



# Energy Sector Overview

---

*Kevin Bertelsen & Matt Sedlacek*

*February 18, 2014*

---

## **Overview**

The energy sector is one of the sectors defined by the S&P500's Global Industry Classification Standard's indexes. It consists of two industries: "energy equipment and services" and "oil, gas, and consumable fuels" There are various sub-industries encompassed in each industry, drilling, equipment/service, exploration/production, refining/marketing, and coal/consumable fuels.<sup>1</sup>

## **Sensitivity**

The energy sector is sensitive to the business cycle. The industry works in a more cyclical fashion. Weather and seasons play critical role in the industry and cause an increase in demand for gasoline in the summer and a decrease in demand during the winter. Moreover, when people buy less at the pump it is reflected in less storage and transportation which in turn leads to less drilling and exploration. One exception to this cyclical fashion is natural gas. Natural gas sees a spike in demand during the colder months as people use it to heat their homes.<sup>2</sup> Because of cyclical nature of the energy industry their earnings are also exposed to volatility.

## **Expenditures**

The energy industry is known for large capital expenditures, research and development spending, and legal expenses. Capital expenditures include prospecting land for oil reserves, property, plant and equipment, and transportation of oil. Research and development spending has been used to pay for adaptations to the changing market and environment policy. Moreover, companies need to spend large amounts in research and development to be successful in order to stay ahead of the curve. For example, Exxon Mobil spent over 1 billion dollars in 2012 alone. Also, the government and environmental agencies are creating costs for the energy sector in their attempts to cut down carbon emissions. The legal costs for the energy sector stem are used to cover accidents. Therefore, energy companies hold cash aside for legal battles from incidents like oil spills.

## **Macro Drivers**

The macroeconomic drivers of the energy sector includes include gross domestic product (GDP), disposable income, value of industrial shipments, new housing starts, sales of new light duty vehicles, interest rates, and employment.<sup>3</sup> High interest rates, lower GDP, decreased sales

---

<sup>1</sup> Appendix 1

<sup>2</sup> Market Attributes PDF from <<http://us.spindices.com/indices/equity/sp-500-energy-sector>>

<sup>3</sup> Energy Information Administration

in new light duty vehicles, and decreased in employment will result in lower consumption by consumers and therefore will be harmful to the petroleum industry. Also, increased access to natural resources to be used to heat homes will be harmful to the petroleum industry. The gas, electrical, coal, nuclear energy, renewable industry, and traditional energy industry will also be influenced by decreased in gross domestic product, disposable income, employment and new housing starts due to consumption and consumer spending. However, these industries remain relatively stable due to the necessity to heat homes in the winter; provide power to homes, etc.<sup>4</sup>

### **Current Macro Environment**

Even though the economy has been improving steadily the past few quarters, the energy sector is still lagging behind the rest. Due to the fact that this sector is a severe underperformer post-recession, we can expect to see continued below-average returns from firms in this sector, specifically Exxon Mobil, which has been struggling the past 5 years. This is nothing surprising, as this has been the case for the energy sector following an economic downturn as early as 1962.<sup>5</sup>

### **2014 Outlook**

The comprehensive outlook for the entire economy looks positive for the upcoming fiscal year, and this includes the energy sector. There will be fewer restrictions on US oil that gets exported abroad. When this information is combined with a decrease in imports of petroleum products (which account for 77% of our imports annually), it shows that our GDP should increase, at least in this sector of the economy.<sup>6</sup> Along with an increase in consumer confidence the past quarter, increased confidence on the banks' stability and increased housing construction, the economic outlook for the energy sector is very optimistic. Although the tapering of large scale asset purchases by the Fed is occurring, which will inevitably lead to increased short-term rates, the energy sector should have a breakout year due to the other conditions being put into place.

### **Cycle, Competition, and Emerging Trends**

The energy sector is currently in the late growth phase, also called the cost/shakeout phase of the business cycle. This is indicated by a few large, well-established firms that dominate the industry (Exxon-Mobil, ConocoPhillips, Halliburton, etc). The risk is increasing in this industry, due to various new restrictions that make the drilling and shipping of oil very expensive for the firms involved, eventually leading to lower profits in the long run.

The most significant emerging trend is the recognition of the harmful carbon dioxide emission shave on our environment, leading to the shift away from fossil fuels and petroleum

---

<sup>4</sup> Energy Information Administration

<sup>5</sup> Fidelity

<sup>6</sup> Forbes 2014 Economic Forecast

products. Competition in the energy sector is most notably from alternative energy companies, looking to steer away from fossil fuels and use more environmentally-friendly energy sources. These include solar, wind, and hydroelectric power. As these fuels become more widespread and efficient, they will make up a fair share of the market, possibly changing the entire landscape of the energy sector as we know it.

### Valuation Matrices

Industry	Company	Ticker	P/E (TTM)	P/S (TTM)	P/B (MRQ)	P/Tangible book (MRQ)	P/CF (TTM)	P/FCF (TTM)
Oil exploration and production	Exxon Mobil	XOM	12.29	0.92	-	-		
Oil exploration and production	Chevron Corp	CVX	10.11	0.97			6.02	
Industry Wide			29.6	1.12	1.95	1.99	16.05	1.78
Oil/Gas Equipment and Services	Halliburton	HAL			3.55	3.86		42.06
Oil/Gas Equipment and Services	Schlumberger	SLB	17.57	2.52	2.96	5.83	11.05	27.63
Industry Wide			15.46	1.82	2.57	4.38	9.14	15.4
Sector-Wide			15.33	1.71	1.68	1.8	8.19	3.26

*\*Information extracted from Reuters Historical stock analysis*

As seen in the table above, the sector has a really high price-to-earnings ratio, indicating higher expected earnings growth in the future. The oil exploration/production industry has twice the P/E ratio and P/CF ratio as the oil/gas equipment and services industry, potentially indicating it trading at a higher price and not generating enough cash each quarter.

### Price Charts

See Appendix I for sector ETF analysis.

### In the News: Keystone XL Pipeline

A proposed pipeline, spanning from Alberta to Texas, has been all over the news recently with alternative energy opponents criticizing its benefits and for being environmentally apathetic. If this deal were to go through, the winners would be TransCanada, who is constructing the pipeline, and Exxon Mobil, who owns oil interests in Alberta tar sands.<sup>7</sup> A recent study by the State Department revealed that the pipeline would only create 35 permanent jobs, much less than the predicted thousands.<sup>8</sup> This was a main selling point, and now the project is in jeopardy of being struck down in Nebraska.

<sup>7</sup> Yahoo! Finance – Keystone Pipeline

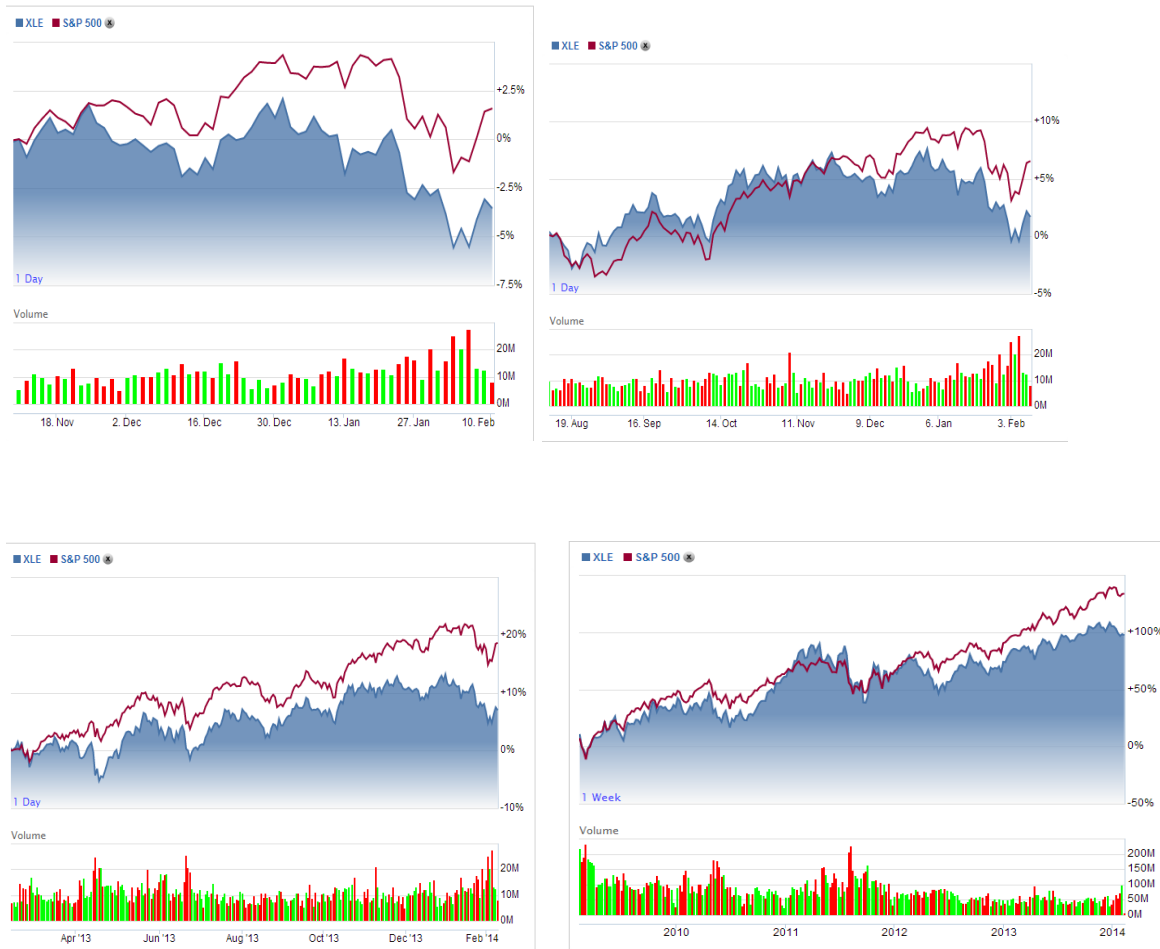
<sup>8</sup> Newsweek

## Appendix 1

Parent Sectors	Industry Groups	Industry	Sub-Industries
Energy	Energy	Energy Equipment & Services	Oil & Gas Drilling
			Oil & Gas Equipment & Services
		Oil, Gas & Consumable Fuels	Integrated Oil & Gas
			Oil & Gas Exploration & Production
			Oil & Gas Refining & Marketing
			Oil & Gas Storage & Transportation
			Coal & Consumable Fuels

- \* Chart extracted from

<https://www.cdp.net/Documents/Guidance/2013/Technical/qics.pdf>



## Works Cited

Energy Information Administration. 2014.

<<http://www.eia.gov/forecasts/aeo/assumptions/pdf/introduction.pdf>>

WeForum. "The Global Competitiveness Index 2013-2014: Country Profile Highlights."

<[http://www3.weforum.org/docs/GCR2013-14/GCR\\_CountryHighlights\\_2013-2014.pdf](http://www3.weforum.org/docs/GCR2013-14/GCR_CountryHighlights_2013-2014.pdf)>

Chandra, Shobhana. "Gain in U.S. Consumer Confidence Lifts Spending Outlook: Economy." *Bloomberg Personal Finance*. 12/31/2013.

<<http://www.bloomberg.com/news/2013-12-31/consumer-confidence-index-in-u-s-increased-to-78-1-in-december.html>>

Mattingly-Emsbo, Lisa & Hofschire, Dirk. "How to invest in sectors using the business cycle." *Fidelity*. 6/11/2013

<<https://www.fidelity.com/viewpoints/how-to-use-business-cycle>>

Subramanian, Pras. "Keystone Pipeline: These 2 companies will win big." *Yahoo! Finance*. 2/13/2014

<<http://finance.yahoo.com/blogs/breakout/keystone-pipeline--is-going-to-be-built---here-s-who-wins--dicker-202919253.html>>

Schlanger, Zoe. "State Department: Keystone XL Pipeline Would Only Create 35 Permanent Jobs." *Newsweek*. 2/13/2014.

<<http://www.newsweek.com/state-department-keystone-xl-pipeline-would-only-create-35-permanent-jobs-228898>>

Conerly, Bill. Economic Forecast 2014-2015: Looking Better With Help From Oil and Gas. *Forbes*. 1/22/2014.

<<http://www.forbes.com/sites/billconerly/2014/01/22/economic-forecast-2014-2015-looking-better-with-help-from-oil-and-gas/>>

<<http://us.spindices.com/indices/equity/sp-500-energy-sector>>