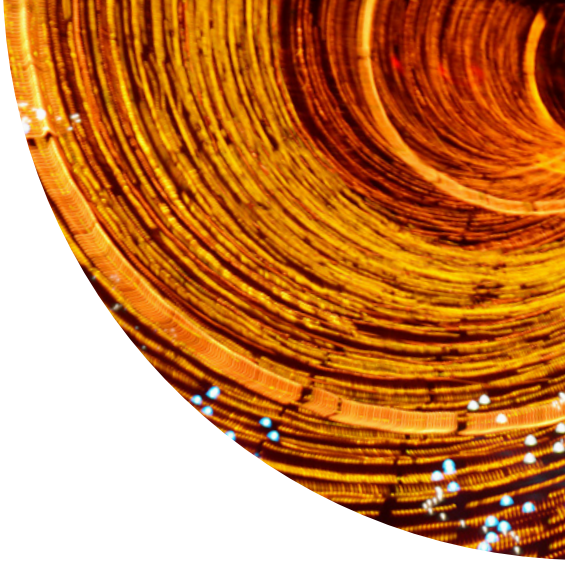
Allspring

MARKETING COMMUNICATION

Eye of the Storm:

Investing in Adaptation and Resilience



+ Utilities sit at the epicentre of US physical climate risk due to their long-lived, immobile infrastructure and essential service obligations.
+ US utilities are in a structural investment cycle, having invested about US$30 billion in resilience and grid-hardening capital expenditures (capex) in 2024, with spending up 8% compounded annually.
+ Recently, US utilities have begun taking up broader climate-specific planning, such as wildfire mitigation plans, resilience filings and enhanced cost-recovery frameworks.

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This report focuses on three timely issues related to sustainability investing: how US utilities are responding to climate risk through massive deployment of adaptation capital, the operational resilience metrics that differentiate winners from losers and the valuation implications for investors navigating this new risk landscape.

Physical climate risk has moved from a long-dated externality to an immediate balance sheet issue across most US infrastructure-intensive industries. Among them, regulated electric, gas and water utilities are the most directly exposed[1]. Their networks span vast geographic areas, their assets are long-lived and location-fixed and their service obligations persist regardless of operating conditions. As a result, utilities increasingly bear the brunt of climate-driven disruptions—both operationally and financially—whilst operating within regulatory frameworks that often lag the pace of physical risk.

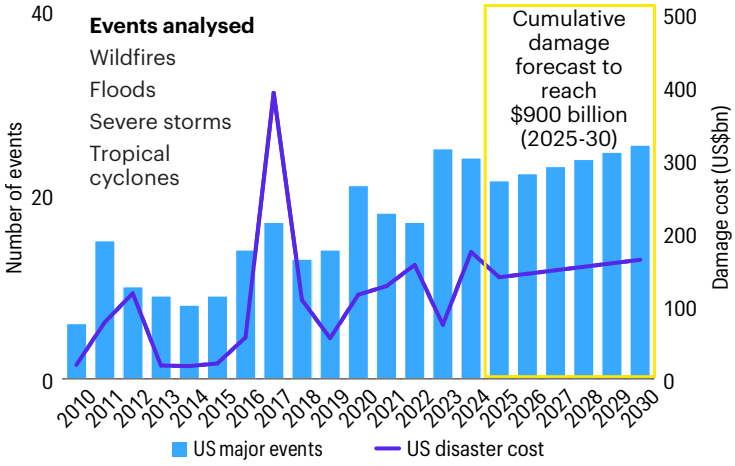
Against this backdrop, physical climate risk has emerged as a key investment consideration for the utilities sector[2], influencing capital allocation priorities, regulatory frameworks and valuations.

The sector is experiencing an unprecedented acceleration in extreme weather events (wildfires, floods, severe storms, tropical cyclones, heat stress, etc.), with the US recording an estimated US$138 billion in climate-related financial impacts during 2025 alone (see Figure 1 on the following page), primarily in coastal states vulnerable to wildfires, hurricanes and flooding.

Physical climate risk exposure: quantifying the escalating threat

The frequency and severity of extreme weather events affecting utility infrastructure have accelerated dramatically. From January through early April 2026, nearly 19,000 wildfires ignited in the US—approximately 6,900 above the average for the last decade[3]. The unusually hot, snowless winter fuelled a fast start to the spring fire season across large swaths of the western, central and southeastern US, disrupting businesses and upending daily life. The situation is particularly acute in California, which is entering its dry season with just 18% of the typical mountain snowfall, heightening drought and wildfire risks across the most populous US state[4].

FIGURE 1: US CLIMATE-RELATED FINANCIAL IMPACT



Sources: US NOAA National Centers for Environmental Information and Emergency Events Database, 31-Mar-25. Analysed by Allspring Global Investments; 2025 is CPI-adjusted.

The projected financial consequences of these events are staggering, with cumulative US climate-related impacts forecast to reach US$900 billion between 2025 and 2030 (Figure 1), driven by damage concentrated in the populous coastal states of California, Texas, Florida and New York, which are particularly susceptible to wildfires, hurricanes and flooding[5].

Regulated utilities: climate risk exposure and strategic capital deployment

NextEra Energy, Dominion Energy, Duke Energy and American Electric Power (AEP) are illustrative case studies of large US-regulated utilities with extensive transmission and distribution networks, broad customer bases and material exposure to region-specific physical climate risks. Collectively, they represent over US$420 billion[6] in market capitalisation, serve roughly 30 million customer accounts and supply electricity to over 60 million people, making them systemically important to US energy reliability and infrastructure resilience.

These utilities face differentiated but escalating physical climate hazards that play a growing role in both operating risk and capital allocation decisions. For example, NextEra Energy, through its Florida Power & Light (FPL) subsidiary, is highly exposed to hurricanes and coastal weather volatility[7]. Over the last decade, intensifying storm activity has translated into recurrent large-scale infrastructure damage, most notably from Hurricane Ian in 2022, which resulted in approximately US$1.1 billion in restoration and recovery costs and outages affecting more than 2 million customers[8]. At the same time, FPL is widely regarded as a leading example of resilience execution, with sustained investment in grid hardening, undergrounding and restoration capabilities contributing to strong system performance during recent back-to-back Florida hurricanes. In turn, these investments support financial performance, as approved network spending can translate into predictable earnings growth over time (Figure 2).

Similarly, Dominion Energy faces pronounced flood and storm-surge risks across Virginia, North Carolina and South Carolina, where ground-level assets such as substations are more vulnerable to inundation[9]. Duke Energy operates across hurricane- and storm-exposed regions in the Carolinas and Florida and sought regulatory approval in 2024 to recover over US$1 billion in storm-related costs following multiple major hurricanes[10]. American Electric Power, with one of the most geographically diverse regulated footprints in the US[11], faces exposure to extreme heat, drought, flooding and wildfire risks across its nearly 200,000-square-mile service territory spanning parts of 11 states[12], with potential implications for service reliability and cost recovery.

FIGURE 2: COMPANY-SPECIFIC ADAPTATION PROGRAMMES

COMPANY	CAPITAL INVESTMENT PLAN	TIME FRAME	STRATEGIC FOCUS
NextEra Energy	US$13–15 billion in transmission and distribution (T&D); ~US$12 billion in solar; ~US$1.5 billion in storage	2024–2027 (T&D); 10-year storage horizon	Grid reliability, load growth, renewable expansion
Dominion Energy	~US$64.7 billion capital plan (↑>30%)	Through 2030	Transmission, distribution, generation, resilience
Duke Energy	US$73 billion capital plan	2024–2028	Grid modernisation, storm resilience
American Electric Power (AEP)	US$1.6 billion DOE loan for transmission reconductoring	Multi-year	Transmission upgrades, wildfire risk reduction

Sources: NextEra Annual Reports (Form 10-K), NextEra Investor Capital plan disclosure, U.S. News & World Report, Duke Energy, US Department of Energy (DOE) and Bloomberg Intelligence. Analysed by Allspring Global Investments.

In response, these utilities are undertaking a shift in capital deployment, moving beyond reactive storm response towards adaptation-focused investment strategies aimed at asset hardening, exposure reduction and faster recovery following extreme events (Figures 2 and 3). These investments are becoming a central component of regulated utility capital plans, helping protect critical network assets, improve system resilience and support more stable long-term financial performance. NextEra Energy is prioritising transmission and distribution hardening alongside large-scale solar and battery storage to support grid reliability under extreme heat and load volatility. Dominion Energy has expanded its capital plan by more than 30% through 2030 to fund transmission, distribution and generation upgrades aligned with rising flood and storm risks. Duke Energy's US$73 billion capital plan (2024–2028) embeds grid modernisation and storm-hardening across its regulated footprint, whilst American Electric Power is pursuing targeted solutions, including federally backed upgrades to existing transmission lines to strengthen backbone infrastructure and reduce wildfire and extreme weather exposure across multiple climate zones.

Taken together, these case studies demonstrate that physical risk adaptation has become integral to regulated US utility strategy, supporting service reliability; enabling recovery of climate-driven capex through regulatory frameworks; and underpinning long-duration, regulated performance in an environment of intensifying physical climate risk. These dynamics become even more critical as projections point to a sharp acceleration in US electricity demand, well beyond the growth experienced over the last decade[13].

Adaptation capital deployment: unprecedented investment acceleration

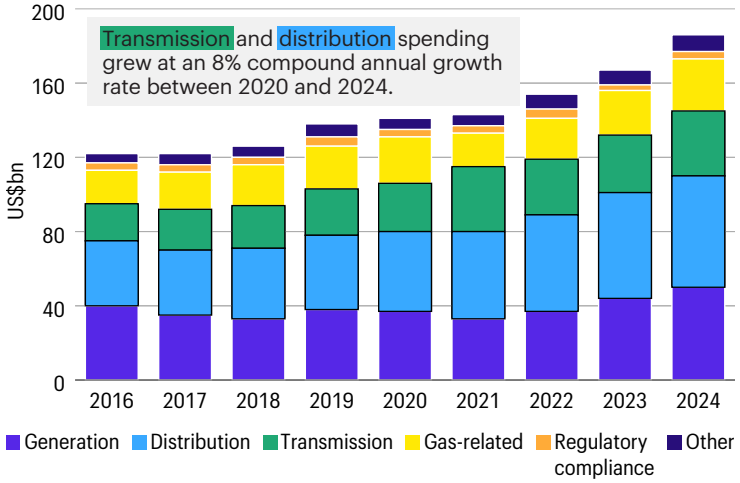
Utilities are strengthening transmission and distribution networks through targeted measures such as undergrounding lines, replacing ageing and fire-prone overhead wires, elevating substations, deploying digital monitoring tools and more[14]. This investment is disproportionately concentrated in regions exposed to wildfires, hurricanes, extreme heat and flooding, reflecting the geographic concentration of physical risk across service territories.

Regulatory oversight of utility resilience spending is not new. State-level public utility commissions have long assessed investments in reliability, storm recovery and grid hardening, deciding which expenditures are prudent and how approved costs are incorporated into customer rates over time[15]. What has evolved more recently is the increasing formalisation of climate-specific planning requirements, including wildfire mitigation plans, resilience filings, grid modernisation proceedings and broader climate-risk preparedness expectations in coastal states such as California, Florida, New York and Texas[16].

Figure 3 illustrates a steady rise in transmission and distribution capex from 2016 through 2024, reflecting a structural shift in how US electric utilities allocate capital in response to the increasing frequency, severity and geographic reach of extreme weather events. Rather than relying primarily on episodic, post-event repairs, utilities are embedding hardening and adaptation investments directly into baseline capital plans, materially reshaping long-term capex profiles.

Estimates from Edison Electric Institute indicate that roughly one-fifth of transmission capex and approximately one-third of distribution capex are directed towards adaptation purposes[17]. In 2024, US transmission and distribution capex totalled approximately US$90 billion, of which roughly US$30 billion was deployed towards resilience and grid-hardening investments (Figure 3). This category of spending—primarily associated with asset replacement and risk mitigation rather than incremental capacity—rose more than 8% on a compound annual basis from 2020 to 2024.

FIGURE 3: ELECTRIC UTILITIES CAPEX (~70 US INVESTOR-OWNED UTILITIES)



Sources: Edison Electric Institute and Bloomberg Intelligence, December 2024. Analysed by Allspring Global Investments.

Investment implications: assessing resilience in utilities

The investment relevance of adaptation is not simply whether climate risk exists but whether investors can identify which utilities are better positioned to manage it. Physical climate risk is already evident in insurance costs, company disclosures, regulatory filings and infrastructure planning and is increasingly reflected in valuation frameworks. The more important question is, which issuers can respond effectively whilst sustaining returns?

This matters in utilities because the sector combines high physical asset exposure with a clear ability to act. Transmission networks, substations, generation assets and distribution systems are exposed to storms, flooding, wildfires, drought and extreme heat. However, utilities can reduce vulnerability through grid hardening, undergrounding, flood protection, digital monitoring and more. These programmes are funded through corporate capital plans, internal cash flow and debt financing. Capex does not create immediate earnings—benefits tend to emerge over time through lower restoration costs; fewer outages; improved reliability; reduced earnings volatility; and, where regulation permits, growth in the regulated asset base that supports future returns.

For investors, the opportunity is less about broad market dislocation and more about relative company selection, shaped by three critical factors: the scale of physical risk exposure, the quality of management response and the ability to fund and recover resilience investment over time.

We believe this supports an active approach to portfolio construction. Utilities with constructive regulatory frameworks, credible capital plans, strong execution and manageable leverage may offer more durable cash flows and improved long-term return potential. By contrast, companies with elevated hazard exposure, weaker balance sheets or delayed adaptation strategies face greater vulnerability.

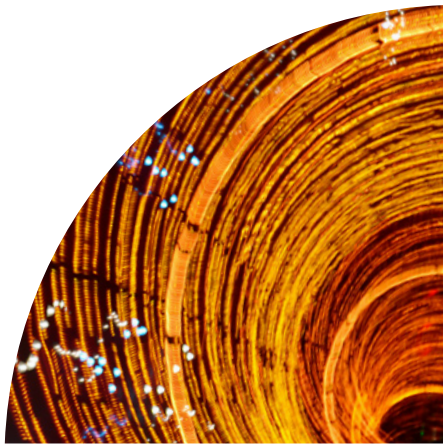
Allspring Climate Transition strategies

At Allspring Global Investments, we believe that a deep, fundamental understanding of companies enables us to make better decisions on behalf of our clients. Our proprietary Climate Transition Framework was constructed to identify and understand climate-related risks to optimise risk management and portfolio construction decisions. The framework contemplates two critical questions: how will climate change affect company fundamentals, and what decarbonisation potential do companies have? It considers resilience to climate-related physical risk in terms of assessing business model exposure and adaptability, operating expertise, capital structure preparedness and country-level factors. Our view is that many of the qualities that make a company a climate transition leader also make the company more durable in the face of rapid and unpredictable change.

For further information

We're committed to thoughtful investing, purposeful planning and the desire to deliver outcomes that expand above and beyond financial gains.

Click or scan the QR code to check out Allspring's insights:



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