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*Focusing on Fundamentals in the
Electric Utility Industry*



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Given the utility industry's regulated monopoly structure and high barriers to entry, it is largely buffered from competitive threats. Demand for electricity is mostly inelastic and regulators typically allow utility companies to earn a reasonable return on their rate base as long as they meet the state's policy objectives and service obligations at competitive costs to customers. As such, the utility industry is favorably positioned relative to most other capital-intensive industries.

The utility industry has a dividend yield about 150 basis points above that of the S&P 500, as well as mid-single digit long-term earnings growth backed by recession-resistant earnings, which lends the sector its bond-like investment characteristics. With the tailwind of declining interest rates over the past several years, it becomes apparent why the sector might be attractive to some investors. Nevertheless, we feel more compelled to invest in utilities when our total expected return is competitive with that available in other sectors.

We believe a combination of factors will continue to cause utility companies to compound their intrinsic values at below-average rates over time: low return on equity (ROE) allowed by regulators (about 10% on average); relatively high dividend payout ratio (in excess of 60%) resulting in a low retained earnings ratio; high capital spending intensity to grow earnings per share (EPS) by mid-single digits; and below-par growth opportunities circumscribed by their service territories.

Additionally, just under 60% of total utility sector returns for the trailing 10-year period¹ can be attributed to dividend reinvestment (vs. about 32% for the S&P 500) due to a combination of high dividend yield and low EPS growth. We believe investors are less likely to misprice relatively safe dividends, which are such a large portion of the sector's total return. Individual utility stocks, in our experience, tend not to deviate materially from their intrinsic value. As such, the sector has not been our favored hunting ground for stock picking and we have historically been underweight utilities across most of our portfolios.

The biggest challenges confronting the utility industry are rooftop solar power, energy efficiency, renewable energy, and electric cars. Below we discuss our views on how these trends will likely impact the industry.

Rooftop Solar Power

Rooftop solar has been cited as the single biggest existential risk to the utility model and has garnered significant attention from the press and industry observers. Unlike the cord cutting we have seen in the cable TV industry, rooftop solar panels still rely heavily on the home's connection to the electric grid for three key reasons: to make the economics work, for load management, and to manage inherent intermittency in rooftop solar power generation.

Rooftop solar panel owners typically sell all of the electricity they generate back to the utility company and get billed only for their net electricity consumption. Effectively, they get compensated for the electricity sold back to their utility company at rates far above what the company might otherwise pay to secure grid-scale renewable generation. This is one of the key incentives that make rooftop solar economics work for the owner.

Homeowners are unable to directly consume the electricity they generate from their solar panels as the startup load for appliances such as air conditioning and refrigeration, albeit for brief periods, far exceeds the capacity of rooftop installations.

Also, solar generation depends upon the hours of sunshine which can fluctuate wildly besides not being available at night. Connection to the electric grid solves these issues. We believe combined solar and battery technology would need to be orders of magnitude better than what's available today, while keeping real costs flat, in order to truly allow solar panel owners to cut their cord with the local utility.

A utility company gets to recover its fixed costs based on the unit consumption of each home. With rooftop solar reducing the net electricity consumption of a home, these customers are able to transfer their portion of a utility's fixed cost of service onto other ratepayers. State utility commissions have been clamping down on this practice by imposing fixed monthly charges on rooftop solar customers through their utility bills. So long as rooftop solar remains grid dependent, state level regulation might continue to limit their penetration by levying fees or curbing their incentives in order to mitigate cost increases for the remaining utility customers.

Energy Efficiency

Energy efficiency has been one of the key drivers of electricity consumption remaining roughly flat since 2007. Increasingly efficient appliances, more stringent building codes, and the transition from incandescent light bulbs to CFL and LED bulbs have all played a role. CFL and LED technologies are 75-85% more efficient than incandescent light bulbs. Lighting is responsible for about 10% of residential and commercial electricity consumption and more than 80% of homes still use some incandescent bulbs, meaning that CFL and LED adoption alone could act as a measurable headwind to electricity consumption growth for the next several years.

Renewable Energy

Renewable sources of energy such as wind and solar have benefited from states mandating minimum energy levels that should come from renewables. In addition, federal tax credits on investments as well as production of renewable energy further help these sources become more cost competitive relative to traditional fossil fuel-fired power plants. Despite the executive branch of the federal government stepping away from promoting renewables, there remains a healthy appetite for them at the state level. We expect utility-scale wind and solar, coupled with utility-scale battery technology, to be cost competitive relative to traditional generation resources even after federal tax benefits sunset later this decade. Moreover, wind and solar-rich regions are typically located away from load centers and need long-range transmission infrastructure to bring power to more densely populated regions. We expect utility-scale renewables and battery storage to play a meaningful role in meeting our energy needs for the foreseeable future and expect transmission needs to grow with renewable development.

Electric Cars

With electric load growth adversely impacted by energy efficiency, the question is: will electric cars help boost peak electricity consumption and utility earnings? There were about 240 million passenger vehicles driven 2.8 trillion aggregate miles in 2015 according to the U.S. Department of Transportation. Assuming no significant improvement in battery capacity of four miles per kilowatt-hour, we would need to generate about 17% more electricity relative to 2015 to enable all passenger vehicles to run on electricity drawn from the utility grid. Transition to electric vehicle (EV) ownership will likely be a multi-decade process and could add 50-75 basis points of average annual load growth, depending on the pace of EV adoption. In an industry starved for load growth, this would be welcome but won't move the capital expenditure needle in a meaningful way. Much of the load growth could occur at night when EVs will likely be recharged, which are considered off-peak hours. It would be

similar to more passengers using public transportation during non-rush hours, which could increase maintenance spending but not generate nearly as much demand for new buses and trains (or utility capital expenditure when we extend that analogy to utilities).

We believe the last mile of wire from a sub-station to people's homes would likely require some upgrades to accommodate the higher load needed to charge cars. In addition, states will decide how big of a role utilities will play in building the charging infrastructure. We are paying close attention to California to see if there could be any implications for the rest of the country.

Diamond Hill's Exposure to Electric Utilities

We have a short position in Consolidated Edison, Inc. (ED). It's a regulated utility company serving customers mostly in the New York City region. The New York state utility regulators have rate mechanisms in place that allow utilities to earn close to their authorized levels; however, they authorize some of the lowest ROEs in the country. This has resulted in steady earnings for ConEd and its valuation has benefited meaningfully from investors' pursuit of dividend yield. But we believe ConEd's stock price does not fully reflect some of the potential risks. New York is looking to implement an energy policy that should lower electricity consumption relative to 2012 by 23% by 2030. If successful, we'd expect meaningful headwinds for long-term EPS growth for ConEd, especially when power consumption is expected to decline. Moreover, ConEd's energy distribution infrastructure is largely underground, which makes it expensive and very difficult to maintain. We believe its system carries an above-average risk of failure, and system reliability is one of the more important determinants of ROE allowed by regulators. To work its way out of a low-growth environment, we believe the company may pursue opportunities outside of its traditional regulated utility structure, which could incrementally chip away at its safe haven status.

We own shares of Canada-based utility company Fortis, Inc. (FTS). We received the shares in partial consideration for our ownership of ITC Holdings, which Fortis acquired. ITC was a pure play transmission company that was undergoing an ROE review by federal regulators. We established a position in ITC when the stock price reflected a far-worse outcome of the ROE review than we thought was reasonably possible. We have maintained a position in Fortis following the close of the ITC acquisition because over a third of Fortis' earnings are driven by transmission infrastructure, which should be able to capture incremental growth from the increasing mix of renewables in the electric grid over the long term. Moreover, we believe the market may be underestimating Fortis' overall growth prospects even excluding transmission opportunities.

¹10-year period ending July 31, 2017.

As of July 31, 2017 Diamond Hill owned shares of FTS and held a short position in ED.