Rating Agency Outlook for Public Power

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MOODY'S RATINGS

Outlook for US Public Power

Florida Municipal Electric Association
July 2025

US Public Utilities Rated Universe

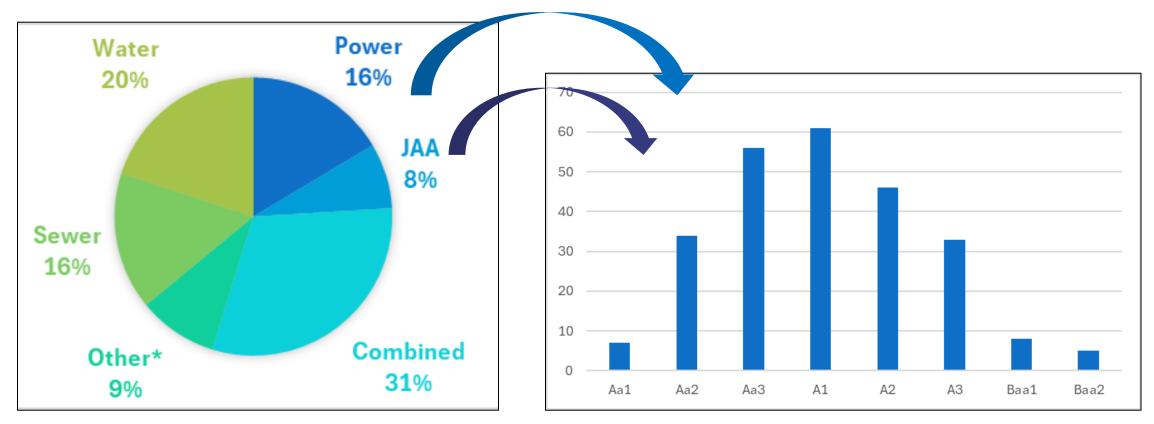
Sector Outlook

3 What We Are Watching

1 - US Public Utilities Rated Universe

Moody's rates > 1,000 US Public Utilities

A1 median rating for public power and joint action agencies



^{*}Other includes G&T Cooperatives and Gas, Solid Waste, and Stormwater Utilities



2 – Sector Outlook

US public power outlook is stable

2024 outlook stable on the sector's ability and willingness to raise rates, healthy liquidity and debt to manage higher capital spending

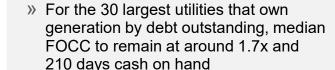
Negative

What could change outlook to negative

- » Median FOCC ratio of the 30 largest generators declines to around 1.50x
- » Inflationary pressures and higher natural gas and power costs imperil timely cost recovery, strain liquidity and weaken the sectors willingness to raise rates.

Stable

Drivers of a stable outlook



» Willingness to raise rates as needed and rely on strong liquidity to manage higher CAPEX

Positive

What could change outlook to positive

» Rate increases and stabilizing fuel and power purchase costs contribute to an improvement in liquidity and a rise in the median FOCC ratio for the 30 largest generators to above 2.0x





Credit challenges facing the US power sector

- → Higher load growth to increase near-term spending on market power purchases and investments in new generation capacity and system reliability
 - Transmission projects and new dispatchable natural gas-fired assets to support growing intermittent renewable generation in the grid
- → Load growth will drive higher operating costs, capital spending and debt
 - Inflationary environment, supply chain challenges, labor
 - Increased competition for resources, delays in interconnection
- → Extreme weather events to remain a threat to reliability
- → Affordability concerns could challenge continued willingness to increase rates
 - Concerns around affordability have been mitigated in part by meaningful reduction in natural gas prices and have provided an opportunity for base rate increases without severe customer and regulatory pushback
 - FERC approved PJM's proposal for a capacity price cap of \$325/MW-day to address affordability concerns and stabilize upcoming auction prices



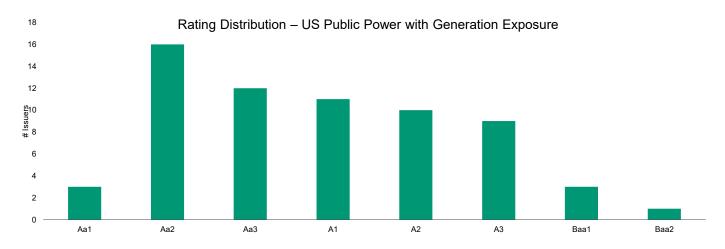
Attributes supporting sector's sound credit profile

→ Attributes supporting the sector's credit quality include:

- Service area monopoly
- Ability to raise rates without requiring regulatory approvals
- Willingness of management to raise rates when needed
- Long term amortizing debt
- Sound and stable coverage metrics, and strong internal liquidity

	Median days cash on hand (DCOH)	Median fixed obligation charge coverage (FOCC)
2025 estimated	210	1.7 x
2024 estimated	221	1.7 x
2023	219	2.0 x
2022	185	1.9 x
2021	210	2.0 x
2020	229	1.7 x

→ Median sector rating is A1 with around 75% of public power issuers falling in the mid-A to mid-Aa rating range

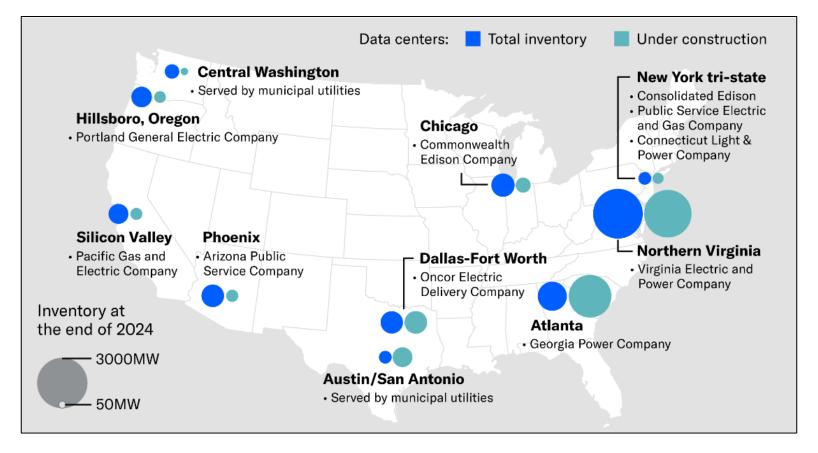




3 – What We Are Watching

Data Centers: Significant Growth Underway

Managing overbuild risk is critical as utilities accelerate grid upgrades to support the surging energy needs of data centers



Source: CBRE North America Data Center Trends H2 2024 and Moody's Ratings:



Nuclear Energy Renaissance

Despite growing interest and support, the costs and complexity of construction are significant

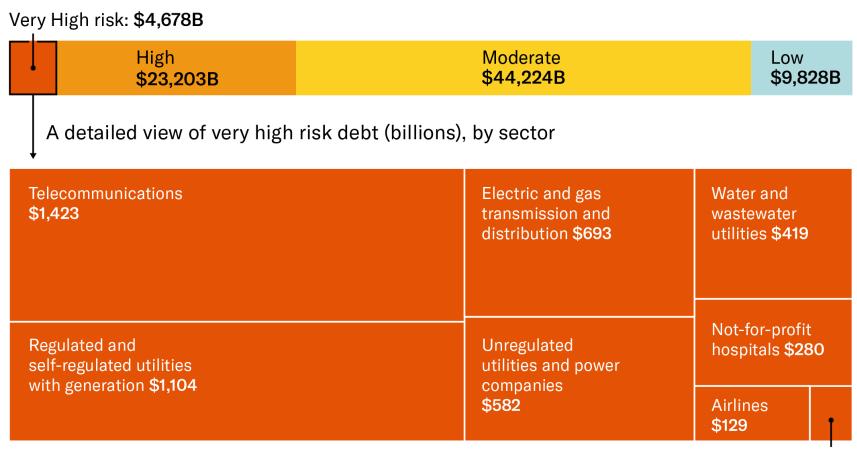
- → **Strategic Role**: Nuclear is a key low-carbon, efficient baseload power source amid rising electricity demand. In 2024, the Department of Energy set targets to triple nuclear energy capacity by adding 200GW by 2050.
- → Construction Risk: First-of-a-kind reactors face delays and cost overruns; policy support is crucial for growth.
- → **SMRs:** Small Modular Reactors offer flexible, clean energy options for hard-to-decarbonize sectors like shipping.
- → **Public Perception**: Advancements and safety records may ease public concerns over time.

→ Nuclear plants in the news include:

- → Vogtle Units 3 and 4 (GA)
- → Crane Clean Energy Center (Formerly Three Mile Island Unit 1) (PA)
- → Clinton Clean Energy Center (IL)
- → Palisades Nuclear Plant (MI)
- → Numerous plans for small modular reactors (SMRs)



Public Power Utilities face Very High cyber risk



Power generation projects: \$48



Thank you

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U.S. Public Power Outlook: Climate Events, Inflation, and Capital Spending Pressures Underlie Negative Rating Trends







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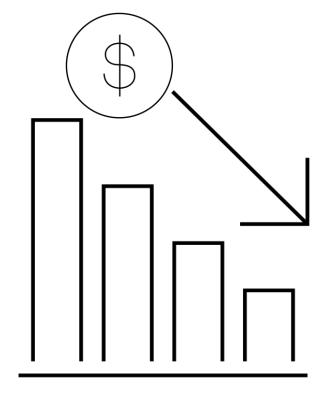
July 23, 2025

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Public Power | Sector Outlook

Negative

- Inflationary environment / Rate affordability / Constraints on ratemaking flexibility
- Costs of strengthening infrastructure to prevent and mitigate climate events (wildfires, polar vortices, heat, hurricanes, flooding, etc.)
- Costs of implementing environmental mandates (federal and state – where applicable)
- Costs of meeting load growth
- Exposures to potential climate event liability claims



Public Power Rating Actions as a Percent of the Rated Portfolio

2024:

- Upgrades
 - 3% of the rated portfolio
- Downgrades
 - 6% of the rated portfolio

2025 YTD:

- Upgrades
 - 1% of the rated portfolio
- Downgrades
 - 3% of the rated portfolio



Public Power Rated Florida Public Power Utilities' Exhibit Resilience

2024:

- Upgrades
 - 1
- Downgrades
 - 0

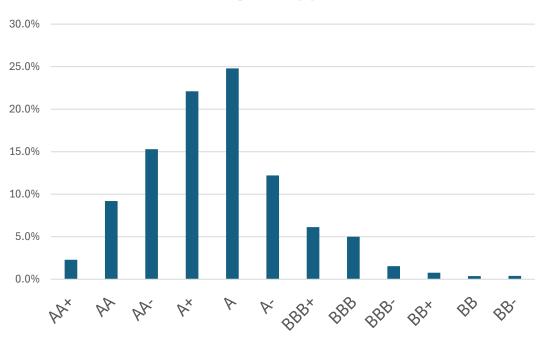
2025 YTD:

- Upgrades
 - 0
- Downgrades
 - (

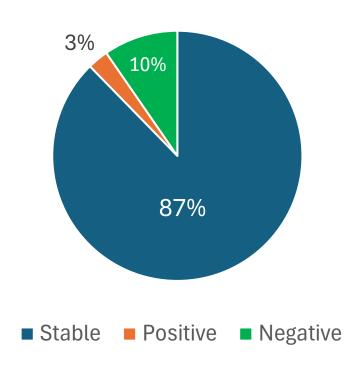


Public Power The Overall U.S. Public Power Ratings Distribution Remains Sound

Ratings Distribution - Not for Profit Public Power and Electric Cooperative Utilities



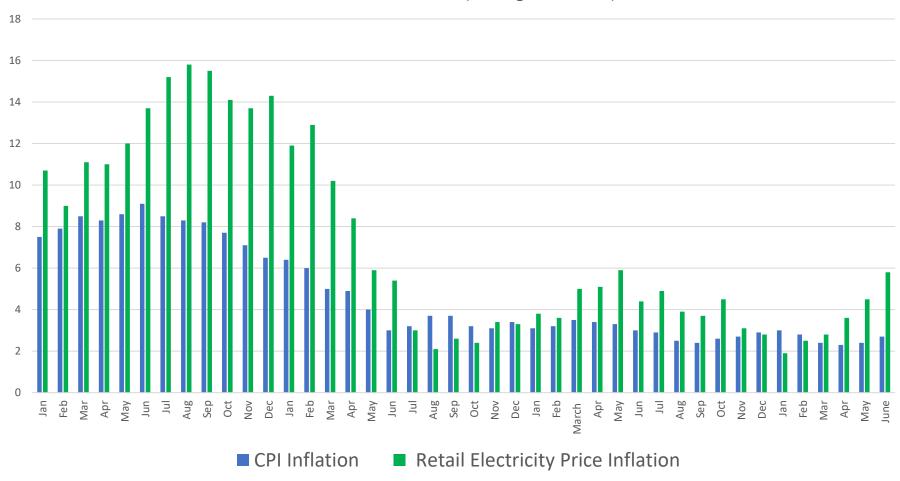
Rating Outlook Distribution



Public Power Inflationary Pressures are Eroding Ratemaking Flexibility: Retail Electric Rate Increases Outpace CPI Inflation

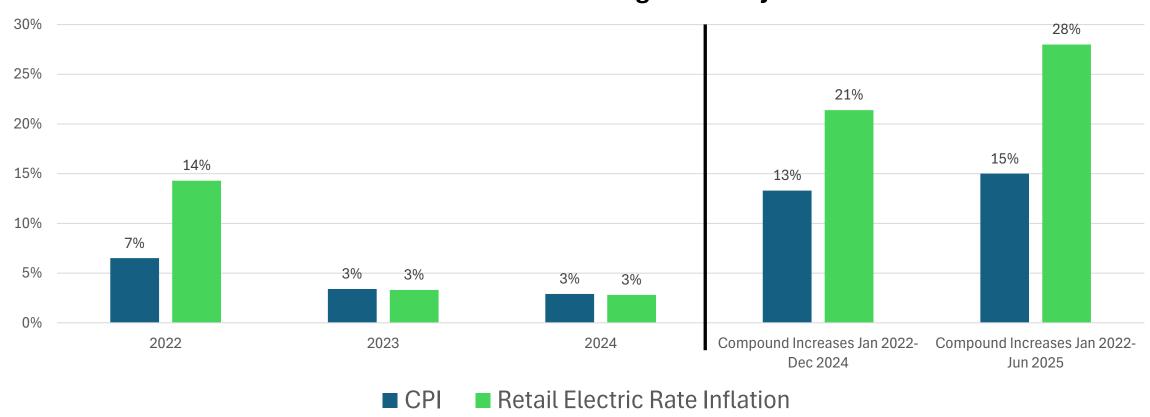
Retail Electricity Price Change (%) Versus CPI

Jan 2022 – June 2025 (Trailing 12 Months)



Public Power | Multi-year Cumulative Effect: Compound Inflationary Increases in CPI vs Retail Electricity Rates

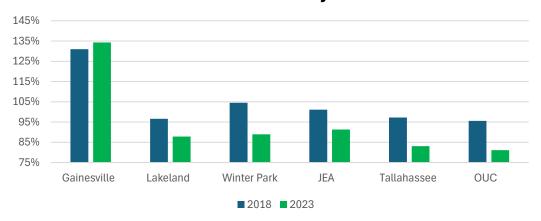
Retail Electricity Prices Have Outpaced CPI and Diminish Ratemaking Flexibility



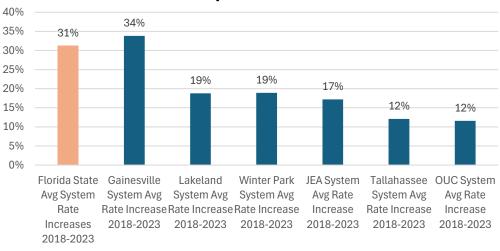
Source: Bureau of Labor Statistics

Public Power Examples of Florida Municipal Utilities Exhibiting Improving Relative Rate Competitiveness But Diminishing Affordability

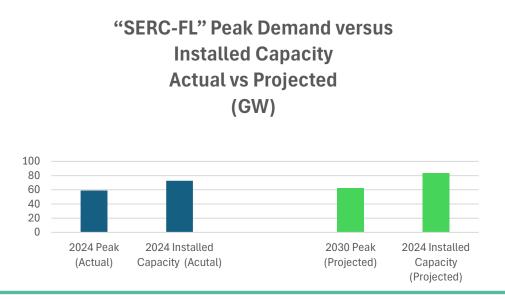
Generally Improving Rate Comparability Versus the State's Average System Rate Masks Rate Increases and Consumer Affordability Pressures

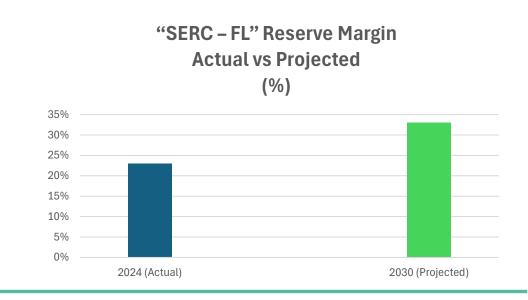


Five-Year Cumulative Increases in Select Florida Municipal Utilities' Electric Rates

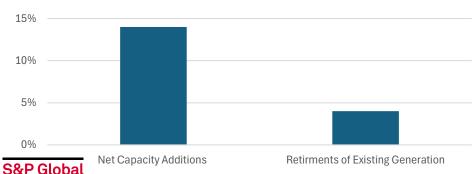


Public Power | Projected Florida Infrastructure Investments Could Exacerbate Affordability Pressures





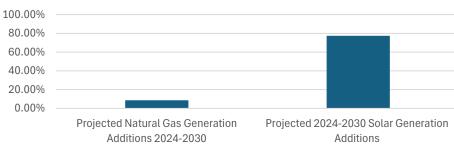




Source: U.S. Department of Energy

Ratings

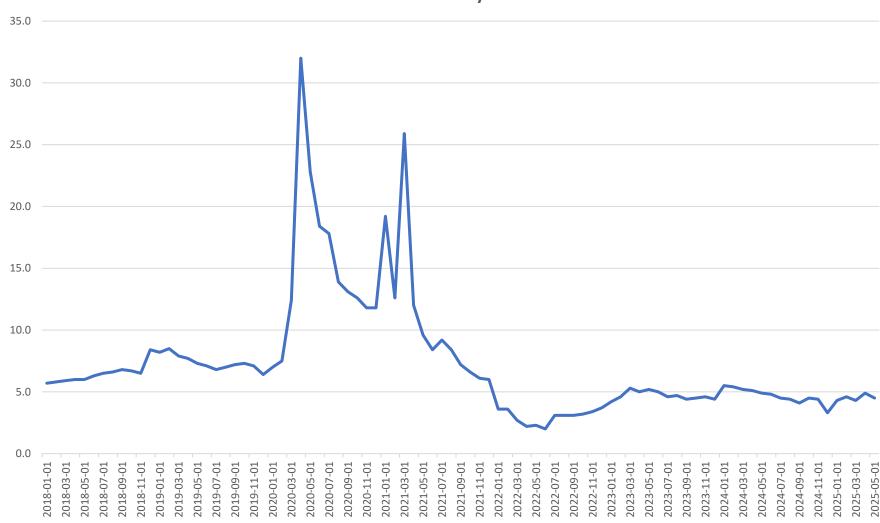




Public Power | Affordability: The Personal Saving Rate Trails Pre-Pandemic Levels

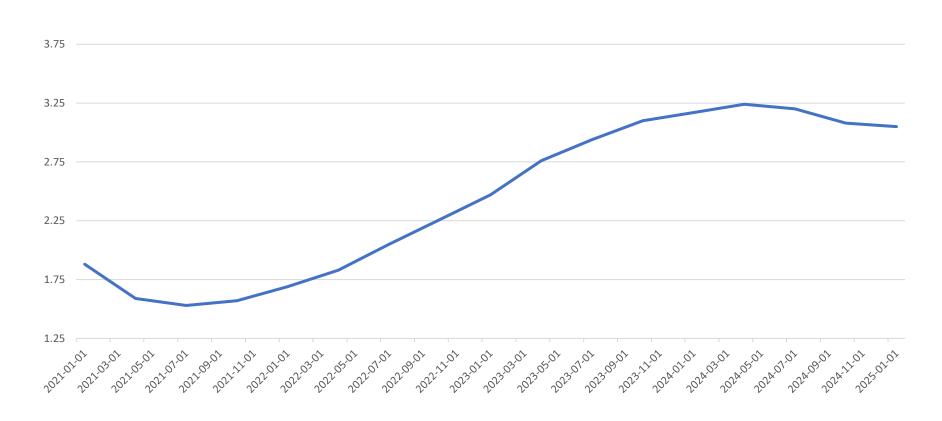
Personal Saving Rate (%)

Jan 2018 - May 2025



Public Power | Affordability: Credit Card Delinquencies are at a 10-Year High

Elevated Credit Card Delinquencies (%) Reflect Consumers' Financial Strains Jan 2021 – Jan 2025



Public Power As Economic Pressures Increase, The Right to Exercise Autonomous Ratemaking Authority and a Willingness to Perpetuate Historical Financial Performance are Diverging



Public Power | Profile of Downgraded Utilities (2024)

Median fixed charge coverage of utilities downgraded in 2024:

1.0x

Median days liquidity of utilities downgraded in 2024:

74

Median fixed charge coverage of rated not-for-profit retail electric portfolio:

1.5x

Median days liquidity of rated not-for-profit retail electric portfolio:

168

Public Power Profile of Downgraded Utilities (2024) – Smaller Utilities Tend to be Less Able to Absorb or Socialize Higher Costs than their Larger Counterparts

Median number of customers of utilities downgraded in 2024:

Median number of customers of rated retail not-for-profit electric utilities:

13,888

16,892

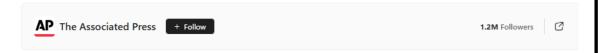
Average Number of Customers
Among Rated Public Power Utilities:

90,600



Public Power | Mounting Economic and Political Pressures are Likely to Compound Affordability Considerations

<u>LIHEAP</u>



Trump administration fires staff of program that helps lowincome households pay for heat

April 1, 2025

Tariffs

THE WALL STREET JOURNAL.

How Tariffs Could Shock America's Power System

Transformers used in power grids are especially vulnerable to trade disruptions

By Jinjoo Lee Follow Feb. 20, 2025 7:00 am ET

Legislation



Public Power | Tariff Costs Are Influencing Inflation

- Tariffs could adversely affect the supply chain and the cost and availability of materials critical to utilities engaged in a build cycle
- The breadth of international trading partners that tariffs target, limits utilities' options for securing alternative suppliers
- Tariff-driven U.S. economic volatility could lead to costlier and tighter financing conditions





Public Power | Legislation: The One Big Beautiful Bill Act

- The bill either removes, dilutes, or truncates tax incentives for clean energy investments
- Not-for-profit utilities' ability to monetize credits requires commencing construction within an aggressive time frame.
 - Significant transmission interconnection and supply chain backlogs could frustrate utilities' abilities to meet construction commencement milestones.
- FEOC (Foreign Entity of Concern) considerations can also present significant barriers to monetizing tax credits because China is a major supplier of electric sector infrastructure and material.
- The loss of access to tax credits could compound consumer rate affordability issues as utilities add renewable generation to supplement production capacity.

Public Power | Averting and Responding to More Frequent, Severe, and Costly Climate Events are Adding to Financial Exposures

Wildfires



Hurricanes







Flooding



Extreme Heat



Public Power | Outlook: Financial Pressures and Their Mitigants – Balancing Rising Costs, Affordability, and Utilities' Financial Resilience

- Affordability exposures remain prominent
 - Inflationary pressures borne by utilities and their customers
 - Natural gas prices are rising and past reductions in natural gas prices were eclipsed by increasing costs of labor, materials, and debt
- The candidate versus the incumbent
 - BLS data shows that savings have not materialized . . . yet (?)
- Utility long-term planning horizons and resource commitments
 - Responses to April 2024's EPA emissions and byproduct rules
 - Utilities face legal and strategic barriers to abandoning infrastructure commitments and face a pendulum of vacillating environmental stringencies of successive federal administrations
- Beyond Florida, restrictive state regulations might survive federal easing
- Persistent load growth, climate events, emissions regulations, will continue to have inflationary effects
- Yet, despite these exposures, S&P's ratings distribution for public power utilities remains strong, reflecting financial metrics that broadly provide utilities with resilience to withstand increasing costs and ratemaking flexibility reductions.



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"U.S. Presidential Election Could Have Material Credit Implications"





U.S. Presidential Election: Key Cross-Sector Credit Themes (July 8, 2024)

- There is bipartisan support for trade protectionism and using tariffs, subsidies and incentives as part of a broader strategy to promote reshoring.
 - · Lower economic growth
 - Supply chain interruptions
 - Inflationary effect on imports
- Despite material distinctions on revenue and expenditure policy between parties, no change in U.S. fiscal position is expected; Large deficits and rising public debt remain Fitch's base case.
 - Increasing ratio of debt/GDP
 - Changes in tax policy
 - · Debt ceiling brinksmanship
- Public statements from Republican leaders indicate a strong willingness to rollback climate related policies and regulation.
 - Reduced infrastructure spending
 - Repeal of IRA and/or IIJA
 - Reduced support for public assistance for climate-related disasters and changes to FEMA



U.S. Public Power and Electric Cooperatives Outlook 2025 Neutral

U.S. Public Power and Electric Cooperatives Outlook 2025

Core Credit Drivers: Public Power

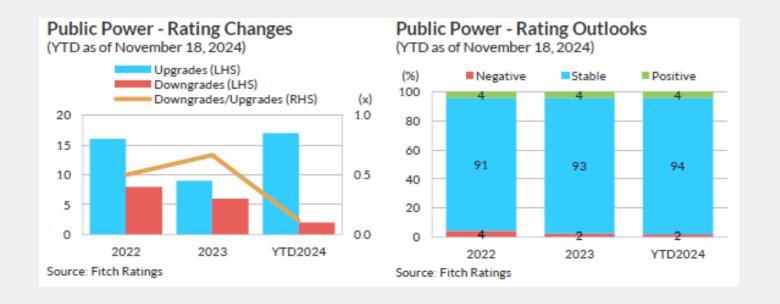
	Revenues				Expen	ditures	Financial profile			
Sub-sectors	Personal income/ affordability	Real estate values	Demand/ volumes	Labor costs	Labor availability	Non-labor operating costs	input	Leverage	Cost of debt	Financial reserves and liquidity
Public Power	↔	NM	7	\leftrightarrow	↔	↔	\leftrightarrow	\leftrightarrow	7	↔

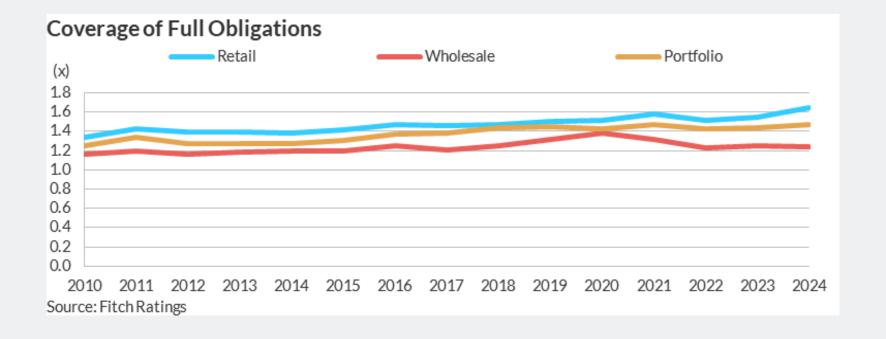
[†] Improving - High relevance. → Improving - Moderate relevance. ↔ Neutral. > Deteriorating - Moderate relevance.

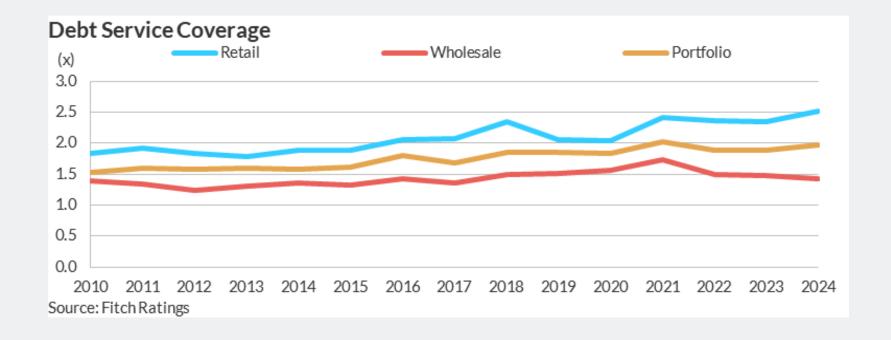
[↓] Deteriorating — High relevance. NM – Not material.

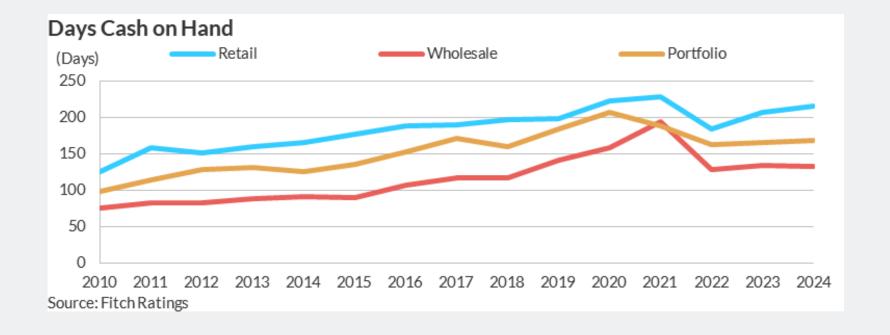
Source: Fitch Ratings

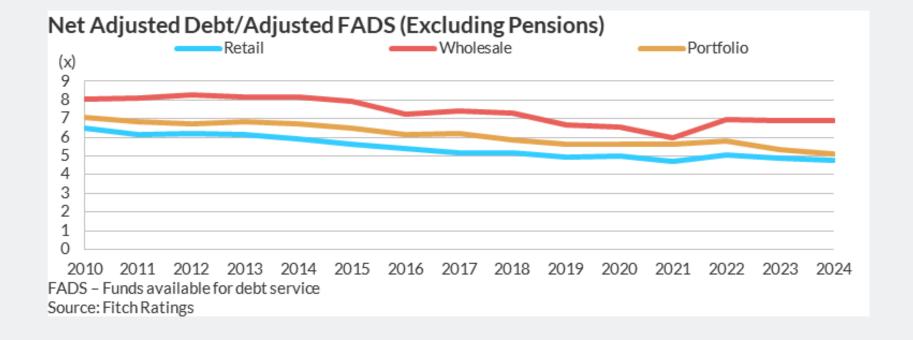
U.S. Public Power and Cooperative Rating Actions











"US 'Liberation Day' tariff hikes were far worse than expected."

"Prospects for the world economy are not looking quite as bad as they did mid-April, but we are still expecting a sharp slowdown induced by the trade war."

- Fitch Ratings

U.S. Public Power and Cooperative Rating Actions

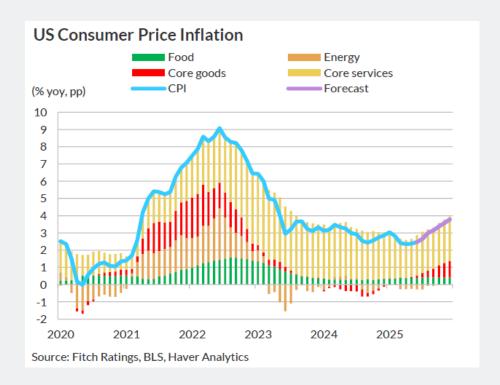
	077	Direct l	mpacts		Indirect	<u>Impacts</u>	Financial	Overall Credit Impact
	Federal Spending Cuts	Trade War	Mass Deportations	Federal Job Cuts	Financial Market Volatility	Economic Effects	Impact (Given Issuer Response)	
States	High				Moderate	Elevated	Moderate	Moderate
Local Governments	Low	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
School Districts	Moderate	Low	Moderate	Low	Moderate	Moderate	Moderate	Moderate
Public Power	Low	Elevated	Moderate	Low	Low	Low	Moderate	Moderate
Water & Sewer	Low	Elevated	Moderate	Low	Low	Low	Moderate	Moderate
Transportation	Moderate	Elevated	Low	Low	Low	Moderate	Moderate	Moderate
Hospitals	High	Moderate	Moderate	Low	Elevated	Moderate	Moderate	Elevated
Life Plan Communities	Low	Moderate	Moderate	Low	Elevated	Low	Moderate	Moderate
Higher Education	Elevated	Low	Moderate	Low	Elevated	Low	Moderate	Elevated
Community Development & Social Lending	Elevated	Low	Low	Elevated	Low	Elevated	Moderate	Moderate
USPF overall	Moderate	Moderate	Moderate	Low	Elevated	Low	Moderate	Moderate

Source: Fitch Ratings





- Pressures on operating costs are expected to return, given tariff-related trade shocks and higher expectations for inflation; Fitch expects rates of 3.8% in 2025, up from 2.9% in 2024;
- Limited scope for import substitution or trade diversion in the near term; Adverse supply shock in the US could be marked.
- Little evidence so far of a tariff-induced increase in core goods prices; But inflation is still expected to rise as goods prices pick up.
- Inflation is expected to subside to 3.4% in 2026.



- Fitch's base case natural gas prices were raised to \$3.60/mcf (cubic feet) for 2025 and \$3.5/mcf for 2026 last month; Prices remain generally unchanged at \$2.75/mcf over the longer term.
- Recent price assumption adjustments reflect increasing exports and reducing storage levels.
- This follows prices of \$2.2/mcf in 2024.

Oil and	l Gas	Price	Assı	umptions
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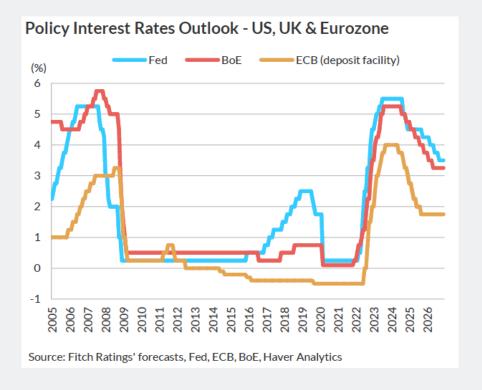
	2024	202	25	202	26	202	27	202	28	Mid-c	ycle
	Actual	Old	New	Old	New	Old	New	Old	New	Old	New
Base Case											
Brent (USD/bbl)	80.5	65.0	70.0	65.0	65.0	65.0	65.0	60.0	60.0	60.0	60.0
WTI (USD/bbl)	76.6	60.0	65.0	60.0	60.0	60.0	60.0	57.0	57.0	57.0	57.0
Henry Hub (USD/mcf)	2.2	3.25	3.60	3.00	3.50	2.75	3.00	2.75	2.75	2.75	2.75
TTF (USD/mcf)	11.0	12.0	12.0	8.0	8.0	7.0	7.0	7.0	7.0	5.0	5.0
Stress Case											
Brent (USD/bbl)		35.0	35.0	45.0	45.0	48.0	48.0	48.0	48.0	48.0	48.0
WTI (USD/bbl)		32.0	32.0	42.0	42.0	45.0	45.0	45.0	45.0	45.0	45.0
Henry Hub (USD/mcf)		2.5	3.0	2.25	2.5	2.25	2.25	2.25	2.25	2.25	2.25
TTF (USD/mcf)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.5	4.5

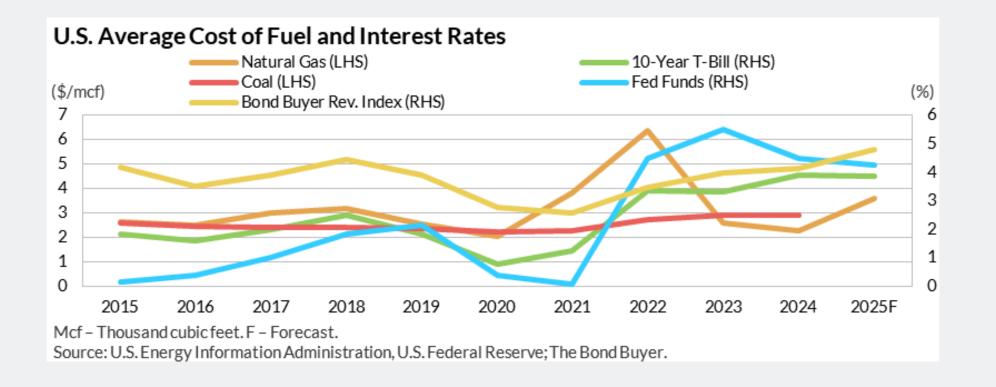
Assumptions as of June 2025.

 $Bbl: barrel; mcf: thousand \ cubic \ feet; TTF: Title \ Transfer \ Facility; WTI: West \ Texas \ Intermediate.$

Source: Fitch Ratings

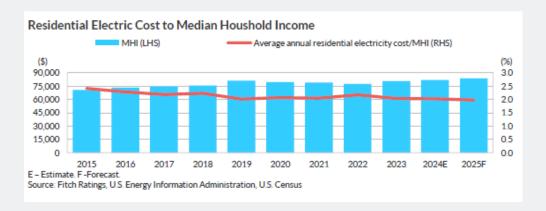
- Expectations for lower interest rates have eased somewhat in 2025. While Fitch expects policy rates to continue their downward trend, future cuts will be delayed until 4Q25 (4.25% at YE25); Further easing is expected in 2026 (3.5% at YE26).
- 10-year Treasury yields are expected to remain unchanged at roughly 4.5%.

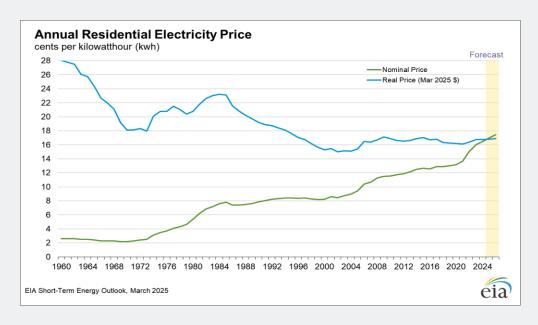




Affordability Ratios Could Weaken Modestly

- Affordability was relatively stable in 2024 but could weaken modestly in 2025 and 2026 if real median household income (MHI) growth slows
- Electric costs were unchanged at 2.04% of MHI in 2024 and should remain under 2.08% through 2026, even with no MHI growth.
- Ratios remain well below the levels observed during the great recession (2.5% to 2.7%).
- Real average residential electric prices have remained relatively unchanged since 2007.
- Changes in ratios will likely be tied to changes in real MHI.







Affordability Ratios Could Weaken Modestly

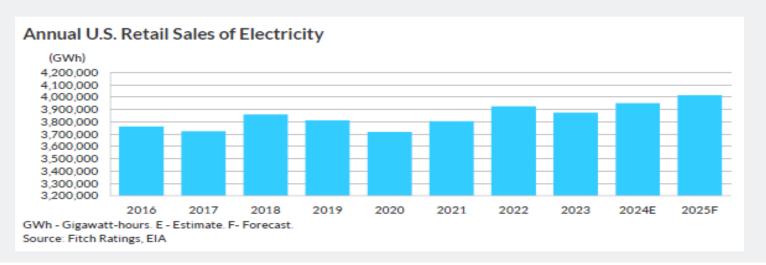
- Fitch recently revised its US GDP forecast upward modestly to 1.5% in 2025 and 2026, following the de-escalation of trade tensions with China in May; Nevertheless, growth is expected to slow sharply this year.
- "Signs are...emerging of an underlying slowdown. Consumption growth slowed to 1,6% annualized in the three months to April...and retail sales were weak in May." (Fitch Ratings, June 26, 2025)

(%)	Annual Avg. 2020-2024	2024	2025F	2026F	2027F
GDP	2.4	2.8	1.5	1.5	2.1
Consumer spending	2.9	2.8	2.0	1.5	2.1
Fixed investment	2.8	3.7	1.3	0.4	2.0
Net trade (contribution pp)	-0.4	-0.4	-1.1	0.2	0.0
CPI inflation (end-year)	4.0	2.9	3.8	3.4	2.4
Unemployment rate	5.0	4.0	4.4	4.9	4.8
Policy interest rate (end-year)	2.05	4.50	4.25	3.50	3.00
Exchange rate, USDEUR (end-year)	0.90	0.96	0.89	0.89	0.89



Electric Demand is Growing...But by How Much and When?

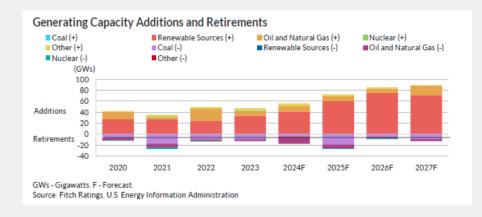
- U.S. electricity demand, which has stayed relatively flat over the last two decades, is poised to grow between 2.0%-2.5% annually through 2030, well above the 0.2% growth rate since 2010.
- Data center and Al-related demand is expected to drive growth; Data centers are expected to account for between 5%-9% of U.S. power demand by 2030, up from about 4% currently.
- Resurgence of manufacturing and industrial electrification will further drive demand; The IRA and CHIPS
 and Science Act have created an impetus for onshoring clean energy and semiconductor manufacturing.
- Electric vehicles are a small but fast-growing part of the U.S. transportation fleet; As penetration increases, so will the demand for electricity to charge them.
- Near-term demand could be tempered by global trade war and lower economic growth, but 2025Q1 sales up 4.9% over 2024Q1.

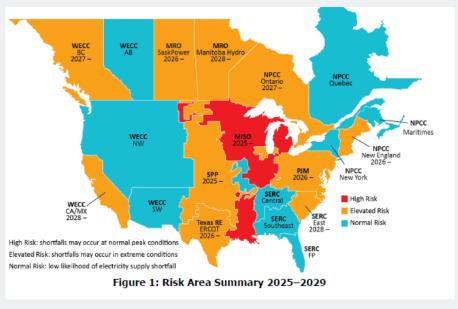




Capacity and Reliability Concerns Remain

- Risks related to regional generating capacity constraints and energy shortfalls remain and could result in market dislocation.
- Projected capacity needs to offset plant closures and meet growing demand are aggressive; EIA projects 2024-2027 capacity additions that are 52% higher than actual capacity added during 2020-2023.
- Extreme temperatures and burgeoning data- and AI-related demand could drive record peak demand for electricity; While clean energy targets, plant retirements, wildfire risks and supply chain issues could frustrate resource availability and development.
- Supply/demand imbalances and periodic market dislocations could significantly increase the price of market energy and overall power costs weakening financial performance and credit quality.





Source: North American Electric Reliability Corporation



Looser Environmental Regulations Could Facilitate Resource Planning

- EPA recently announced its intention to reconsider environmental regulations on power plants (Clean Power Plan 2.0), Mercury and Air Toxic Standards, effluent limitations and guidelines and greenhouse gas reporting requirements.
- Collectively, these efforts could facilitate the sector's ability to meet growing demand.
- A more relaxed timetable for asset retirements. and emission reduction strategies could moderate capital spending, bolster regional reserve margins and reduce exposure to market dislocation and price spikes.
- State- and local-led initiatives, together with proposals and policies aimed at limiting investment in thermal coal, will continue to drive certain issuers toward strategies promoting lower emissions and decarbonization

EPA Announces Action to Address Costly Obama, Biden "Climate" Measurements (Social Cost of Carbon)

March 12, 2025

Trump EPA Announces Path Forward on **National Air Quality Standards for** Particulate Matter (PM2.5) to Aid Manufacturing, Small Businesses March 12, 2025

Trump EPA to Reconsider Biden-Harris MATS Regulation That Targeted Coal-Fired Power Plants to be Shut Down

March 12, 2025



Reduced support for public assistance for climate-related disasters and changes to FEMA is a concern

FITCH WIRE

US Public Finance Issuers Broadly Resilient to Federal Policy Pressure

Thu 08 May 2025 - 9:50 AM ET

FITCH WIRE

US Public Finance Credits Resilient Amid Hurricane Helene Recovery

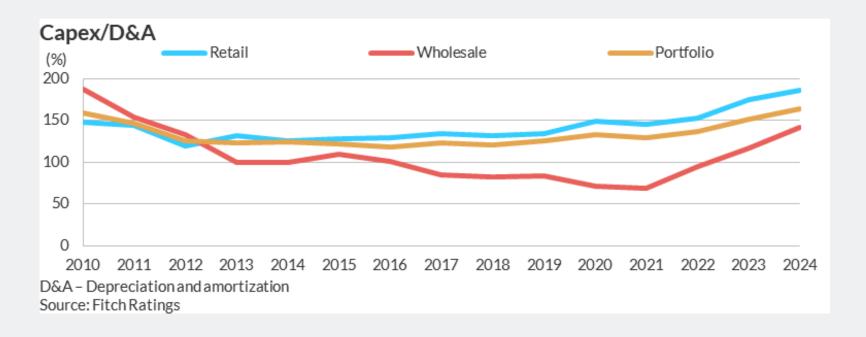
Thu 03 Oct 2024 - 11:03 AM ET

"Timely federal intervention, primarily through the Federal Emergency Management Agency (FEMA), is key to supporting fiscal stability for [entities] affected by...storm[s]."

"Power utilities typically manage costs associated with extreme weather events through robust cash reserves and liquidity facilities designed to bridge the timing between restoration costs and reimbursement by FEMA. FEMA typically reimburses around 75% of restoration costs."

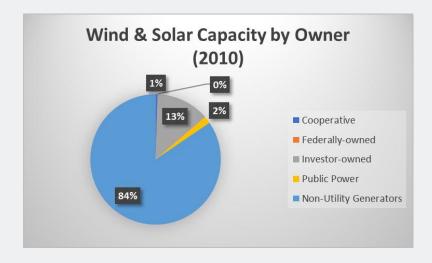
Capital Spending is Growing

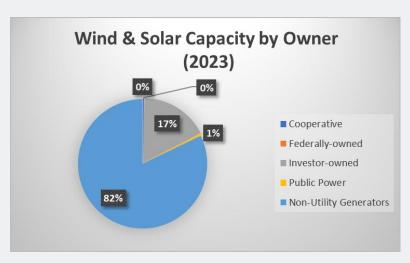
- Capital spending across the utility sector has grown dramatically since 2021.
- Rates of capital investment for public and cooperative utilities are similarly higher, with the median ratio of capital investment to depreciation for retail systems improving to over 185% in 2024, the highest level since 2010; The ratio for wholesale systems rose for the third year in a row to 142% in 2024 from 117% in 2023.
- Investment over the near term should continue to grow, not only because of growing electric demand and the need for additional infrastructure, but also because of rising costs for materials and labor.
- Higher capital spending will drive increased borrowing but is unlikely to materially weaken credit quality.



Capital Spending is Growing

- Capital spending related to new generating capacity and the energy transition will continue to be dominated by private sector investment.
- In 2023, federal and public power systems owned roughly 304 MWs of solar capacity and 773 MWs of wind capacity; IOU and Non-Utility Generators owned 14,197 MWs and 78,385 MWs, and 27,207 MWs and 119,862 MWs, respectively.
- Overall, recent figures indicate that federal, public and cooperative power systems currently own 21% of all U.S. generating capacity, but account for only 4% of proposed construction.
- The introduction of direct pay tax credits through the Inflation Reduction Act (IRA) is expected to spur greater direct investment in clean energy projects across the sector.





Source: APPA, EIA, Fitch Ratings



Noteworthy Rating Actions – Los Angeles Department of Water & Power

- Rating Watch triggered by devastating wildfires;
 Fires had not been contained, damage to utility infrastructure was unknown, source of ignition had not been determined.
- Concerns related to potential wildfire liabilities and CA's application of inverse condemnation, liquidity, billing and collection trends, capital demands and rate flexibility.
- Affirmation based on the extinguishment of the wildfire, the loss of less than 1% of its customer base and an estimated cost of direct physical damage of only \$78 million to the electric system.
- Negative Outlook reflects continuing source of ignition investigation by ATF, litigation filed against the city and utility systems, account for only 4% of proposed construction.
- Effect of a large liability is expected to be tempered by legislative support or a statefacilitated mechanism in line past support for wildfire liabilities.

Rating Action Commentary

Fitch Places Los Angeles, LADWP and Related Ratings on Rating Watch Negative Due to Wildfires

Fri 17 January 2025 - 1:19 PM ET

Rating Action Commentary

Fitch Affirms 'AA-' on LADWP, CA's Power Rev Bonds; RWN Removed; Outlook Negative

Tue 08 April 2025 - 5:17 PM ET

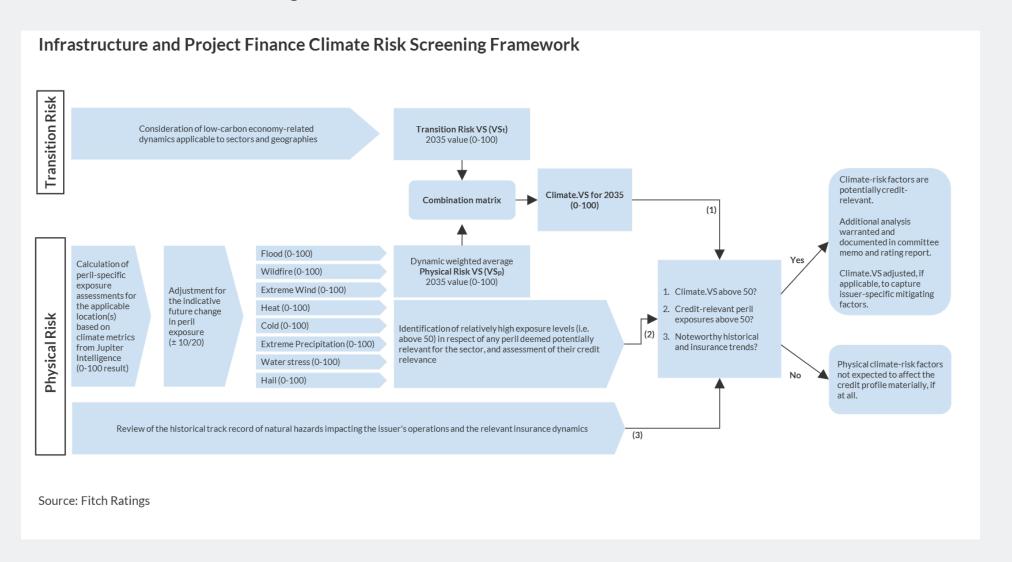


Climate Risk in Ratings

- Fitch is contemplating introducing a screening framework centered on Climate Vulnerability Signals to enhance its ability to identify and consider potentially credit-relevant climate risks in its rating process for global infrastructure and project finance issuers and transactions.
- Fitch currently integrates climate risk into infrastructure and project finance ratings when it is deemed sufficiently relevant and material to an issuer's creditworthiness.
- The screening framework would enhance the way potential climate risk factors are captured, considered and communicated.
- Fitch is evaluating comments received through the end of the comment period (May 31, 2025).
- Similar frameworks will likely to be considered across all of Fitch's analytical teams over time.



Climate Risk in Ratings





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