

Cash Flow and Carey



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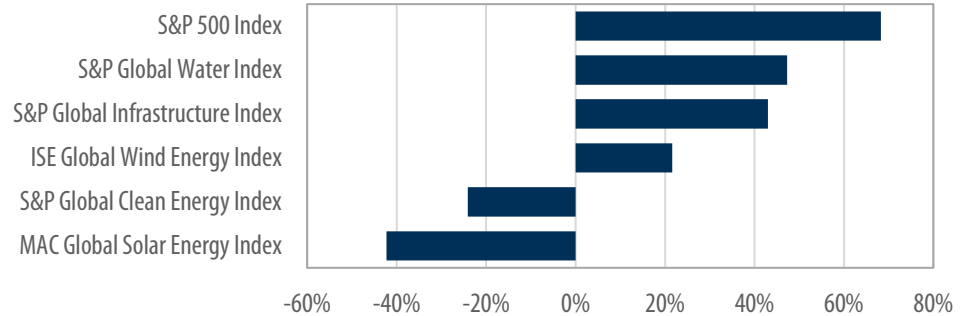
10/31/24

This chart is for illustrative purposes only and not indicative of any actual investment. The illustration excludes the effects of taxes and brokerage commissions and other expenses incurred when investing. Investors cannot invest directly in an index. The S&P 500 Index is an unmanaged index of 500 companies used to measure large-cap U.S. stock market performance. The S&P Global Water Index is comprised of approximately 50 companies from around the world that are involved in water related businesses. The Global Infrastructure Index is comprised of 75 companies from three distinct infrastructure clusters: Utilities, Transportation, and Energy. The ISE Global Wind Energy Index is a quintile-based modified capitalization weighted index tracking public companies that are active in the wind energy industry. The S&P Global Clean Energy Index is an index of approximately 100 companies involved in global clean energy-related businesses. The MAC Global Solar Energy Index tracks globally-listed public companies that specialize in providing solar energy products and services.

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I'll Just Have Water, Thank You

Utility & Infrastructure - Related Indices vs. S&P 500 Cumulative Total Returns (10/12/22 – 10/29/24)



Source: Bloomberg. **Past Performance is no guarantee of future results.**

View from the Observation Deck

For today's post, we compare the cumulative total returns of several utility and infrastructure-related indices to that of the S&P 500 Index between 10/12/22 (the start of the current bull market) and 10/29/24. As revealed in the chart, when it comes to an investment in infrastructure stocks, water stands out above them all. Water plays a critical role in socio-economic development, the production of food and energy, and crucially, human survival itself. The United Nations reported that 2.2 billion people around the world lacked access to safely managed drinking water, and 3.5 billion did not have access to safely managed sanitation in 2022. We discuss what we believe have been catalysts to growth for the companies involved in water utility, infrastructure, materials, and equipment below.

- In the U.S., an estimated 2 million people currently live without running water inside their homes. While most U.S. citizens have access to clean water and sanitation, the infrastructure that provides these services is aging. The pipe that makes up the U.S. water network is 45 years old, on average. Some of the oldest cast iron pipes still in use were put in service more than 100 years ago, according to McKinsey & Company.
- The U.S. drinking water infrastructure is comprised of 2.2 million miles of underground pipe, according to the American Society of Civil Engineers (ASCE). The ASCE noted that an estimated 6 billion gallons of treated potable water is lost through leaks in this piping infrastructure each day. The U.S. Environmental Protection Agency (EPA) expects water-pipe replacement rates to peak in 2035, with somewhere between 16,000 to 20,000 miles of piping being replaced per year.
- We've written about estimated impact of artificial intelligence (AI) on the energy grid in previous posts ([click here](#)), but AI's demand for water cannot be understated. A recent report by J.P. Morgan revealed that large data centers use as much as 5 million gallons of water per day to effectively cool the chipsets that process AI intensive workloads. Notably, the U.S. was home to 5,381 data centers at the end of March 2024. For comparison, Germany, the U.K., and China were home to just 1,484 data centers combined as of the same date.
- Funding for updated water infrastructure has accelerated in recent years. In 2021, the U.S. government revealed legislation that designated \$55 billion toward water infrastructure improvements. Fifteen billion dollars of that funding was set aside to replace each of the 9.2 million lead service lines still in use, by 2031. In October 2024, the EPA announced \$6.2 billion in additional funding to upgrade U.S. water infrastructure.
- The cumulative total returns of each of the indices in today's chart were as follows: S&P 500 Index (68.23%), S&P Global Water Index (47.27%), S&P Global Infrastructure Index (42.96%), ISE Global Wind Energy Index (21.60%), S&P Global Clean Energy Index (-24.08%), and the MAC Global Solar Energy Index (-42.27%).

Takeaway

From our perspective, the results in today's chart can be explained by the crucial role that access to clean water and proper sanitation play in developed and developing nations around the world. Globally, an estimated \$1.37 trillion of additional water infrastructure investments are required to provide clean water to the 2.2 billion people currently in need of it by 2030. In the U.S., our aging water infrastructure is in dire need of repair and replacement, with 6 billion gallons of treated water being lost each day to leaks in the current framework (approximately 14%-18% of U.S. daily water usage). Additionally, data centers are estimated to use an increasing share of available water to cool the chipsets that process AI workloads, which stands to stress these systems even further. Given the critical nature of the water ecosystem in comparison to the other infrastructure investments shown in today's chart, we do not find the sector's outperformance overly surprising. While there is no way to be certain, we expect these companies will continue to benefit from the global construction and domestic modernization of water infrastructure.