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In this Issue...

U.S. Gas-Fired Power Genera..

THE NAVIGAT<mark>IIR</mark>

NAVIGATING THE CURRENTS OF CHANGE

- IIR Project Spending Index ...
- Amazon Readies for \$17.4 Bi..
- Join IIR for Our 2024 North...



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U.S. Gas-Fired Power Generators Bolster Plants as Demand Rises

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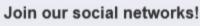
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Dec. 2023 In this Issue...

- ▶ U.S. Gas-Fired Power Genera..
- ▶ IIR Project Spending Index ..
- Amazon Readies for \$17.4 Bi.
- ▶ Join IIR for Our 2024 North..







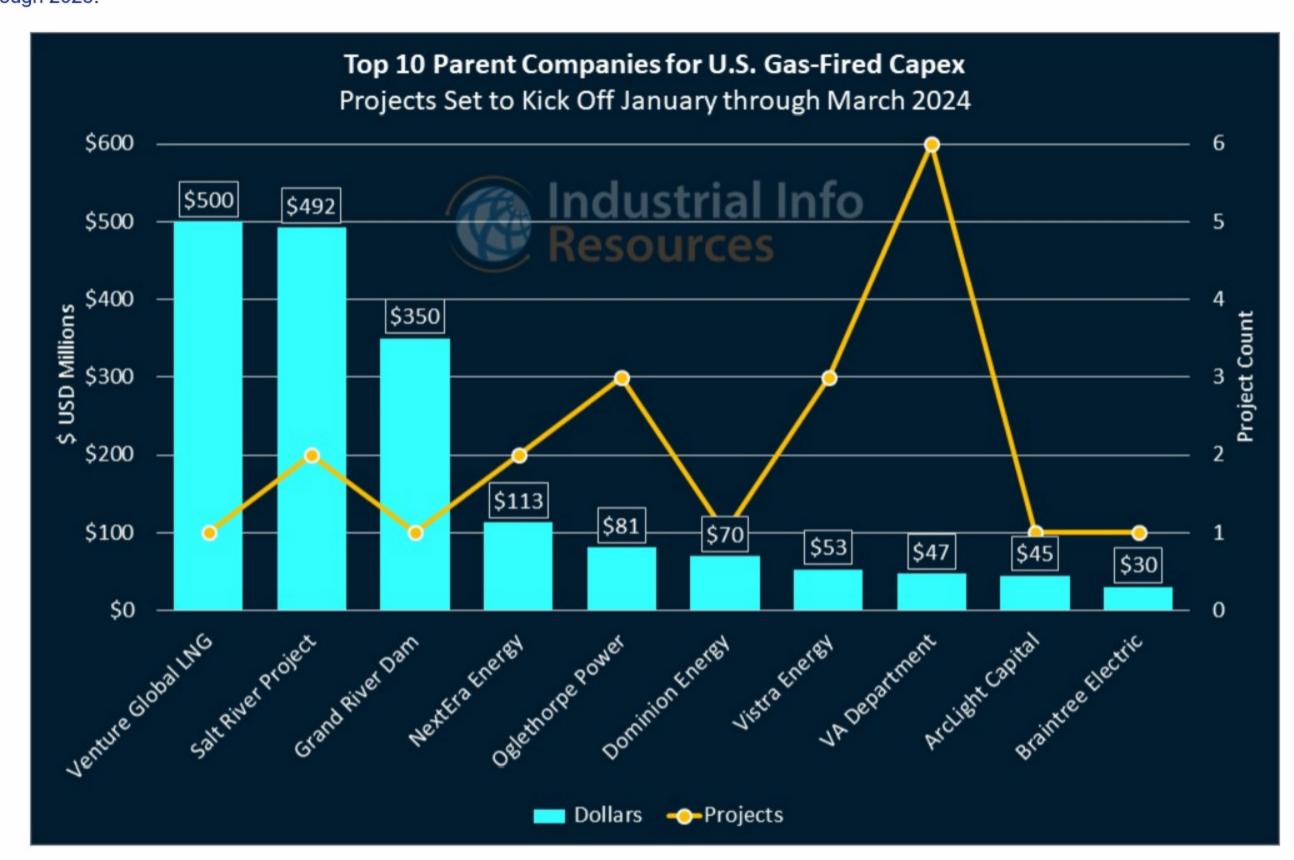




U.S. Gas-Fired Power Generators Bolster Plants as Demand Rises

U.S. natural gas demand is expected to hit record highs for full-year 2023, according to the U.S. Energy Information Administration (EIA), and likely will continue next year, before leveling off after mid-decade. Gas-fired power generation producers are responding with expansions and upgrades at their busiest facilities. Industrial Info is tracking about \$1.9 billion worth of capital-spending projects at U.S. gas-fired plants that are set to begin construction in the first quarter of 2024, more than \$1.4 billion of which is attributed to projects that Industrial Info's researchers believe have a medium-to-high likelihood (70% or more) of moving forward as planned.

From 2024 through 2025, the EIA estimates 7.7 gigawatts (GW) of U.S. gas-fired power generation capacity will begin service, following 8.6 GW estimated to be brought online in 2023 alone. For more information, see October 19, 2023, article - U.S. to Add More than 16 GW of Gas-Fired Capacity through 2025.



The highest-valued project designed to add gas-fired power generation that is set to kick off next quarter comes from the State of Oklahoma, where its largest public utility, the Grand River Dam Authority, is preparing to add the \$350 million Block 4 at the Grand River Energy Center in Chouteau, about 40 miles east of Tulsa. Developers of the 495-megawatt (MW), gas-fired, combined-cycle (NGCC) unit are keeping an eye on the future: Block 4 will replace the center's Unit 2, a 492-MW, coal-fired generator, and in coming years will be able to operate entirely or on a blend of hydrogen.

In October, Grand River Dam Authority signed an agreement with Mitsubishi Power (Yokohama, Japan) for the latter to provide an advanced-class gas turbine to the Grand River Energy Center, which the developers say points to a market shift favoring advanced-class gas turbines for peaking applications. Mitsubishi Power developed its first J-series, advanced gas turbine in the U.S. for the Grand River Energy Center's 500-MW Unit 3, which began operations in 2017. Subscribers to Industrial Info's Global Market Intelligence (GMI) Power Project and Plant databases can learn more from a detailed project report and plant profile.

Other proposed NGCC additions include a major project on the Gulf Coast: Venture Global LNG's (Arlington, Virginia) 720-MW power plant at its Calcasieu CP2 LNG Terminal in Cameron, Louisiana, which will feature an additional 25-MW gas-fired aeroderivative turbine. Venture Global plans to use the NGCC plant to power its liquefied natural gas (LNG) export facility, a two-phase project designed to eventually produce nearly 20 million metric tons per year of LNG. Subscribers can read more in a detailed plant profile and project reports on the NGCC plant and LNG Phase I and Phase II.

The Gulf Coast region is set to see its natural gas-fired generation capacity increase in years to come, following a decision by Texas voters to approve \$7.2 billion in loans and grants for gas-fired power plants. For more information, see November 10, 2023, article - Texans Approve Billions in Funding for Natural Gas Power Generation.

Southeast Energy Group, a subsidiary of Dominion Energy Incorporated (NYSE:D) (Richmond, Virginia), is planning to upgrade some of its existing gas-fired power capacity with a \$70 million repowering of its Parr Power Station in Jenkinsville, South Carolina, which will increase the facility's output from 72 to 114 MW. Southeast Energy plans to replace four combustion turbines with a pair of aeroderivative models from General Electric (NYSE:GE) (Boston, Massachusetts), which are cleaner and less costly than traditional models. The repowering is expected to wrap up toward the end of 2024. Subscribers can learn more from a detailed project report.

A smaller amount of investment is going toward environmental, social and governance (ESG) projects, which are aligned with the growing calls for a reduced dependence on fossil fuels. A subsidiary of Baxter International Incorporated (NYSE:BAX) (Deerfield, Illinois) is preparing to begin construction on an additional power unit at its inhalation anesthetics plant in Guayama, Puerto Rico, which would generate 2 MW from gas turbines and 2 MW from combined heat and power (CHP), which is estimated to produce about half the annual carbon dioxide (CO2) emissions when compared with a conventional boiler. Excess energy from the plant will go toward Puerto Rico's power grid. Subscribers can learn more from a detailed project report.

Subscribers to Industrial Info's GMI Project Database can click here for a full list of detailed reports for projects mentioned in this article, and click here for a full list of related plant profiles.

Subscribers can click here for a full list of reports for U.S. gas-fired projects that are set to begin construction in the first quarter of 2024.

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- U.S. Gas-Fired Power Genera.
- IIR Project Spending Index ...
- Amazon Readies for \$17.4 Bi.
- Join IIR for Our 2024 North...



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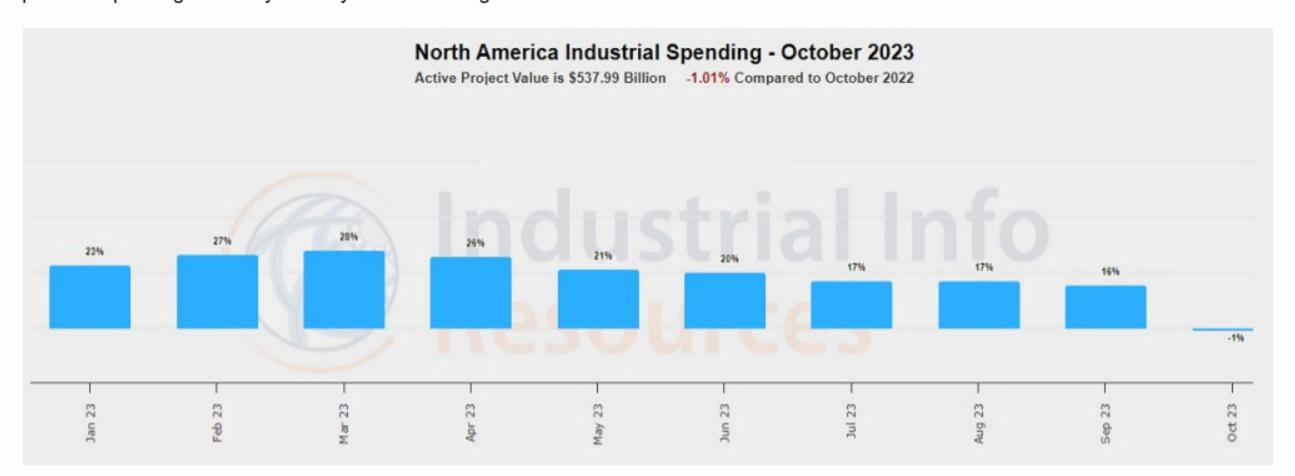




IIR Project Spending Index Slides into Negative Territory After Nearly Three Years of Growth

For the first time since December 2020, Industrial Info's latest North American Industrial Project Spending Index recorded a drop in year-over-year project spending.

The active project value for October was \$537.99 billion, down 1.01% from the same month in 2022. The Project Spending Index is a monthly indicator that compares active spending rates with the same month in the previous year to get a measure of growth or contraction in the industrial market. The index provides spending details by industry and market region.



For October, five of the 12 industries followed by Industrial Info registered spending drops from the same month in 2022. For 2023, spending has trended down since March.

One of the largest drops was felt by the Industrial Manufacturing Industry, which fell \$64.46 billion, or 30.54%, on a year-over-year basis. In September, an outlook survey by the National Association of Manufacturers (NAM) indicated that U.S. manufacturers continued to report a downtrend in expected capital expenditures. For more information, see September 18, 2023 article - U.S. Manufacturers' Capital-Spending Expectations Continue Downtrend, Despite Project Activity.

According to the U.S. Federal Reserve System's November Beige Book on current economic conditions, economic activity slowed since the previous report, with four U.S. Federal Reserve districts reporting modest growth, two indicating conditions were flat to slightly down, and six noting slight declines in activity. Retail sales, including autos, remained mixed, while sales of discretionary items and durable goods, like furniture and appliances, declined on average, "as consumers showed more price sensitivity."

Manufacturing activity was mixed, and manufacturers' outlooks weakened, according to the Beige Book, while the economic outlook for the next six to 12 months diminished over the reporting period.

In the Eleventh District, which includes Texas and parts of New Mexico and Louisiana, outlooks "worsened, and uncertainty remained elevated with numerous contacts citing geopolitical instability and high interest rates as headwinds." However, Texas manufacturing activity "expanded modestly" in October, as production increases were led by fabricated metals and machinery manufacturing. In the energy arena, "Oilfield activity was flat to up over the past six weeks. The recent spate of mergers and acquisitions continued to put slight downward pressure on activity levels."

Getting back to Industrial Info's Project Spending Index, onshore oil and gas production showed a \$26.42 billion increase in October, up 47.63% from the same month in 2022. The U.S. Energy Information Administration (EIA) recently reported that it expects North American exports of liquefied natural gas (LNG) to more than double from the current 11.4 billion cubic feet per day (Bcf/d) to 24.3 Bcf/d by the end of 2027. For more information, see November 14, 2023, article - EIA: North American LNG Exports to Double Through 2027.

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By any account, Amazon.com Incorporated (NASDAQ:AMZN) (Seattle, Washington) is one of the leading constructors of warehouse and distribution centers and data centers in the world and particularly in the U.S., where Industrial Info is tracking more than \$17.4 billion worth of projects from Amazon that are planned to kick off in 2024. A large, planned data center in Ohio pushes Amazon's planned spending in that sector to nearly \$15 billion in 2024 projects starts, with distribution and warehousing facilities, including a new air hub, making up the balance.

Virginia's proximity to Washington, D.C., has helped contribute to Amazon's project activity next year, accounting for half of all U.S. data center projects Amazon is expected to launch in 2024. The largest of these is destined for Stafford, about 40 miles southwest from the heart of D.C. Construction on the first phase of the grassroot Potomac Church Tech Center is expected to start in the second half of next year, putting it on track for an expected early-2026 completion. The facility will be built on a 50-acre site and will have two stories with 260,000 square feet. The project will help meet demand for Amazon Web Services in the area. Subscribers to Industrial Info's Global Market Intelligence (GMI) Industrial Manufacturing Project Database can click here for the full report.

Across the continent in Gilroy, California, about 80 miles southeast of San Francisco, Amazon is gearing up to begin work on a grassroot 49-megawatt (MW) data center early next year. The 218,000-square-foot facility will include a backup power generation facility consisting of 50 2.5-MW diesel-fired emergency generators. HKS Incorporated (Dallas, Texas) is performing design-engineering work on the facility, which is expected to be completed in mid-2025. Subscribers can click here for more details.

While data centers occupy more projects and overall value than its other projects, Amazon remains hard at work constructing a network of fulfillment and distribution centers that really took off after the onset COVID-19 pandemic and has only lately showed signs of slowing somewhat. Among the largest of these is the company's Project Fifi in Niagara Falls, New York, construction of which was originally planned to begin in the fourth quarter of this year but has been pushed to early 2024. The facility will be built on a 216-acre vacant lot and will include five stories encompassing more than 3 million square feet, 55 loading docks and more than 460 trailer-parking spaces. The project is expected to be completed in late 2025. Subscribers can click here for more information.

Also on the books to start construction next year is Amazon's Project Rocky, a planned 2.5 million-square-foot multi-story distribution center in Rockville, Virginia. The facility will feature 55 trailer-loading docks and 414 parking spaces for trailers. The facility is expected to be completed in 2025. Subscribers can click here for more details on the project.

After earlier this year completing a billion-dollar-plus air hub in Kentucky, Amazon is planning the expansion of a regional air facility in Lakeland, Florida, near the Lakeland Linder International Airport. The project entails constructing a 464,600-square-foot building addition, a paved truck court to accommodate 370 additional truck bays and a concrete aircraft-parking apron for three additional Boeing 767-300s. The expansion is to kick off early in the year and is expected to be completed in its second half. Subscribers can click here for more details.

Subscribers to Industrial Info's GMI Industrial Manufacturing Database can click here to view reports for all of the projects discussed in this article and click here for the related plant profiles.



Dec. 2023

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The presentations will include the following segments:

- Global Market Outlook
- Petroleum Refining & Alternative Fuels
- Midstream Gas Processing and LNG Markets
- Chemical Processing
- Electric Power
- · North America Spending Forecast

IIR staff also will be holding an interactive workshop on our products earlier in the afternoon.

We hope you are able to join us for this event! Click here to learn more and to RSVP.

