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Morning Briefing

On Utilities, Oracle & Data Centers In Space

Check out the accompanying [chart collection](#).

Executive Summary: Among the improbable accomplishments of artificial intelligence, it has turned sleepy Utilities stocks into hot commodities. Demand for electricity to power AI data centers is expected to soar. Jackie examines forecasts for electricity generation and what's fueling them. ... Also: Oracle has been spending with abandon on data center buildouts, feeding investors' fears that such massive capex won't pay off. All it took was the loss of a potential partner for a future project to send Oracle shares reeling. ... And: Some visionaries see data centers in space solving a lot of problems, but do they have stars in their eyes?

Utilities: Having an Electrifying Year. Once considered appropriate investments only for widows and orphans due to their historically slow but steady returns and consistent dividends, Utilities stocks suddenly have become rock stars. That's because electricity demand has been energized by demand from artificial intelligence (AI) data centers and other areas.

Excitement for the formerly stodgy area has made the S&P 500 Utilities stock price index one of the best performing sectors in the S&P 500 ytd through Tuesday's close: Communication Services (30.6%), Information Technology (21.6), Industrials (18.1), S&P 500 (15.6), Utilities (12.9), Financials (12.7), Health Care (11.6), Materials (7.0), Consumer Discretionary (6.6), Consumer Staples (2.8), Energy (1.8), and Real Estate (-0.5) ([Fig. 1](#)).

The sector's performance understates just how well some of its best-performing industries have done this year. The S&P 500 Electric Utilities stock price index has climbed 14.7% ytd, and the Independent Power Producers & Energy Traders industry is the best-performing Utilities industry, having risen 22.8% ytd ([Fig. 2](#)). Leading those ytd gains are NRG Energy (up 77.5%), followed by Constellation Energy (63.4%) and American Electric Power (AEP) (24.2%).

The newfound excitement surrounding utilities has also led to increased volatility in the highest-flying areas. The Independent Power Producers & Energy Traders industry had fallen 26.8% ytd back in April; it subsequently rallied to a 48.9% ytd peak in September only to give back some of its gains in the ensuing three months. That's nearly an 80ppt swing in a few months.

Let's take a closer look at what's electrifying Utilities stocks:

(1) *Demand is up.* Electricity generation actually fell by an average of 0.3% per year from 2010 to 2020, as demand increases from population growth and economic growth were offset by improvements in energy efficiency and a shift in usage. Demand from the manufacturing sector fell as demand from the service sector, which consumes less energy, rose. Savings from efficiency regulations and building codes drove a 0.6% annual reduction in electricity usage from 2007 through 2017, according to a Bank of America [report](#) citing Lawrence Berkeley National Lab data.

Since 2021, however, electricity generation has grown about 2% per year and is expected to grow by 2.4% this year and 1.7% in 2026, the Energy Information Administration (EIA) [forecasts](#). Driving demand are the increased use of electric and hybrid-electric vehicles, heat pumps, reshoring of industrial plants back to the US, and the construction of new data centers.

In addition to benefiting from increased electricity sales, utilities have been upgrading their distribution systems, and regulators have allowed them to pass on these costs to consumers. They've deployed advanced metering, distribution automation, and demand-management technologies, as well as made their systems more climate resilient.

(2) *Nuclear gets headlines, but solar is doing the job.* Amid all the talk of reviving nuclear plants, the EIA expects electricity production from nuclear sources to fall from 19% of the total electricity produced in 2024 to 18% in 2026. Also expected to decline slightly over that period is electricity from natural gas powered plants, from 42% in 2024 to 40% in 2026. But increased use of solar should make up the difference: The EIA forecasts that solar will supply 8% of electricity next year, up from 5% last year.

Solar provides the largest amount of new electric capacity being brought on. Developers are expected to add 33.3 gigawatts (GW) of new utility-scale solar electric generating capacity in the US this year. That would be just a touch more than half of the 64 GW of total new electricity expected to be brought online for this year. The remainder is provided by battery

storage (18.3 GW), wind (7.8 GW), and natural gas (4.7 GW), the EIA [estimated](#) in August. That said, President Donald Trump signed [executive orders](#) to increase nuclear energy capacity from around 100 GW today to 400 GW by 2050, by restarting plants and having 10 new large reactors under construction by 2030. Conversely, he eliminated federal funding via grants and tax credits for the construction of new solar and wind projects.

Constellation Energy has benefited from the renewed focus on nuclear energy. The company plans to restart Three Mile Island, helped by a \$1 billion loan backed by the Trump administration and a 20-year contract with Microsoft to buy the electricity produced. Constellation has another contract with Meta Platforms to take nuclear energy from its Clinton, Illinois plants.

The share price activity of Vistra, another utility with nuclear power plants, illustrates the sector's volatility. Its shares were down 28.9% ytd in April, only to rebound and peak in September when they were up 58.1% ytd. They've since given back some of those gains and are now up only 25.8% ytd. But anyone who has been in the stock for three years has no complaints; the shares are up more than 600% over that time span.

(3) *What could dim the lights?* Even the traditionally safe utilities sector has clouds on the horizon that should be watched. The largest appears to be growing consumer outrage over higher utility bills. Consumers don't care that data center demand has increased, pushing up electricity prices. They see an increase in their monthly bill, and they're letting politicians and regulators know that they're madder than heck.

The US monthly nominal residential price of electricity has risen from roughly 14 cents/kilowatt hour in 2021 to 18 cents this year. And the EIA forecasts prices will rise 4.9% this year and 4.2% in 2026.

In the Indianapolis area, AES attempted to increase rates by 13.5% over the next year and a half. A subsequent settlement between AES and the City of Indianapolis halves that rate increase for a customer using 1,000kwh/month and prohibits the company from seeking another increase before 2030. But consumer groups [continue to object](#).

Floridians are about to see their monthly utility bills rise, by \$2.50 on average to \$136.64, which is up from \$101.70 in 2021. NextEra Energy's Florida Power & Light got [regulatory approval](#) for the increase despite consumer advocates' objections.

Another item to watch: the price of natural gas for utilities that use it as fuel, though many

can pass some of their fuel costs on to customers. The price of natural gas futures has climbed from under \$2.00 per MMBTU last year to \$3.89 on Tuesday ([Fig. 3](#)). Conversely, lower interest rates could benefit utilities, because it would lower the cost of capital they need to improve and build new facilities.

Lastly, any indication that the data center buildout will be less robust than expected could dampen investors' excitement about the industry. A hint of that occurred Wednesday when concerns about Oracle's data center buildouts (addressed below) sent the S&P 500 Electric Utilities stock price index down by 0.85%, and the shares of Constellation Energy and Vistra fell 6.7% and 7.8%.

Perhaps the greatest unknown is whether there will be electricity generation overbuilding. There are 5,007 generation capacity additions expected between September 2025 and August 2028 that are expected to generate a total of 360,925 megawatts of electricity. If all of those projects came to pass, they'd increase installed electricity-generating capacity by about 26.8% from the 1.34 million megawatts available as of August, the Federal Energy Regulatory Commission [reported](#).

(4) *A look at earnings estimates.* The S&P 500 Electric Utilities index's forward revenues per share and forward operating earnings per share have been climbing sharply since 2000, and are both at record levels ([Fig. 4](#) and [Fig. 5](#)). The industry's forward profit margin has been improving since 2023 and is near record levels ([Fig. 6](#)).

Going forward, analysts forecast revenue growth of 6.6% this year and 6.4% in 2026, while earnings growth decelerates to 6.5% this year, only to reaccelerate to 8.1% in 2026 ([Fig. 7](#) and [Fig. 8](#)). The Electric Utilities industry's forward P/E, at 18.1, is well north of the low near 10 that it has sported a few times in the past 30 years, but it's still below the peaks of 23-25 hit during that time ([Fig. 9](#)).

Information Technology: Oracle Spooks the Market. Oracle has a cash-flow problem. The company [posted](#) negative free cash flow of \$13.2 billion during the 12 months ended November 30 because it spent \$34.5 billion on capital expenditures to expand the company's data centers. The spending accelerated in the company's most recent quarter (ended November 30), when free cash flow was negative \$10 billion and capex was \$12 billion, according to Oracle's earnings conference call [transcript](#). Oracle has said it plans to spend \$50 billion on capex this year.

The shift has been dramatic. During the same 12 months in 2024, Oracle spent only \$10.7

billion on capex, less than a third of what it spent this year, and it generated \$9.5 billion of free cash flow.

As long as the company spends this heavily on data centers, it will have a problem. The company got bad news on that score yesterday when its largest data center partner, Blue Owl Capital, opted not to invest in a new data center that is to be built in Michigan and leased by Oracle.

The *FT* [reported](#): “People close to the Michigan deal said lenders pushed for stricter leasing and debt terms amid shifting market sentiment around enormous AI spending, including Oracle’s own commitments and rising debt levels. As a result, the deal was less attractive financially for Blue Owl than its earlier projects.” Blue Owl was also concerned about construction delays.

Oracle countered that the best equity partner for the project was not in fact Blue Owl and that negotiations for an equity provider are ongoing and proceeding according to plan.

The report sent Oracle shares tumbling 5.4% Wednesday, bringing the stock’s decline since its September 10 record high to 45.6%. The shares’ 97.0% ytd gain back then since has melted to only 7.1% ytd through Wednesday’s close.

Disruptive Technologies: Data Centers in Space? You read that right: Proponents of putting data centers in space tout the problems it would solve, e.g., the difficulty obtaining land permits, the expense of electricity, and the need to use water for cooling. Space is a vast area, with plentiful solar energy, and it’s cold.

The November 13 [Morning Briefing](#) discussed Google’s Project Suncatcher, which aims to put a constellation of solar-powered satellites carrying Google’s TPUs into space. It turns out Google isn’t alone. Others are working on similar projects. Here are some additional details:

(1) *Reaching for the stars*. Starcloud, a Nvidia-funded startup, launched a satellite last month with a Nvidia H100 GPU into space. It has been used to run NanoGPT, a large language model developed by OpenAI founding member Andrej Karpathy, and to train it to speak in Shakespearean English.

The company [plans to build](#) five-gigawatt orbital data centers with solar and cooling panels. It would produce more power than the largest plant in the US. Its next satellite launch is

slated for October 2026 and it will carry Nvidia's Blackwell platform and several H100 chips. It will allow customers to operate AI workloads from space.

(2) *Reaching for the moon.* Lonestar Data Holdings aims to put a data center on the moon. In February, it launched a data center on Intuitive Machines' Athena Lunar Lander that headed to the moon. While in space, the data center completed tests that confirmed it could upload, download, encrypt, and decrypt data and its systems operated properly in space's harsh environment.

But the Lunar Lander missed its targeted landing spot and [*died in a frigid crater*](#). Lone Star says its data center remains intact. Despite the unfortunate outcome, Lonestar continues to work with [Sidus Space](#) to build data centers and data storage that will be housed in a low-Earth-orbit satellite in Sidus' LizziSat micro-constellation.

(3) *The giants' space race.* Jeff Bezos' Blue Origin and Elon Musk's SpaceX are also competing in this space, and both would benefit from vertical integration.

SpaceX is working on a giant rocket that could deliver 300GW-500GW of solar-powered AI satellites to orbit. Bezos [*has predicted*](#) that data centers in space would become cost-competitive with those on Earth within 20 years. Only companies with deep pockets may have the staying power to see that day come.

(4) *The doubters.* Not everyone is convinced. Here are two detailed reports by [Andrew Cote](#) and [Andrew McCalip](#) on why space data centers are mostly pie in the sky. The expense is crazy, and the technical problems range from the damage from radiation and space junk to the lack of technicians in space to swap out faulty GPUs.

McCalip notes that the one company that might make it work is SpaceX, due to its vertical integration. Cote concludes that while 1GW AI giant server farms may not float around in space, there will be demand for orbital computing clusters serving in-space needs.

Calendars

US: Thurs: Headline & Core CPI 3% & 3% y/y; Initial Claims 225k; Philadelphia Fed Manufacturing Index 2.2. **Fri:** Personal Income & Consumption; PCED; University of Michigan Consumer Sentiment Headline, Current Conditions & Expectations 53.3, 50.7 & 55.0. (Source: FX Street)

Global: Thurs: ECB Interest Rate Decision 2.15%; BoE Interest Rate Decision 3.75%; UK Retail Sales; Bailey. **Fri:** Germany & France PPIs; Germany Gfk Consumer Climate Index; Italy Business Confidence; UK Retail Sales; Buba Monthly Report. (Source: FX Street)

Strategy Indicators

S&P 500 Earnings, Revenues, Valuation & Margins ([link](#)): During the December 11 week, S&P 500's forward revenues ticked down less than 0.1% from a record high, but forward earnings rose 0.1% and the forward profit margin rose 0.1ppt to 14.4%, both to new record highs. The forward profit margin is now 4.1ppts above its seven-year low of 10.3% during April 2020. The consensus expectations for forward revenues growth ticked down 0.1pt w/w to 6.7% from a 40-month high of 6.8%. From a longer-term perspective, that's still well above its 20-year average of 5.2% and its 33-month low of 2.3% during the February 23, 2023 week. That compares to a pandemic-recovery boosted record-high 9.6% forward revenues growth at the end of May 2021 and 0.2% during April 2020, which was the lowest reading since June 2009. The forward earnings growth forecast was steady w/w at a 50-month high of 14.4%, up 3.5ppts from its 15-month low of 10.9% during the May 29 week. That's well above its 20-year average of 11.4%. That compares to its 23.9% reading at the end of April 2021, which was boosted by the recovery from the pandemic to its highest reading since June 2010 and up substantially from its record low of -5.6% at the end of April 2020. Analysts expect revenues to rise 6.4% in 2025 (up 0.1ppt w/w to a new high) and 6.9% in 2026 (down 0.1ppt w/w from a 7.0 high), compared to a 5.0% rise in 2024. They expect an earnings gain of 13.0% in 2025 (up 0.1ppt w/w to a nine-month high) and a 14.7% rise in 2026 (down 0.1ppt w/w from a 14.8 high) compared to 2024's earnings gain of 11.7%. Analysts expect the profit margin to rise 0.7ppt y/y to 13.3% in 2025 (unchanged w/w at an eight-month high) and 1.0ppt y/y in 2026 to 14.3% (unchanged w/w at an eight-month high), compared to 2024's 12.6%. Looking at valuation data as of December 11, the S&P 500's weekly forward P/E rose 0.1pt w/w to 22.5. That's just 0.5pt above the 21-week low of 22.0 during the November 20 week and 0.8pt below the 25-year high of 23.3 during the October 30 week. That's now up 3.3pts from its 16-month low of 19.2 during the April 17 week. It also compares to 23.1 in early September 2020, which was then its highest level since July 2000, and to a 77-month low of 14.0 in March 2020. The S&P 500 weekly price-to-sales ratio rose 0.02pt w/w to a four-week high of 3.23. That's up 0.10pt from a 10-week low of 3.13 during the November 20 week, and is just 0.05pt from its record high of 3.28 during the October 30 week. That's up from a six-month low of 2.22 during the October 26, 2023 week and compares to a 49-month low of 1.65 in March 2020.

S&P 500 Sectors Revenues, Earnings, & Margins ([link](#)): During the December 11 week, eight of the 11 S&P 500 sectors posted gains in their forward revenues; six posted gains in their forward earnings; and the forward profit margin was at or near record highs for six sectors. These seven sectors had post pandemic- or record-high forward revenues this week: Communication Services, Consumer Discretionary, Financials, Industrials, Information Technology, Real Estate, and Utilities. Consumer Staples would have been in this list if it weren't for Drug Retail's exit in September; instead, it is 4.6% below its record high. Health Care is 0.2% below its week-earlier record. Energy's is worsening again, and remains depressed at 29.6% below its September 2008 record and 16.8% below its cyclical high in October 2022. Materials' has slowly improved to a 28-month high at 3.5% below its June 2022 record high. These five sectors had record-high forward earnings this week: Consumer Staples, Financials, Health Care, Information Technology, and Utilities. These four are less than 0.7% from their week earlier record-high forward earnings: Communication Services, Consumer Discretionary, Industrials, and Real Estate. Forward earnings remains depressed for the last two sectors, Energy and Materials. From their respective highs during 2022, Energy's has worsened recently to 39.6% below, while Materials' has improved to a 31-month high of 19.3% below. Looking at the forward profit margin, two sectors rose w/w and three fell. These three were at record highs: Financials, Industrials, and Information Technology. These three sectors remain close: Communication Services, Consumer Discretionary, and Utilities. Consumer Staples, Materials, and Real Estate are improving somewhat from their recent multi-year lows, but Energy's is deteriorating again and Health Care's is still at a record low. Here's how the S&P 500 and its 11 sectors rank based on their current forward profit margin forecasts along with their record highs: Information Technology (29.3%, up 0.1ppt w/w to a record high, its first since September 2024 when low-margin Dell's addition to the index lowered the margin 1.3ppts from a record-high 27.6% then to 26.3%), Financials (21.2, steady w/w at a record high), Communication Services (19.7, down from its 19.8 record high during the August 7 week), Real Estate (16.6, down from its 16.8 eight-month high in early October and from its 19.2 record high in 2016), Utilities (14.9, at a 58-month high and 0.2ppt below its 15.1 record high in April 2021), S&P 500 (14.4, up 0.1ppt w/w to a new record high), Materials (11.3, up 0.1ppt w/w to a 15-month high and up 0.8ppt from 51-month low 10.5 in late February and down from a 20-month high of 11.6 in July 2023 and a 13.6 record high in June 2022), Consumer Discretionary (9.5, down 0.1ppt w/w from a 9.6 record high), Energy (8.7, down 0.1ppt w/w and up from a 55-month low of 8.5 during the May 15 week and down from its 12.8 record high in November 2022), Industrials (11.1, down 0.1ppt w/w from its 11.2 record high, which was its first since the January 2 week), Health Care (8.1, steady at a record low and down from its 11.5 record high in February 2022), and Consumer Staples

(7.1, steady w/w and up 0.4ppt from a 21-month low of 6.7 during the 9/4 week, just before Drug Retail's exit from the sector, and down from its 7.7 record high in June 2020).

Global Economic Indicators

Eurozone CPI ([link](#)): The Eurozone's CPI was unchanged at 2.1% y/y in November, down from September's six-month high of 2.2%; it was flat at 2.0% from June through August. The rate began 2025 at 2.5%; it was at 1.7% last September—which was the lowest yearly rate since April 2021. Meanwhile, the core rate in November was at 2.4% for the third month, after four months at 2.3%; it was at 2.7% in April. The headline and core CPIs are down sharply from their recent peaks of 10.6% in October 2022 and 5.7% in March 2023. Looking at the components, the services rate accelerated for the third month, from 3.1% in August to 3.5% in November. Meanwhile, the rate for food, alcohol & tobacco eased for the fourth month to 2.4% in November after climbing from 3.1% in June to 3.3% in July. The rate for non-energy industrial goods slowed for the second month to 0.5% in November, down from the 0.8% rate posted from July through September. November's yearly inflation rates for the four largest Eurozone countries were a mixed bag. The rates accelerated in Germany (2.6% from 2.3%), slowed in Italy (1.1 from 1.3), and were unchanged in Spain (at 3.2%) and France (0.8).

Germany Ifo Business Climate Index ([link](#)): “This year there are no presents for the Germany economy,” notes Ifo president Clemens Fuest. “For the Germany economy, the year ended as it started: with a disappointing Ifo index reading.” The Ifo business climate index continued to fall, sinking to a seven-month low of 87.6 in December. The report notes, “Companies are more pessimistic about the first half of 2026, while their assessment of the current situation remained unchanged. The year is ending without any sense of optimism.” By sector, the service sector sank back into negative territory, with service providers less satisfied with both current business and expectations—with one exception. The restaurant business is reporting a very strong December. The manufacturing index fell, with nearly all the sectors being affected and expectations taking a significant hit. The business climate in the trade sector deteriorated, with both the expectations and the current situation components contributing. Retailers were dissatisfied with Christmas sales, and their outlook for the first half of next year is also gloomy. In construction, the business climate index was unchanged at a low level. Companies assessed the current situation as worse, though they were less skeptical about the coming months.

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