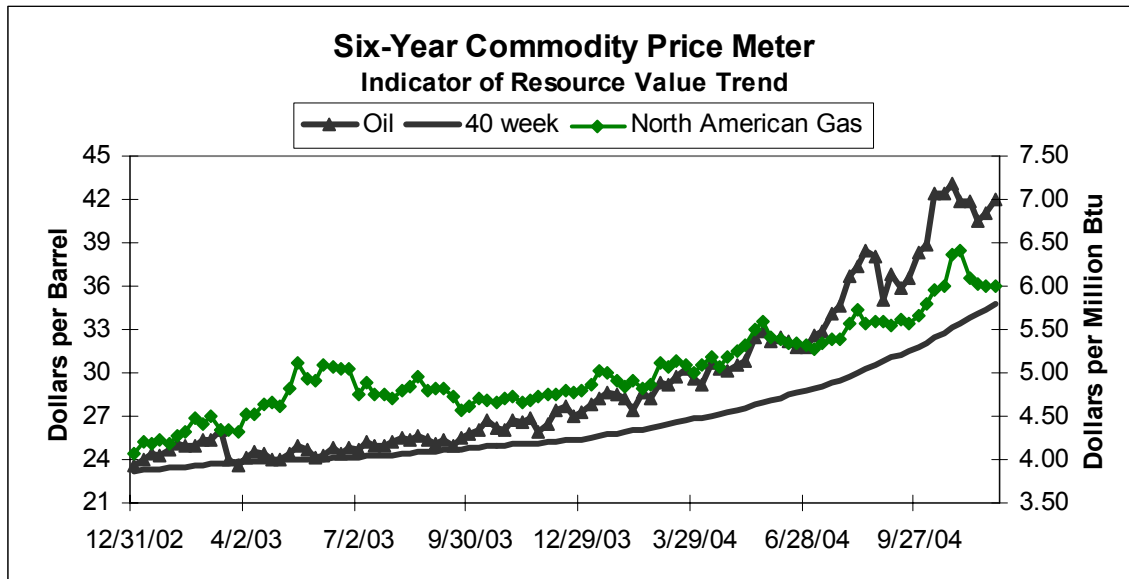
For recommendations and valuation measures, see tables [Rank by McDep Ratio](#) and [Rank by EV/Ebitda](#). For recent single-stock research, see [Index of Stock Ideas](#).

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#### Rated Oil and Gas Producers Rank by McDep Ratio: Market Cap and Debt to Present Value

	Symbol/ Rating		Price (\$/sh) 29-Nov 2004	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
<b>Mega Cap</b>								
Exxon Mobil Corporation	XOM	B3	51.37	6,508	334,000	50.00	0.07	1.03
BP plc	BP	B3	61.47	3,614	222,000	60.00	0.13	1.02
Shell Transport and Trading Co. plc	SC	B3	50.64	1,587	80,000	51.00	0.17	0.99
Total S.A.	TOT	B3	109.81	1,228	135,000	113.00	0.17	0.98
Royal Dutch Petroleum	RD	B1	57.44	2,021	116,000	60.00	0.17	0.96
ChevronTexaco Corporation	CVX	B1	54.66	2,126	116,000	62.50	0.13	0.89
<i>Total or Median</i>					1,003,000		0.15	0.99
<b>Producer/Refiners - Large Cap and Mid Cap</b>								
Kinder Morgan, Inc.	KMI	S2	69.74	125	8,700	20.00	0.74	1.65
Imperial Oil Limited (30%)	IMO	B3	61.93	107	6,620	58.00	0.10	1.06
Marathon Oil Corporation	MRO	B3	39.63	347	13,750	40.00	0.31	0.99
Norsk Hydro ASA	NHY	B1	82.50	254	20,970	90.00	0.18	0.93
Suncor Energy	SU	B3	34.76	460	15,990	38.00	0.13	0.93
Petro-Canada	PCZ	B3	56.70	269	15,270	68.00	0.18	0.86
ConocoPhillips	COP	B1	90.03	702	63,200	110.00	0.25	0.86
PetroChina Company Ltd (10%)	PTR	B2	56.59	176	9,950	82.00	0.06	0.71
Lukoil Oil Company	LUKOY	B2	126.00	209	26,000	208.00	0.06	0.63
<i>Total or Median</i>					180,000		0.18	0.93
<b>Independent Natural Gas and Oil - Large Cap and Mid Cap</b>								
CNOOC Limited (19%)	CEO	B2	56.32	78	4,400	59.00	-	0.95
XTO Energy Inc.	XTO	B1	35.83	272	9,740	38.00	0.19	0.95
Encana Corporation	ECA	B1	57.00	472	26,900	63.00	0.21	0.93
Unocal Corporation	UCL	B3	45.90	274	12,600	54.00	0.24	0.89
Occidental Petroleum Corp.	OXY	B3	60.03	403	24,200	75.00	0.17	0.83
Burlington Resources	BR	B1	45.50	395	18,000	58.00	0.14	0.81
Devon Energy Corporation	DVN	B3	40.94	500	20,500	55.00	0.22	0.80
Anadarko Petroleum Corp.	APC	B1	69.18	253	17,500	94.00	0.20	0.79
<i>Total or Median</i>					134,000		0.20	0.86
<b>Independent Natural Gas and Oil - Small Cap</b>								
Cimarex Energy Company	XEC	B2	41.03	43	1,760	38.00	0.00	1.08
Berry Petroleum Company	BRY	B2	45.50	22	1,020	43.00	0.06	1.06
Energy Partners Ltd.	EPL	B3	19.33	39	750	22.00	0.15	0.89
Encore Acquisition Company	EAC	B2	34.71	33	1,140	47.00	0.22	0.80
<i>Total or Median</i>					4,700		0.10	0.98
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S3	45.77	145	6,640	15.00	0.52	1.99
Kinder Morgan Management, LLC	KMR	S3	41.17	55	2,270	15.00	0.52	1.84
San Juan Basin Royalty Trust	SJT	H	30.14	47	1,400	27.00	-	1.11
Canadian Oil Sands Trust (US\$)	COSWF	B1	53.27	91	4,850	72.00	0.19	0.79
<i>Total or Median</i>					15,200		0.35	1.48

B1 = Buy full unlevered position, B2 = Buy half unlevered position, B3 = Alternative buy

S2 = Short half unlevered position, S3 = Short quarter unlevered position

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses

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#### Rated Oil and Gas Producers

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

	Symbol/ Rating		Price (\$/sh) 29-Nov 2004	Adjstd Resrvs/ Prod NTM	PV/ Ebitda NTM	EV/ Ebitda NTM	P/E NTM	Divd or Distrib NTM (%)
<b>Mega Cap</b>								
BP plc	BP	B3	61.47	9.9	6.6	6.7	13	2.8
Exxon Mobil Corporation	XOM	B3	51.37	11.1	6.3	6.5	12	2.1
Total S.A.	TOT	B3	109.81	9.6	6.3	6.1	11	2.9
Shell Transport and Trading Co. plc	SC	B3	50.64	8.1	5.2	5.2	10	3.9
Royal Dutch Petroleum	RD	B1	57.44	8.1	5.2	5.1	9	4.1
ChevronTexaco Corporation	CVX	B1	54.66	11.4	5.3	4.8	8	2.9
	<i>Median</i>			9.7	5.8	5.7	10	2.9
<b>Producer/Refiners - Large Cap and Mid Cap</b>								
Kinder Morgan, Inc.	KMI	S2	69.74		8.3	13.7	18	3.2
Suncor Energy	SU	B3	34.76	18.4	7.5	6.9	15	0.6
Imperial Oil Limited (30%)	IMO	B3	61.93	11.3	6.2	6.5	12	1.2
Marathon Oil Corporation	MRO	B3	39.63	7.8	5.5	5.5	10	2.8
Norsk Hydro ASA	NHY	B1	82.50	9.4	5.1	4.8	12	2.2
Petro-Canada	PCZ	B3	56.70	7.6	5.5	4.7	9	0.9
ConocoPhillips	COP	B1	90.03	11.9	5.4	4.6	7	1.9
PetroChina Company Ltd (10%)	PTR	B2	56.59	13.5	6.3	4.5	9	4.2
Lukoil Oil Company	LUKOY	B2	126.00	12.2	5.3	3.3	6	2.7
	<i>Median</i>			11.6	5.5	4.8	10	2.2
<b>Independent Natural Gas and Oil - Large Cap and Mid Cap</b>								
XTO Energy Inc.	XTO	B1	35.83	11.7	5.9	5.6	11	0.6
CNOOC Limited (19%)	CEO	B2	56.32	9.6	4.9	4.7	9	3.2
Occidental Petroleum Corp.	OXY	B3	60.03	11.2	5.6	4.7	8	1.8
Unocal Corporation	UCL	B3	45.90	8.9	5.0	4.5	9	1.7
Burlington Resources	BR	B1	45.50	9.9	5.4	4.4	9	0.7
Anadarko Petroleum Corp.	APC	B1	69.18	10.9	5.4	4.3	9	0.8
Encana Corporation	ECA	B1	57.00	6.4	4.4	4.1	9	0.7
Devon Energy Corporation	DVN	B3	40.94	6.6	4.6	3.7	7	1.0
	<i>Median</i>			9.7	5.2	4.4	9	0.9
<b>Independent Natural Gas and Oil - Small Cap</b>								
Berry Petroleum Company	BRY	B2	45.50	12.5	5.4	5.7	12	1.1
Encore Acquisition Company	EAC	B2	34.71	11.9	6.7	5.3	10	-
Cimarex Energy Company	XEC	B2	41.03	5.2	3.7	4.0	11	-
Energy Partners Ltd.	EPL	B3	19.33	4.9	3.6	3.2	10	-
	<i>Median</i>			8.6	4.6	4.7	10	-
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S3	45.77	12.0	7.9	15.8	21	6.4
Kinder Morgan Management, LLC	KMR	S3	41.17	12.0	7.9	14.6	19	7.1
San Juan Basin Royalty Trust	SJT	H	30.14	12.5	7.5	8.3	9	10.8
Canadian Oil Sands Trust (US\$)	COSWF	B1	53.27	20.0	9.4	7.4	9	3.2
	<i>Median</i>			12.2	7.9	11.5	14	6.7

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended December 31, 2005; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

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#### **Index of Stock Ideas Recent Written Analyses**

<u>Date</u>	<u>Symbol</u>	<u>Stock</u>	<u>Theme</u>
29-Nov	XEC	Cimarex Energy Company	Timely Talent
26-Nov	XTO	XTO Energy Inc.	Twenty Per Cent per Year per Share
24-Nov	APC	Anadarko Petroleum Corporation	Asset Upgrade
22-Nov	EAC	Encore Acquisition Company	Opportunity in Hedging Impact
22-Nov	MTR	Mesa Royalty Trust	Hugoton Predictability, San Juan Surprise
17-Nov	TOT	Total S.A.	African Oil, European Refining
17-Nov	UCL	Unocal Corporation	Incremental Production in 2005
15-Nov	EPL	Energy Partners, Ltd.	Lowest Cash Flow Multiple
15-Nov	OXY	Occidental Petroleum Corporation	Still Cheap
12-Nov	CRT	Cross Timbers Royalty Trust	Low Risk, Long Life
9-Nov	IMO	Imperial Oil Limited	Raise Present Value to US\$58 a Share
9-Nov	DVN	Devon Energy Corporation	Large Cap Natural Gas
8-Nov	BRY	Berry Petroleum Company	Smart Oil Contract
8-Nov	PCZ	Petro-Canada	Looking for Long Life
5-Nov	* SJT	San Juan Basin Royalty Trust	High Winter Distributions Ahead
4-Nov	* ECA	EnCana Corporation	Bold Moves
3-Nov	* MRO	Marathon Oil Corporation	Lower Net Present Value to \$40 a Share
2-Nov	* XOM	Exxon Mobil Corporation	Raise Present Value to \$50 a Share
26-Oct	* KMP	Kinder Morgan Energy Partners, L.P.	Fallen Star
26-Oct	* KMI	Kinder Morgan Inc.	Fallen Star
26-Oct	* KMR	Kinder Morgan Management, LLC	Fallen Star
18-Oct	* NHY	Norsk Hydro ASA	High Cash Flow
11-Oct	* BR	Burlington Resources, Inc.	Natural Gas Sensitivity
11-Oct	* COSWF	Canadian Oil Sands Trust	Raise Present Value to US\$72 a Unit
11-Oct	* SJT	San Juan Basin Royalty Trust	Raise Present Value to \$27 a Unit
6-Oct	* COSWF	Canadian Oil Sands Trust	Ten Percent Holder Surfaces
5-Oct	* LUKOY	Lukoil Oil Company	SEC Standard Reduces Reserves
30-Sep	* COP	ConocoPhillips	Lukoil Investment Confirmed
30-Sep	* LUKOY	Lukoil Oil Company	ConocoPhillips Partner Confirmed
28-Sep	* RD	Royal Dutch Petroleum	Low Risk, Attractive Reward
28-Sep	* SC	Shell Transport & Trading Company, p.l.c.	Low Risk, Attractive Reward
20-Sep	* BP	BP p.l.c.	Betting on Putin
20-Sep	* LUKOY	Lukoil Oil Company	ConocoPhillips Partner
8-Sep	* CEO	CNOOC Ltd ADS	Higher Dividend, Higher Present Value
8-Sep	* PTR	PetroChina Company Limited	Dividend Raised, Present Value Trimmed
31-Aug	* COP	ConocoPhillips	Lukoil Investor?
26-Aug	* BP	BP p.l.c.	Russia Distinction
16-Aug	* SU	Suncor Energy Inc.	A Boone and Charlie Favorite
4-Aug	* CVX	ChevronTexaco Corporation	Stock Price Lagging Oil Price

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