

Renewing Thoughts on Alternative Energy

ENERGY AND UTILITIES SECTOR REPORT

Buy-rated Companies Mentioned in This Report:

Utilities

- NextEra (NEE - \$59.96)
- Alliant Energy (LNT - \$48.55)

Prices and opinion ratings as of market close 9/27/23 and subject to change. Source: Reuters.

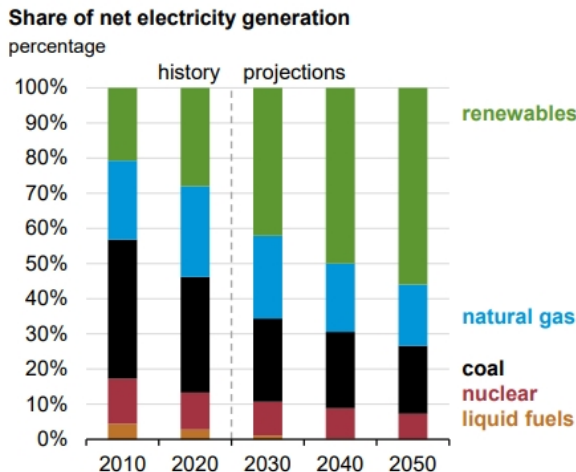
For more information:

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Alternative energy is defined as energy generated without depleting natural resources or harming the environment, avoiding the use of fossil fuels and nuclear power. The fastest-growing sources are wind and solar power. Various companies are involved in the industry in some fashion, whether as suppliers or users. Some component providers for wind farms, for instance, are large multinational industrial companies, such as GE or Siemens. But massive, diversified companies like these are not purely alternative-energy companies for investors seeking renewable exposure. Many of the other suppliers and/or marketers of renewable power are small, undiversified and unprofitable. We do not cover any of these companies. However, several companies that we do cover profit from the increasing penetration of cleaner energy. We will examine this issue from the perspective of both energy and utility companies.

Global Outlook for Alternative Energy

Worldwide, renewable power has grown substantially over the past decade. This impressive growth has been driven by both solar and wind generation. China is the largest contributor to renewables growth, accounting for over one-quarter of the world's renewable generation. Due to this rapid growth, renewables have increased their share of global power generation over the past decade from approximately 20% to 30%. Despite efforts to reduce carbon emissions, coal remains a dominant fuel for power generation, accounting for over a 30% share, though down from roughly 40% a decade ago.¹ Natural gas is the second-most used fuel and has steadily increased over the past two decades, while oil and nuclear have declined. According to the U.S. Energy Information Administration, renewables will produce roughly half of the world's electricity generation by 2040.



Analyst: Mike Doyle, CFA
Analyst: Faisal Hersi, CFA

Source: U.S. Energy Information Administration

Please see important disclosures and analyst certification on pages 4 - 5 of the report.

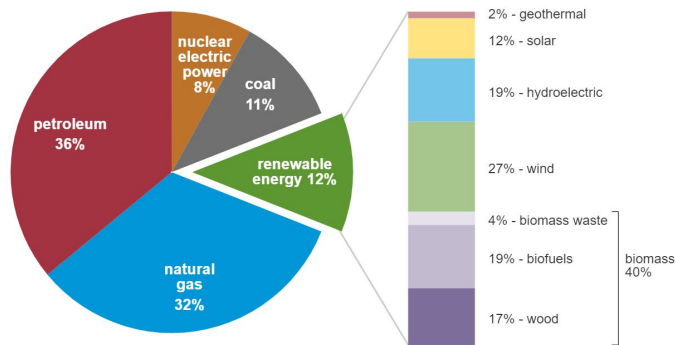
Impact of Alternative Energy on Oil & Gas Companies

Globally, **oil and gas producers** face an impending crossroads. Their legacy business of supplying fossil fuels faces headwinds as citizens and governments around the world demand a lower-carbon future. Given the continued growth in renewables, we expect global oil demand growth to slow in the coming years and potentially peak in the next decade or two. However, global natural gas demand will likely remain strong for several decades to come. Among the global integrated oil and gas companies that we cover, the European integrated companies are leading the way in transitioning toward an energy future that is less carbon-intensive. Investments in renewables by the integrated oil and gas companies will continue to expand, but will not likely be significant growth drivers in the next decade. In the United States, although growth in renewable energy is expected to continue, fossil fuels (petroleum, natural gas) remain the primary source of energy consumption.

U.S. primary energy consumption by energy source, 2021

total = 97.33 quadrillion British thermal units (Btu)

total = 12.16 quadrillion Btu

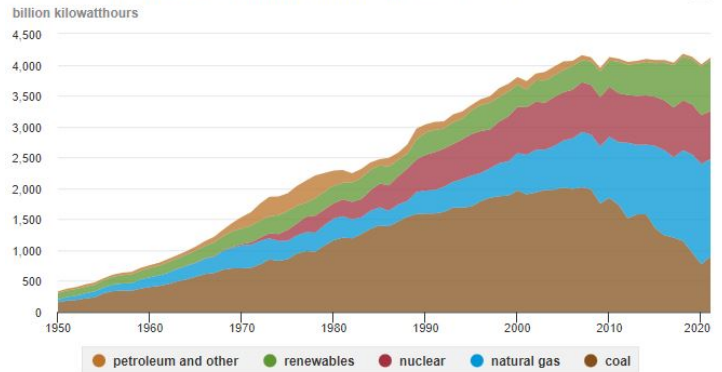


Data source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 1.3 and 10.1 April 2022, preliminary data
 Note: Sum of components may not equal 100% because of independent rounding.

Impact of Alternative Energy on Utilities

In the **utility** industry, most companies are targeting an increasing share of renewable power in their portfolios. This is driven by fears of climate change, environmentalists pushing for cleaner air, state mandates or voluntary goals, and, simply, decreasing costs. Given the push for cleaner power, there have been many coal plants shuttered in the past several years. Older nuclear plants have also faced competitive pressures. Almost all new power generation facilities in the U.S. are expected to be either natural gas-fired or renewables.

U.S. electricity generation by major energy source, 1950-2021

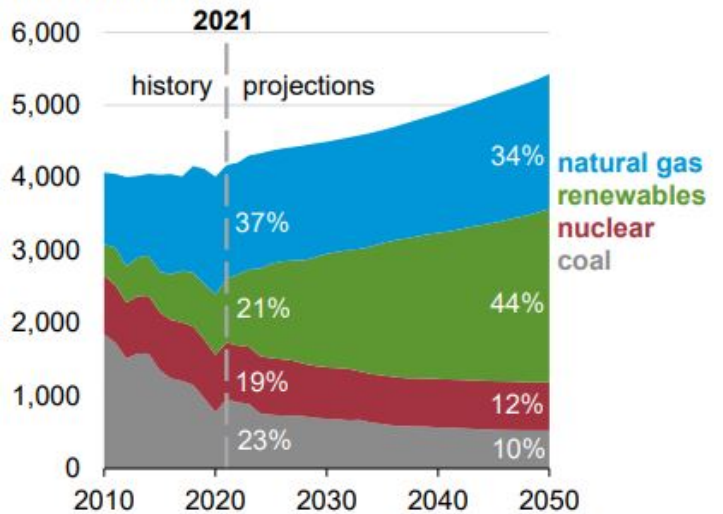


Data source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 7.2a, January 2022 and *Electric Power Monthly*, February 2022, preliminary data for 2021
 Note: Includes generation from power plants with at least 1 megawatt electric generation capacity.

In a somewhat roundabout way, building new power plants benefits utilities' profits. If they can build or acquire a renewable power source, they are permitted to earn a return on it. Couple this with states, large corporations, and many residential customers pushing for cleaner power, and you get a favorable environment for utilities to add renewable power.

U.S. electricity generation from selected fuels AEO2022 Reference case

billion kilowatthours



Source: U.S. Department of Energy

Of the utilities we cover, we believe the biggest beneficiary of this trend is Buy-rated NextEra Energy (NEE). It is the leader in the U.S. in both wind and solar power and has a massive backlog of projects. NEE builds renewables (on an unregulated, or competitive, basis) for other utilities that don't have the financial capability or expertise to do it themselves, for small municipalities or co-operatives that supply power, and, increasingly, for large

companies. It usually owns the asset and sells the power to the counterparty via a long-term contract. NEE also has a large and growing renewable platform for its regulated utility in Florida. We believe this opportunity will drive profits for NEE for many years to come.

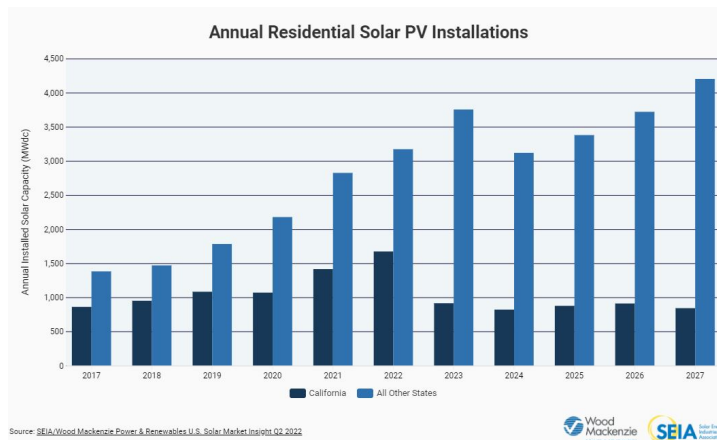
Investors have always been concerned with how much of this trend is driven by government subsidies. While we believe subsidies have aided growth in renewables, the cost to produce renewable power even without subsidies has declined substantially from its early days due to improved technology and efficiency. While costs have risen from their lows more recently due to inflation and supply-chain issues, over the longer term we do not see this movement toward cheaper renewable power abating as technology and efficiency continue to improve.

Almost every electric utility in North America is now utilizing renewables to some extent, and, as coal, nuclear and natural gas plants age and become more expensive to operate, we see more renewables in our future. We believe Alliant Energy (LNT) has been among the more significant adopters of renewable energy via its investment in wind-power projects. However, it has also begun to tap opportunities in solar power within its service territories. Threats trying to capture some of the profits, like rooftop solar or third-party developers, do currently exist outside the traditional utility model; however, we believe utilities have the infrastructure, relationships and expertise to remain at the center of the system. We believe utility capital spending, which drives earnings and dividend growth, will remain healthy, supplemented by renewables spending. But we do not think it will lead to a significant increase in growth rates, as utilities must continue to balance spending with keeping customer bills in check.

Residential Solar Power + Storage

Solar power systems are considered clean energy because they do not produce carbon dioxide or create other forms of greenhouse gas (GHG) emissions. In addition, the negative environmental effects of deploying a system on a home or building are minimal. Residential solar installations have grown significantly over the past several years and are expected to increase for the coming decades. In 2021, the U.S. solar market grew 30%¹. Although California continues to lead the U.S. in solar power installs, several other states including Texas and Florida are also experiencing strong growth.

Steadily falling prices and attractive financing for rooftop solar systems are helping drive some of this growth, but there is still opportunity to lower 'soft costs' associated with installation labor, customer acquisition and inspections.



In summary, we believe renewable energy will continue to grow. While this will change the mix of energy sources we use, our belief is that the global integrated oil and gas companies we cover should be able to cope with it. They have small but growing investments in renewables. Additionally, third-party sources are forecasting oil and natural gas to continue to grow for decades to come driven by developing economies. Meanwhile, many utilities will benefit from the trend. As they replace older nonrenewable power plants with wind and solar, earnings power improves, supporting dividend growth.

We do not recommend any companies whose success is entirely tied to renewables. These companies tend to be small and volatile, and most would not meet our investment criteria. In some cases, the overall success of renewable-energy companies is highly correlated with whether there are large government or regulatory incentives in place promoting renewable-energy business and products (i.e., tax credits, direct government subsidies, or greater fossil fuel restrictions/taxes). Although some incentives have been implemented in recent years, it's still unclear whether items like government tax credits will remain in place over the long term, regardless of which political party controls the U.S. Congress or the White House. The Inflation Reduction Act of 2022 that was passed in the U.S., represents a more than \$300 billion investment in renewable-energy technologies and services. However, it is still unclear exactly how the investment

will shape the long-term growth trajectory of the U.S. renewable-energy industry. We prefer a more conservative, diversified investing approach. This would include many regulated utilities with growing renewable portfolios.

¹Source: Solar Energy Industry Association

Please see the individual research reports for additional information, including disclosures, analyst certifications, valuation and risks specific to each company.

Analyst Certification

I certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers; and no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in the research report.

Mike Doyle, CFA; Faisal Hersi, CFA

Required Research Disclosures

Analysts receive compensation that is derived from revenues of the firm as a whole which include, but are not limited to, investment banking revenue.

Buy (B) - We believe the valuation is attractive and total return potential is above average over the next 3-5 years compared with industry peers.

Hold (H) - We believe the stock is fairly valued and total return potential is about average over the next 3-5 years compared with industry peers or a special situation exists, such as a merger, that warrants no action.

Sell (S) - We believe the stock is overvalued and total return potential is below average over the next 3-5 years compared with industry peers. In some cases we expect fundamentals to deteriorate considerably and/or a recovery is highly uncertain. FYI - For informational purposes only; factual, no opinion.

The table below lists the percent of stocks we follow globally in each of our rating categories. Investment banking services indicate the percentage of those companies that have been investment banking clients within the past 12 months. As of: September 28, 2023

	BUY	HOLD	SELL
Stocks	53%	47%	0%
Investment Banking Services	4%	2%	0%

Other Disclosures

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3-Year Rating and Price History for: Alliant Energy Corp. (LNT.O) as of 09/27/2023



Source: Reuters

3-Year Rating and Price History for: NextEra Energy (NEE) as of 09/27/2023



Source: Reuters