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# Energy Sector

**Overview**

The Energy Market is extremely complex and is affected by every other industry in one way or another. In today's society, consumers, businesses, and other entities highly depend on energy to maintain lifestyles and to operate organizations. This analysis will highlight the following; the allocation of energy, the international and domestic political climate, and the key economic drivers, concluding with whether to sell or hold the current equities in the portfolio.

**The Allocation of Energy**

Five major energy consuming sectors, the below percentages were acquired from the Energy Information Administrations (EIA) from 2017 Statistics:

- Electric power – 38.1%
- Transportation – 28.8%
- Industrial – 22.4%
- Residential – 6.2%
- Commercial – 4.5%

Also reported from the EIA is the types of energy consumed in the USA, they report the following:

- Natural Gas – 31.8%
- Petroleum (Oil and natural gas) – 28%
- Coal – 17.8%
- Renewable Energy – 12.7%
- Nuclear electric power – 9.6%

**International and Domestic Climate**

**International**

Since the Paris agreement two years ago, 198 countries around the world have pledged to keep their carbon emissions lower. It is important to note that the U.S. is in the process of withdrawal. According to the International Energy Agency (IEA), renewable usage will go up 15% in the next 25 years, as well as a 50% growth in natural gas. Concerning oil, foreign powers are a key driver in the market. OPEC is an organization of countries has major control of the world's oil supply; they oversee over 40% of the world's oil. Today, the majority of new oil production comes from the U.S.A because of Saudi Arabia and Russia's cap on production, leaving most new opportunities left to the United States.

**Domestic**

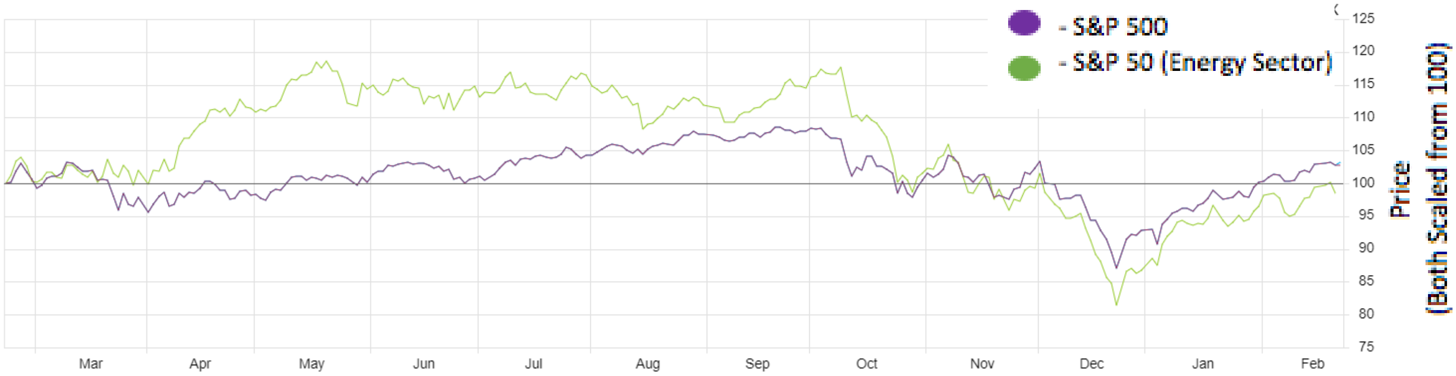
The opposition of nonrenewable sources of energy has become increasingly prevalent in the last couple months. For example, in Massachusetts, there has been great opposition to building more natural gas pipelines and related infrastructure. New York State legislature has approved a ban on oil and natural gas drilling off the New York coast. The Green New Deal has a bold initiative to eliminate the use of all fossil fuels in the next 10 years. While this remains very controversial, the Green New Deal has fueled corporation's interest in increasing renewable energy sources in the U.S. However, the 30% tariffs on solar panels have caused a loss of 20,000 jobs in the renewable energy industry.

**Key Economic Drivers**

- **Permian Shale Basin –** Huge oil reserves found in Texas have created an excess supply of oil in the U.S. Because of this, the U.S. is producing more oil than Saudi Arabia and Russia, making the U.S. less affected by supply changes in the market.
- **Procyclical to S&P –** In the figure shown below, energy reacts with the S&P in a very volatile way. Businesses need more energy to support booming operations or less energy when business is in decline.

- **Population –** Population strongly effects the energy markets because everyone is a consumer of energy. As long as population is increasing, residential energy usage should be increasing as well.
- **Politics –** The political realm highly effects the energy market. For example, the ongoing trade war with China has taken a hard hit on the booming Natural Gas industry in the United States.
- **Commodities –** A large portion of the energy sector is the sale of commodities. The prices of these commodities will strongly affect supply and demand; therefore, strongly effecting energy revenues.

The figure below shows all the energy stocks in the S&P 50 (Energy stocks only) against the S&P 500. We can see over the course of the past year that it runs procyclical to the market, at a more volatile pace.




**SWOT Analysis**

**Strengths:**
- Moves procyclical to the market, which has seen success lately
- Energy is always necessary and will always be needed

**Weaknesses:**
- Dependent on the price of commodities
- Shipping to Asia from US oil rigs may be very expensive
- Trade wars have dampened a booming natural gas industry

**Opportunities:**
- Oil pact between Russia and Saudi Arabia limits production between them, but not to the US. Leaving vulnerable Asian market
- Invest where the energy culture leans, companies are trying to go green

**Threats:**
- "Out with the old in with the new" - More green energy is coming soon
- Policies can turn companies' revenues upside down

**Portfolio Holdings**

- **Exxon Mobil Corp (Energy) – HOLD;** After the stock dropped by nearly 20% in early February due to mispriced earnings, the stock is correcting itself. Oil prices are increasing due to decreasing supply via OPEC, opening opportunity for Texas oil rig companies.
- **Marathon Petroleum Corp (Energy) – SELL;** Oil output has underperformed in recent years. Also, they do not have a large stake in the Permian, which seems to be what's hot in oil right now.
- **Ormat Technologies, Inc. (Utilities) – HOLD;** As of their last 10k report, they have building six more Geothermal plants building in Turkey, which is the fastest growing Geothermal community.
- **Petroteq Energy Inc (Energy) – HOLD;** Has a patented clean oil recovery technology. With the energy culture starting to look greener, we still use a lot of oil. Petroteq needs their product to be recognized**.**
- **Xcel Energy (Utilities) – HOLD;** Initiative to go completely carbon free by 2050. They have proved they are capable of doing so while matching today's energy culture.