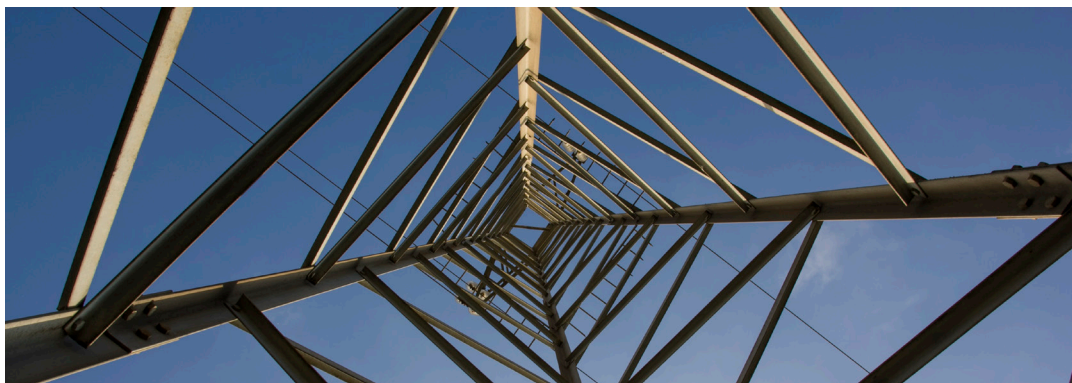


Industry Top Trends 2022

North America Regulated Utilities

Credit Quality Remains Pressured



This report does not constitute a ratings action

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What's changed?

Weakening financial measures. For the third consecutive year, financial measures weakened, reflecting record high capital spending.

Rising physical risks. Severe winter storms, hurricanes, tornadoes, and wildfires led to a weakening of credit quality.

Back to basics. Utilities sold off noncore assets, capitalizing on expanding opportunities within the lower-risk regulated utility industry.

What are the key assumptions for 2022?

High capital spending. The industry's capital spending exceeded a record \$170 billion for 2021, reflecting necessary investment in energy transformation, safety, and reliability. We expect the industry's capital expenditures will continue to gradually increase, reaching more than \$180 billion by 2024.

Consistent access to the capital markets. Because the industry will continue to experience negative discretionary cash flow, substantial outside funding is necessary to meet the industry's capital spending and dividends requirements.

No change to the corporate tax rate. A proposal to impose a minimum 15% corporate tax rate could lead to weaker financial measures.

What are the key risks around the baseline?

Inflation. Longer-term inflation would likely result in higher costs, which could lead to weaker financial measures because of regulatory lag.

Interest rates. Rising interest rates will also increase costs and weaken financial measures over the next 12-24 months.

Commodity prices. Higher commodity prices typically lead to a higher customer bill, pressuring the industry's ability to effectively manage regulatory risk.

Ratings trends and outlook

North America Regulated Utilities

Chart 1

Ratings distribution

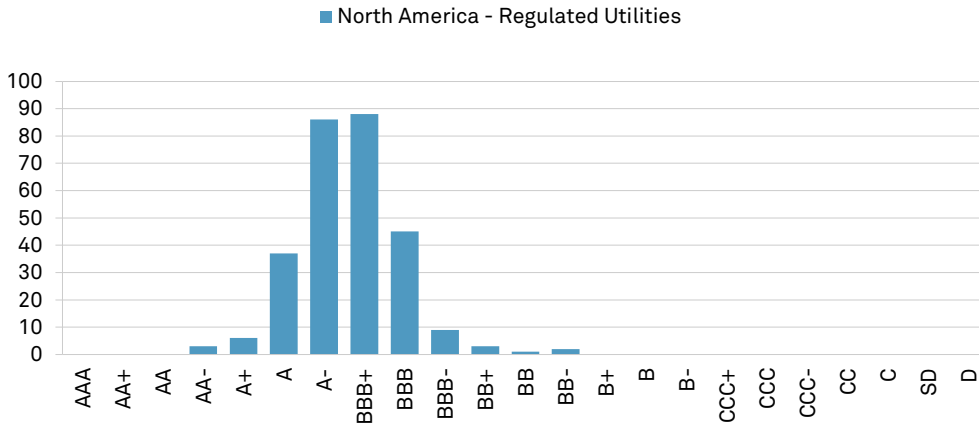


Chart 2

Ratings outlooks

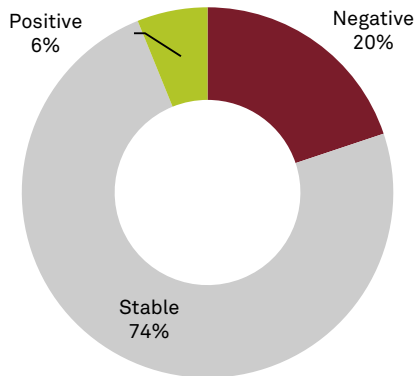
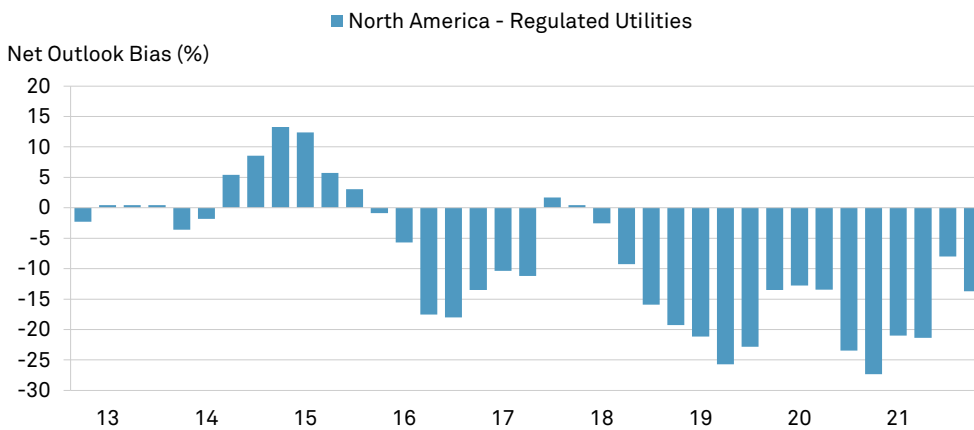


Chart 3

Ratings outlook net bias



Source: S&P Global Ratings. Ratings data measured at quarter end.

Industry credit metrics

North America Regulated Utilities

Chart 4

Debt / EBITDA (median, adjusted)

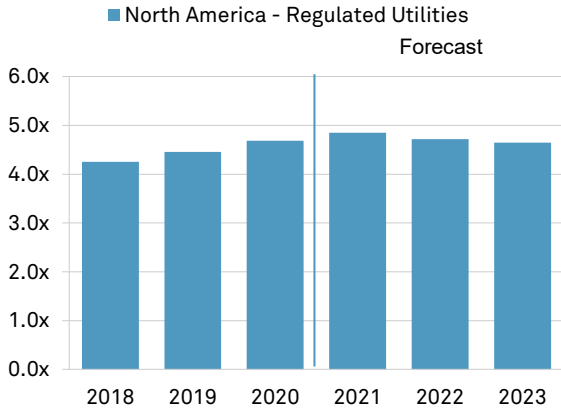


Chart 5

FFO / Debt (median, adjusted)

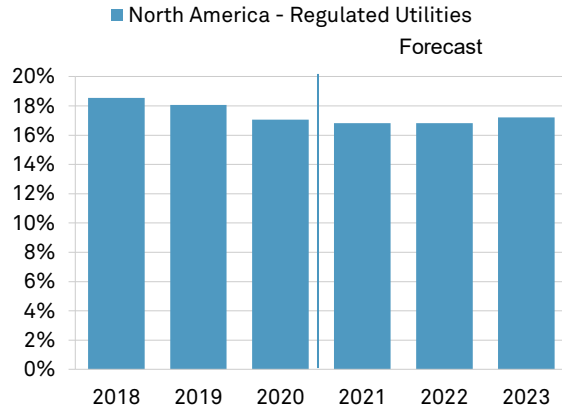


Chart 6

Cash flow and primary uses

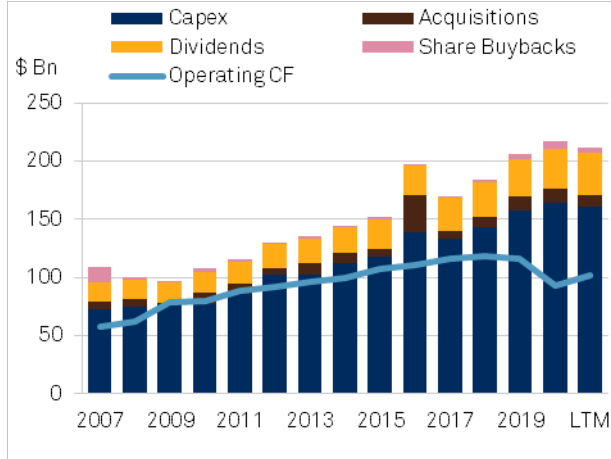
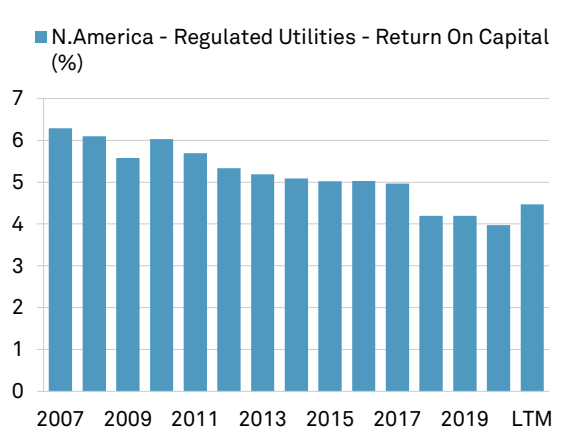


Chart 7

Return on capital employed



Source: S&P Global Ratings, S&P Global Market Intelligence. Most recent (2021) cash flow and ROCE figures are using last twelve months (LTM) data. All non-forecast figures are converted into U.S. Dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate. FFO—Funds from operations.

Industry outlook

Ratings trends and outlook

The industry outlook remains negative. For the second consecutive year, downgrades outpaced upgrades reflecting how many companies within the industry are strategically operating with only minimal financial cushion from their downgrade thresholds. Furthermore, environmental, social, and governance (ESG) credit risk factors continue to hinder the industry's credit quality. Given that about 20% of the industry has a negative outlook and only about 5% of the industry has a positive outlook, it is more likely that downgrades will continue to outpace upgrades in 2022.

Main assumptions about 2022 and beyond

1. Energy transformation

The utility industry has already made significant progress toward reducing its greenhouse gas (GHG) emissions. Over the past decade, the industry reduced its reliance on coal-fired generation by more than 50% and more than doubled its generation from renewable energy. Because of these transformative trends, the industry's GHG emissions have decreased by about 25%. Despite its achievements, the industry continues to invest in renewable energy and batteries, which will further reduce its GHG emissions over the next decade. However, pressure to accelerate this transformation could also lead to unintended consequences, such as operational issues from an over reliance on intermittent power, which could weaken financial measures and credit quality.

2. Effective management of regulatory risk

Managing regulatory risk is one of the most important elements for maintaining credit quality for regulated utilities. The challenge arises because of regulators' concern regarding the impact to the customer bill and the utility's need for the timely recovery of costs and investments. During the pandemic, many utilities either delayed their rate case filings or received rate case orders that were lower than expected, partially leading to the industry's weaker financial measures. Since COVID has subsided, utilities have increased the frequency of their rate case filings but risks regarding the effective management of regulatory risk remains. As the industry's energy transformation progresses, recovering renewable investments while simultaneously recovering earlier-than-expected retirements of coal-based generating facilities may be challenging. Rising interest rates, inflation, or higher commodity prices, would each increase the customer bill, making it even more difficult to effectively manage regulatory risk. Compound this with other large environmental costs that require recovery, such as coal ash, and managing regulatory risk could effectively become even more arduous.

3. Minimal financial cushion

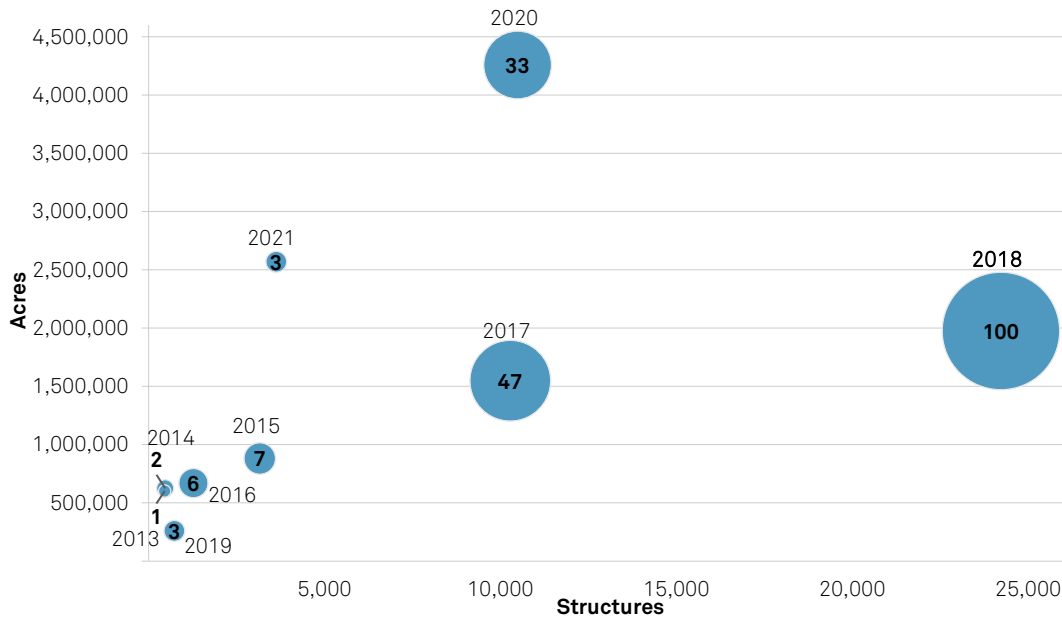
Utility cash flows tend to be more stable and predictable than most other industries. As such, an increasing percentage of the industry has been managing its financial measures with only minimal financial cushion from their downgrade threshold. While this strategy of limiting excess credit capacity works well under ordinary conditions, when unexpected risks occur or base case assumptions deviate from expectations, the utility can become susceptible to a weakening of credit quality. This has been one of the primary drivers of the industry's weakening of credit quality over the past two years.

Wildfires. Wildfire activity has expanded beyond California and into other Western U.S. states, potentially raising wildfire risk for those utilities. In California, it appears that

utilities are improving their use of technology and system hardening to reduce risk. Although the 2020 and 2021 wildfire seasons caused much devastation and destruction, California’s utilities were able to minimize their susceptibility toward causing catastrophic wildfires (see chart 8). Over the past several years, the utilities have invested billions in new technology to precisely predict the timing and location of a high-wind event and have made effective use of proactively shutting down parts of their system as an effective tool to avoid triggering a catastrophic wildfire.

Chart 8

Annual Wildfire Activity In California



Note: Bubble size and data labels represent number of fatalities for each year.
 Source: The California Department of Forestry and Fire Protection.

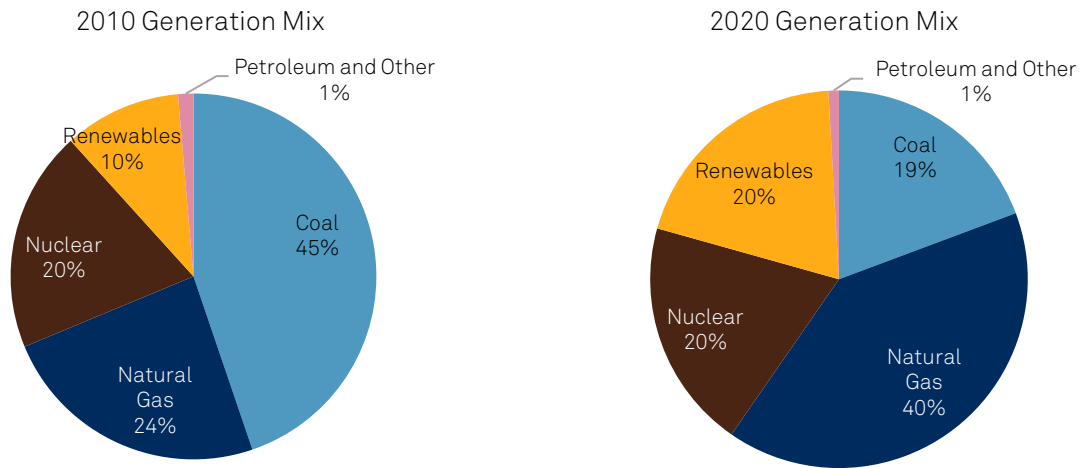
Lessons from Europe. In 2021, many European utilities faced considerably higher costs because of rising commodity prices and intermittent offshore wind turbines that did not perform as expected. This resulted in some utilities turning to coal-fired generation for supply and governments encouraging various solutions to alleviate customer bill pressure. Currently, Europe sources more electricity supply from renewables than the U.S. Partly because of these challenges, the European Commission is looking to classify nuclear power and natural gas-fired generation as a green investment.

Economy. S&P Global’s U.S. economic outlook is for GDP to grow by 3.9% in 2022 and by 2.7% in 2023. Additionally, we assess the recession risk at just 10%-15%. Should the economy weaken and fall into a recession, it would likely make it more difficult for the industry to effectively manage regulatory risk and sales growth could dampen for those utilities that disproportionately rely on large industrial customers, affecting their financial measures.

GHG emissions. While the industry overall continues to aggressively reduce its GHG emissions, utilities that disproportionately rely on coal-fired generation face higher environmental risks (see chart 9).

Chart 9

U.S. Generation Mix By Energy Source



Source: S&P Global Ratings.

Infrastructure spending plan. The infrastructure legislation allocates about \$65 billion of investment toward the electric transmission grid, \$50 billion to protect against physical risk, and about \$7.5 billion to build a network of electric vehicle charging stations. We expect grants or other financial assistance provided under the infrastructure plan to offer temporary relief for affected utilities, modestly offsetting the funding needs for affected utilities who already face elevated capital spending.

Build back better. Should the bill be enacted as proposed, it will likely accelerate the pace of renewable energy and the reduction of GHG emissions, increasing the industry’s longer-term capital spending programs. The bill could also raise the corporate tax rate, which would likely raise the customer bill but also lead to higher financial measures, reflecting the recovery of tax expense in rates.

Credit metrics and financial policy

Over the past few years, the industry’s financial measures have weakened. This reflects rising capital spending, regulatory lag, and lower authorized returns on equity. The industry’s return on capital was about 6% a decade ago and today it is closer to 4%. During the initial stages of the COVID pandemic, utilities delayed their rate case filings and many rate case orders were below expectations. More recently, energy transformation has increased capital spending, further weakening the industry’s financial measures, pressuring credit quality. We expect that energy transformation will take more than a decade to complete, likely continuing to pressure the industry’s credit quality over this timeframe.

Key risks or opportunities around the baseline

1. COVID-19

The industry has managed most of its coronavirus-related risks. It offset some of its lower commercial and industrial deliveries resulting from COVID-related fallout with higher residential deliveries. It worked with regulators to defer much of the COVID-related costs for future recovery. These actions, in conjunction with the industry's generally consistent access to the capital markets, offset much of the potential risks stemming from the pandemic. One of the enduring effects of COVID-19 was regulatory lag. The industry experienced delayed rate case filings, delayed rate case orders, and weaker-than-expected rate case outcomes. While we generally expected the pandemic would have ended in 2021, the delta and omicron variants have extended the pandemic's shelf life. Should any combination of these variants again result in the shutting down of the economy, it would likely again weaken the industry's ability to effectively manage regulatory risk.

2. The changing generation portfolio

Over the next decade, we expect transformational changes to the U.S.'s electric-generation portfolio. We expect that most of the coal-fired generation will be retired and mostly replaced with renewable energy that will account for about 40%-50% of the generation portfolio. We view natural gas as a bridge fuel that will continue to account for about 35%-40% of the generation portfolio and we expect that nuclear energy will account for about 15%-20% of the balance of the generation portfolio. This transformational change to the generation portfolio will also coincide with reducing GHG emissions by about another 40%, requiring continued robust capital spending over the next decade.

3. The future of the natural gas distribution network

Recently, New York City was the first large northeast cold-weather city to phase out the use of natural gas in new home construction. We expect that other cities will likely follow New York City's lead, constraining the industry's longer-term growth prospects. To minimize such risks, the industry will have to reduce costs, improve infrastructure, and implement various regulatory mechanisms that reduces the regulatory lag to maintain credit quality.

Net zero emissions. During 2021, most utilities committed to a net zero emissions date between 2030 and 2050. We expect that additional pressure on the industry will continue to encourage utilities to expedite their net zero date, accelerating capital spending and probably pressuring financial measures.

Offshore wind. Currently in the U.S., there is only one online offshore windfarm (Block Island Wind), but companies such as Avangrid, Eversource, Public Service Enterprise Group, and Dominion Energy could all have projects operating by 2023. In general, we view offshore wind as having higher risk than traditional onshore wind projects due to generally higher costs, complexity to build, possible siting and permit delays, supply chain risks, and higher operational risks. However, the long-term contracted nature of these projects with other utilities could mitigate some of the aforementioned risks.

Hydrogen and renewable natural gas. Utilities continue to invest in new carbon-free technologies for electricity production. We believe that some of these technologies will be blended within the natural gas distribution system and may account for up to 5% of the electric generation portfolio by 2040.

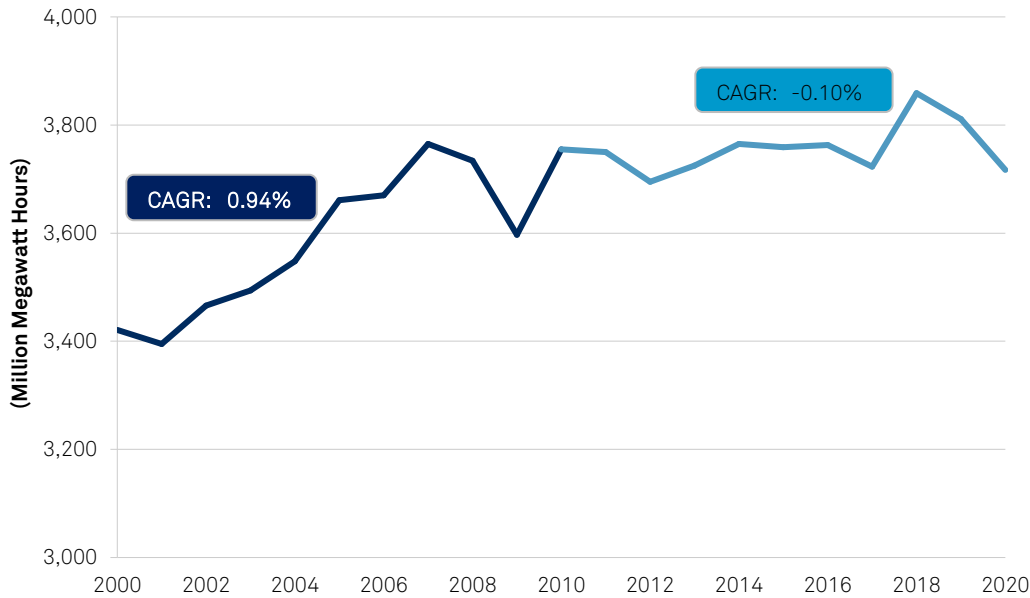
Full electrification. Many European countries have pushed for full electrification to reduce GHG emissions and we believe this trend will expand to parts of North America.

Over the longer term, we believe this will have the effect of expanding the electric business and shrinking the natural gas distribution business.

Growth of electric vehicles. While electric vehicles represented only about 3%-4% of new U.S. car sales in 2021, we expect that by 2025 electric vehicles will represent 15%-20% of new U.S. car sales, leading to higher electricity sales. This would likely offset much of the decline in electric sales the industry has experienced over the past decade because of conservation (see chart 10).

Chart 10

U.S. Total Electricity Sales



CAGR—Compound annual growth rate. Source: U.S. Energy Information Administration.

Cybersecurity. The industry’s vital importance as an infrastructure asset increases its vulnerability to cyber-attacks. The 2021 breach of the Colonial Pipeline highlights the constant cybersecurity risks facing critical infrastructure assets and the utility industry’s ongoing vigilance in this area is critical towards maintaining its high level of safety and reliability.

Related Research

- [Although U.S. Regulated Utilities' Operating Cash Flows Are Set To Rebound From COVID-19, Credit Quality Remains Pressured](#), Dec. 13, 2021
- [ESG Credit Indicator Report Card: Power Generators](#), Nov. 18, 2021
- [ESG Credit Indicator Report Card: Regulated Utility Networks](#), Nov. 18, 2021
- [A \\$1 Trillion Infrastructure Plan: Credit Perspectives For U.S. Investor-Owned Regulated Electric Utilities](#), Nov. 9, 2021
- [Views On North American Utility Regulatory Jurisdictions May Foreshadow Future Credit Trends--November 2021](#), Nov. 4, 2021
- [European Electric Utilities Face Higher Social Risks Than Their U.S. Peers](#), Oct. 13, 2021
- [The Energy Transition: Offshore Wind Picks Up](#), Sept. 20, 2021
- [Keeping The Lights On: U.S. Utilities' Exposure To Physical Climate Risks](#), Sept. 16, 2021
- [The Path To Net-Zero Emissions: Credit Perspectives On What This Means For Some U.S. Regulated Electric Utilities](#), Sept. 9, 2021
- [European Offshore Wind Will Continue To Lead Global Growth](#), Sept. 8, 2021
- [Utilities Are Spinning Off Their Midstream Assets To Support Credit Quality](#), Aug. 4, 2021
- [Will Rising Inflation Threaten North American Investor-Owned Regulated Utilities' Credit Quality?](#), July 20, 2021
- [Credit FAQ: How Are California's Wildfire Risks Affecting Utility Credit Quality?](#), July 3, 2021
- [How ESG Factors Are Shaping North American Regulated Investor-Owned Utilities' Credit Quality](#), April 28, 2021
- [The Hydrogen Economy: Storage Is Paramount For Utilities In The Long Term](#), April. 22, 2021
- [North American Regulated Utilities' Credit Quality Begins The Year On A Downward Path](#), April 7, 2021
- [Winter Storm In Texas Will Continue To Be Felt In Utilities' Credit Profiles](#), March 15, 2021

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