



Macro Meets Micro:

DECIPHERING CLIMATE AND
SUSTAINABILITY TRENDS IN 2025



THE **GROUNDWIRE** GROUP

Stories and strategies for a complex climate future

The energy transition will only succeed when decision-makers understand the broader context in which they are operating. We apply the same systems thinking tools used in this report to help leading organizations in climate solutions understand and navigate complexity. Our work empowers clients to develop a shared vision, communicate it clearly, and act decisively to achieve their goals.



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A systems-thinking approach to our energy future

What is systems thinking?

This second annual trends report puts a new spin on typical trend forecasting reports. By applying systems thinking to the dynamic landscape where the energy transition unfolds, readers will identify new insights that can guide their work throughout the year.

In a world where complexity grows exponentially, and the connections between economies, people, and cultures are ever more entwined, systems thinking offers a way of grappling with that complexity. Visualizing all the various elements in a system and mapping their interactions can help us understand the interconnected systems that form our modern world.

Today's fast-paced business environment drives a task-oriented mindset that leaves little room for the bigger picture. Context is treated as a distraction and organizational bias seeks simple solutions. This report will instead explore many layers of context to tease out the trends that really matter, empowering climate and sustainability leaders to drive a more successful energy future.



In the rearview: major events of 2024

- In 2024, the world officially breached the 1.5 C warming threshold. The past 10 years have been the 10 hottest years on record.¹
- Inflation carried populist, right-leaning parties to victory in a record-breaking year of global elections, with nearly every incumbent party incurring major losses.²
- Microsoft entered into a first-of-its-kind agreement to re-open the Three Mile Island nuclear generating facility.³
- AI chipmaker Nvidia's market valuation surged by over \$2 trillion in 2024, closing the year with a \$3.28 trillion valuation as the world's second-most valuable company.⁴

These events don't happen in isolation. They are deeply connected to a broader system driven by human actions. This report uncovers how individual events interact within macro trends playing out in 2025.

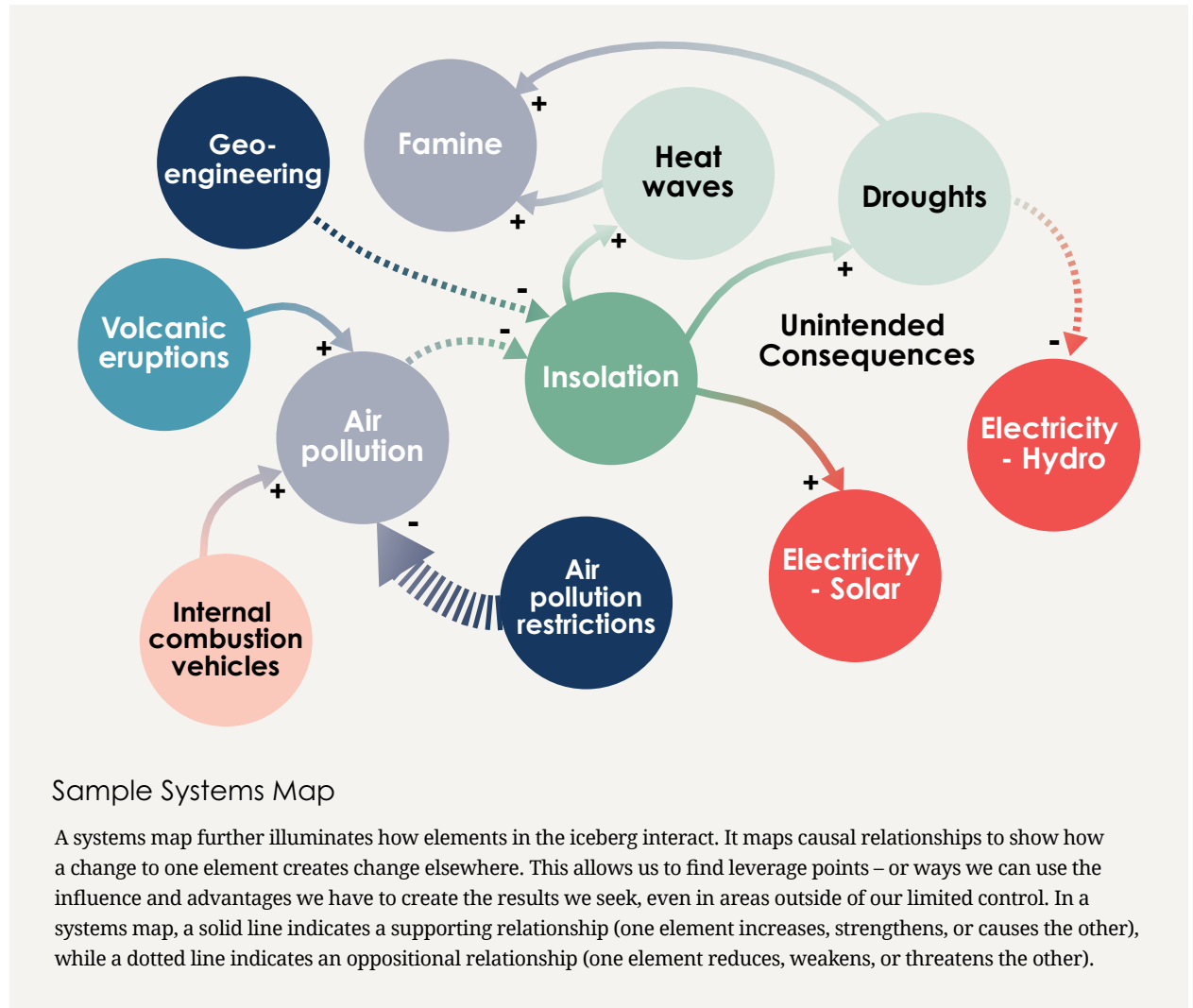
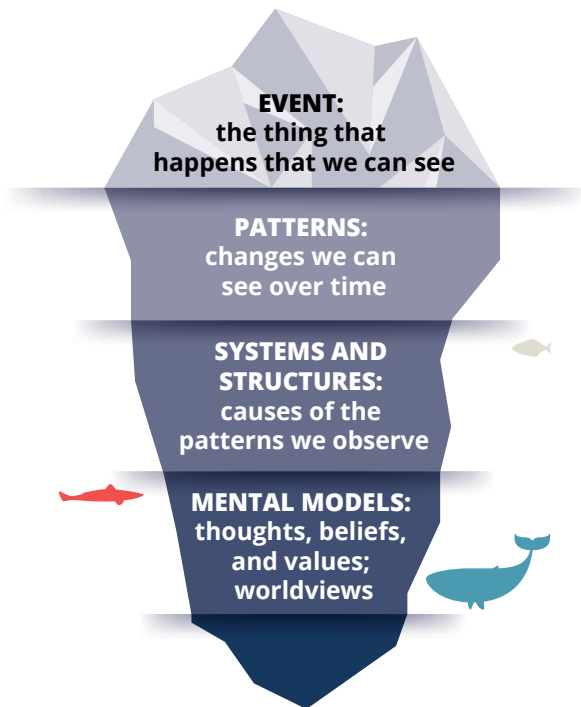


Decoding Systems

The strength of systems thinking is the ability to visualize complex systems and interactions.

Iceberg Model

Nothing happens in isolation. The iceberg model helps us understand why something happened by revealing what contributed to it. The event we observe is the tip of the iceberg. Below the surface, we find the layers that produced the event, beginning with patterns or changes taking place over time. Beneath this are the systems and structures that caused the patterns to happen. The final layer is the mental models – the thoughts, beliefs, values and worldviews – that underpin the systems and structures.



2025 Themes in Focus

Lawfare



Legal challenges cause paralysis and whiplash

The courts will be busy places in 2025. From challenges to government policies to opposition against new developments, climate is on the docket.

The Great Reframing



Language for the current moment

The words you choose are more important than ever. New narratives offer new opportunities to connect your message to what matters.

Rhetoric Meets Reality



The facts still matter

Big ambitions abound. Look for the substance beyond the headlines and talking points.

Lawfare

Disputes over clean energy developments are more often being hashed out in the courts. Offshore wind projects in the U.S. have been increasingly subject to lawsuits challenging leasing and permitting approvals issued by the federal government.¹⁷ In many cases, these lawsuits are brought by groups with funding ties to fossil fuel interest groups.

The same interest groups also actively fund disinformation networks that amplify false claims via social media, attributing whale deaths along the East Coast to offshore wind activities without any credible scientific evidence.¹⁸

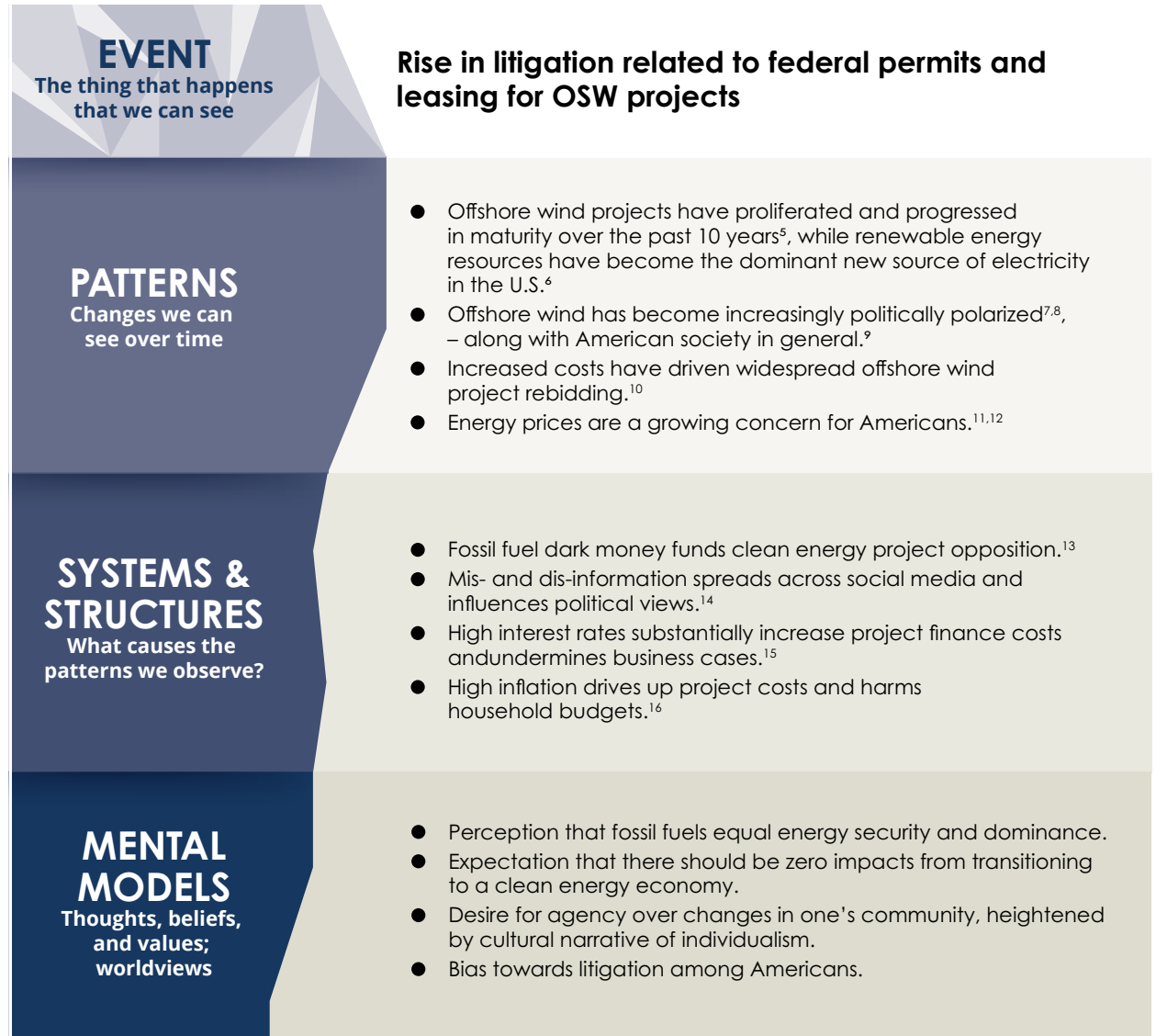
At the macro-level, legal challenges to President Donald Trump's Administration's early executive orders will cause widespread investment paralysis among renewable energy developers and manufacturers.

Some of these orders attempt to rescind tax credits and other funding to renewable energy projects,¹⁹ freeze federal review activities for offshore wind projects, and threaten to modify or revoke existing permits and leases for offshore wind farms.²⁰

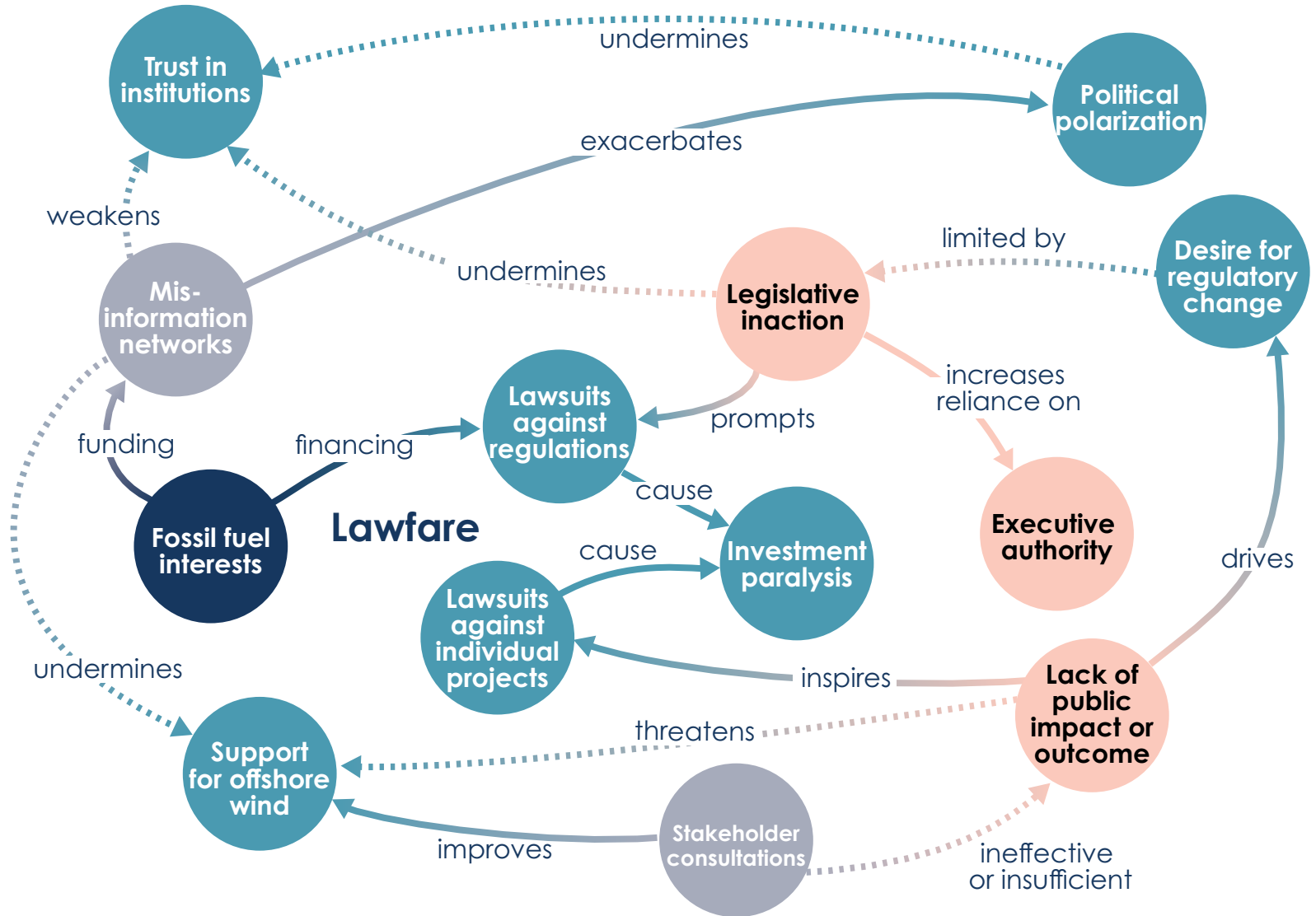
Litigants in these cases turn to legal action when their opportunities to influence policy outcomes are limited, whether by gridlock or inaction from legislators or a sense that their voices do not carry sufficient weight in the debate.

The threats to the renewable energy industry are numerous: not only is litigation expensive, but judicial decision-making can be opaque and subject to a lengthy process of referrals and appeals.

What's more, the merits of a case might not matter if the topic is politically-charged and the defendant is a government agency – regime change can mean that a new government might not defend actions taken by a previous Administration.



Lawfare System Map



Lawfare Analysis

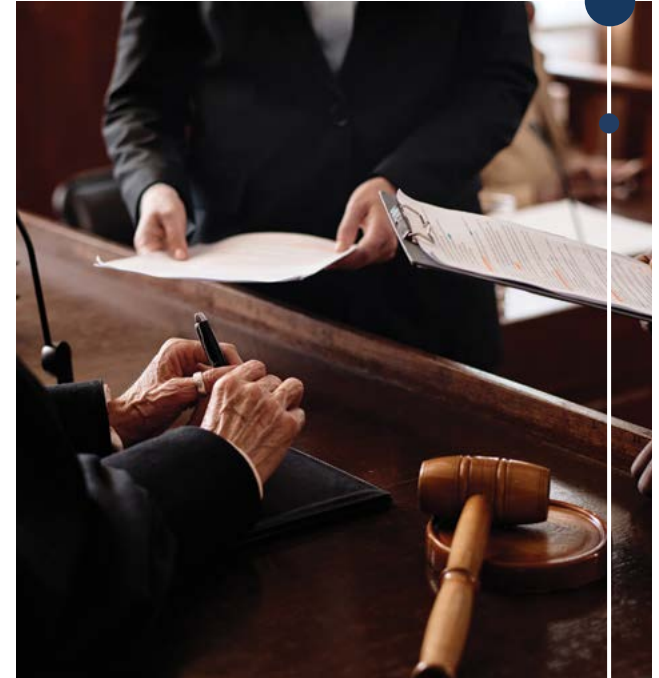
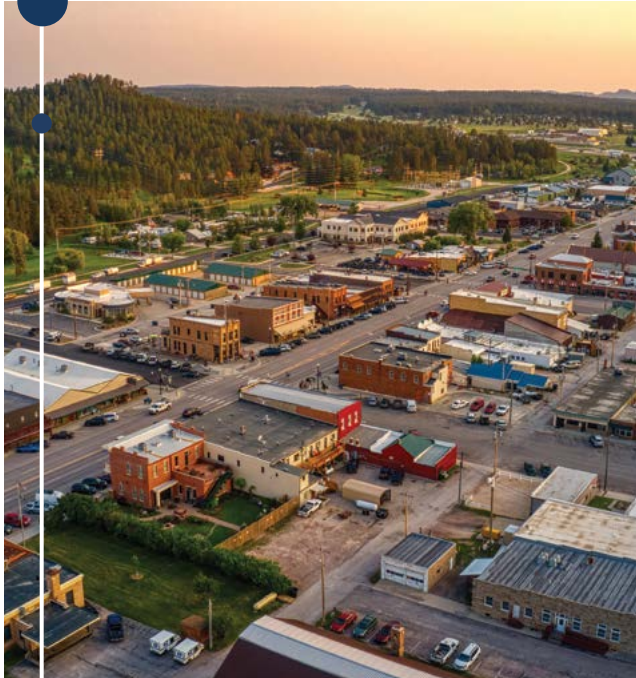
Lawsuits against project developments and regulatory policies are often borne out of frustration. While the process to build and permit projects or establish new regulations typically includes some degree of stakeholder outreach, it is impossible to satisfy every demand. Inevitably, some interests prevail while others fail. If the dissatisfied party has sufficient means and motivation, they may file suit.

This dynamic is frequently seen in legal challenges brought by citizens and businesses against the development of housing and renewable energy projects, typically targeting zoning policies or the issuance of permits at the state and local level. Individuals looking to provide input through formal channels often find the process frustrating and

inaccessible, with hearings conducted during business hours and decisions made behind closed doors. Taking the issue to court is a way for aggrieved parties to have their arguments aired to the public and set in the record, as was the case in recent lawsuits over affordable housing policies in Virginia²¹ and New Jersey.²²

Renewable energy projects in the U.S. have seen a surge in new restrictions at the local level, with a 73% increase identified over the previous year in the Columbia University Sabin Center For Climate Change Law's 2024 report. The same report identifies 378 contested projects with significant opposition, which in many cases includes litigation.²³

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Project developers are not the only ones on the receiving end of a legal challenge. Litigation is increasingly being leveraged to challenge government regulations and corporate policies that are harmful to the climate. A different report from the Sabin Center for Climate Change Law analyzing the global landscape of climate change litigation points to a dramatic rise in climate litigation – a 246% increase since 2017, roughly 70% of which were filed in U.S. courts.²⁴ Corporate interests are pushing back. Litigants against the Securities and Exchange Commission’s new climate disclosure rule²⁵ include fossil fuel trade associations and Liberty Energy, the oilfield services company founded by the new U.S. Secretary of Energy Chris Wright.²⁶ The fate of the rule remains in limbo. In a recent statement, the acting chair of the SEC, Mark Uyeda, said he directed staff to hit pause on its defense of the rule.²⁷

Lawfare is nothing new, nor is it necessarily a negative or harmful process. Some of the most significant advancements we’ve seen in issues from the environment to human rights have been secured through the courts. Interracial marriage²⁸ and school desegregation,²⁹ safety regulations for toxic chemicals,³⁰ and the essential standard of regulating clean air for the

protection of public health³¹ were all won through landmark court decisions. That said, the implications associated with the growing trend of judicial review as an avenue to enact policy change are troubling.³²

Governance by litigation does not create a strong foundation on which new industries can grow and flourish. The paralysis and whiplash of protracted legal battles can also grind entire sectors of the economy to a halt. Last year’s ruling that overturned decades of legal precedent based on the Chevron doctrine raised wide uncertainty about the interpretation and enforcement of a broad swath of government regulations.³³ This year, expect ongoing litigation against Trump Administration executive orders to add to the confusion.

KEY TAKEAWAYS

- For renewable energy developers, early and frequent stakeholder consultation is the best fortification against litigation. Be clear about how feedback is shaping outcomes as well as necessary tradeoffs.
- Legal battles will create short-term uncertainty for long-term investors in climate solutions. The fundamentals underpinning these investments are not expected to change. Many investors will stay the course – they should be prepared to justify the long-term benefits.
- Expect fossil fuel interests to complement their legal attacks on clean energy and climate policies with a well-funded communications ground game. Strong coalitions between advocates and communities can build support for renewable energy development.

246%

The increase in climate litigation since 2017, roughly 70% of which were filed in U.S. courts

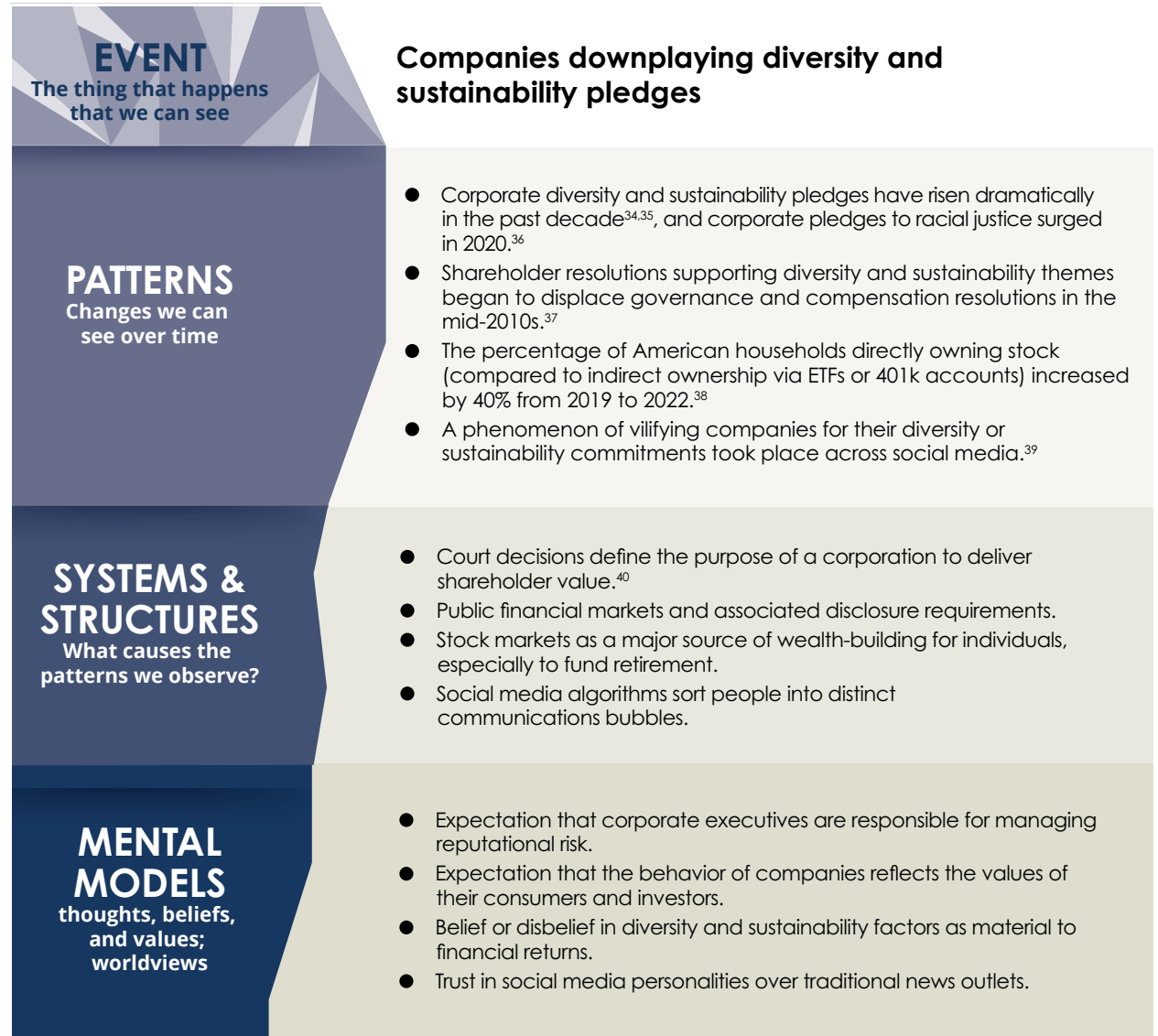
The Great Reframing

The political dimensions of language have never been more obvious. From renaming the Gulf of Mexico to the Gulf of America to branding climate policies as the “green new scam,” President Donald Trump has drawn clear lines in the linguistic battlefield. Early actions from his administration include directives to various agencies to expunge studies and data based on certain keywords, including gender, ethnicity, and diversity.⁴¹

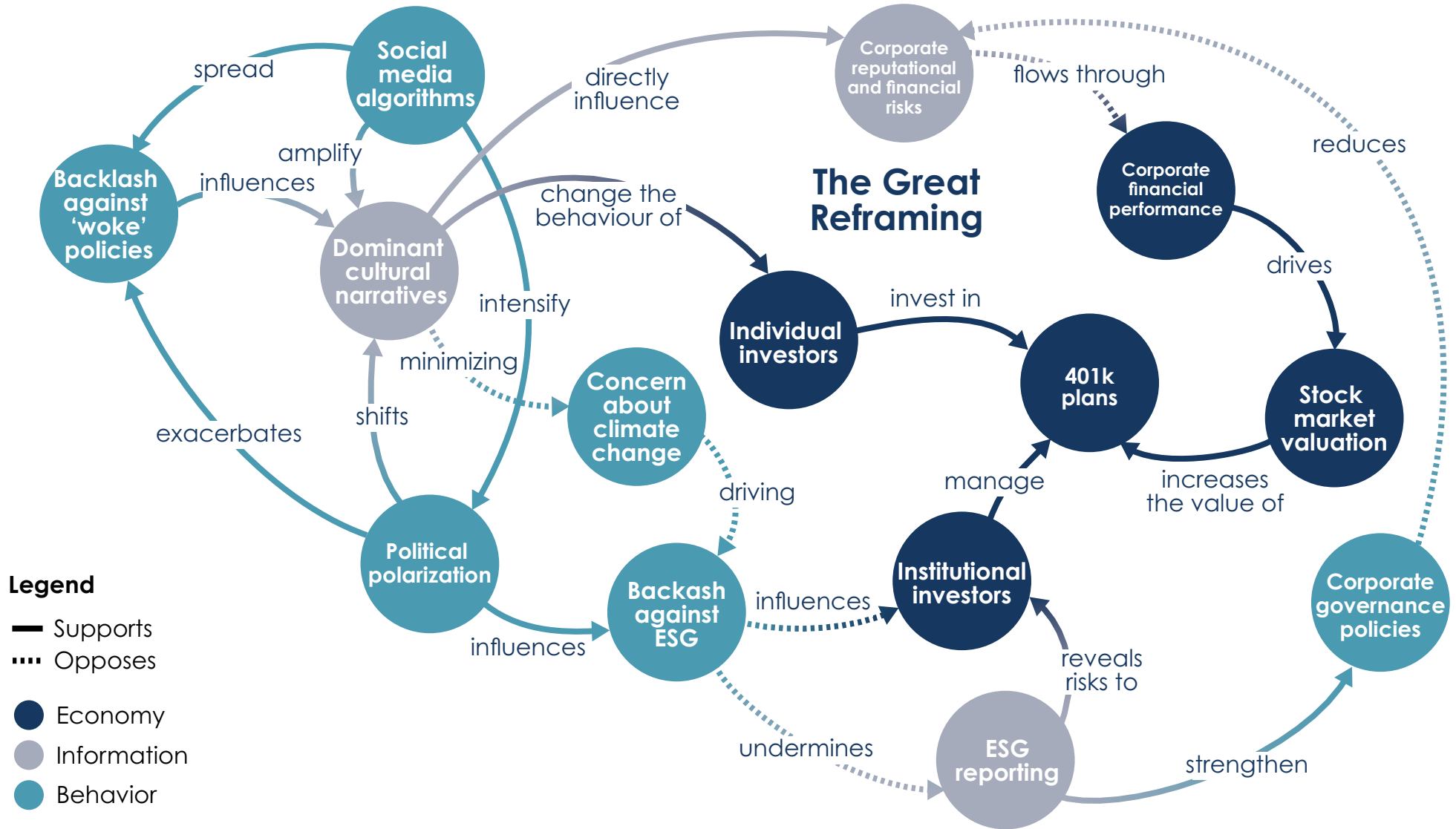
Social media platforms amplify the reputational risk of politically charged language. In 2023, a broad boycott against Bud Light for the use of a transgender actress in some promotional content triggered a 28% drop in sales the following quarter and within a year, sales still had not returned to pre-controversy levels.⁴²

Driven in part by rising culture wars and lawfare against “woke” ideology, companies are reversing or downplaying initiatives focused on diversity, equity, and inclusion (DEI) and environmental, social, and governance (ESG) issues.

A pair of Supreme Court decisions in 2023 ruled that consideration of race in college admissions was unconstitutional.⁴³ Despite this decision being applied specifically to college admissions, companies began taking preemptive action to modify or reframe DEI and ESG policies to avoid unwanted scrutiny and legal action. However, this ongoing shift in public positioning and language has not fundamentally shifted the actions, values, and motivations underpinning DEI and ESG policies.⁴⁴



The Great Reframing System Map



The Great Reframing Analysis

We are in the midst of an enormous shift away from language that has become political, divisive, or outright ineffective. This is not a new phenomenon, but the speed of information is accelerating changes to broad cultural narratives. Social media algorithms use language to sort people into closely aligned groups, who are then presented with different information and ideas.

Environmental issues are no stranger to reframing: in the early 2000s, conservative political pundits advised that “global warming” should be rebranded as “climate change” because it sounded less frightening. Three years later, scientific communicators ran with it, pointing to the many changes that result from growing greenhouse gas emissions.⁴⁵ While it is true that the consequences of emissions go beyond temperature change alone, this wordsmithing from ‘warming’ to ‘change’ opened the door for climate denialism which insists (correctly) that the Earth’s climate is always changing.

Reframed Language for 2025 – What We’re Seeing

Traditional Language	Emerging Language
“The economy”	“Cost of living” “Affordability”
“Energy transition”	“Energy abundance” “All of the above” “Energy security”
“Environmental justice”	“Protecting vulnerable communities from harmful pollution”
“Climate risks”	“Insurability” “Community impacts”
“Climate change”	“Sea level rise” “Coastal flooding” “Extreme weather”

In the early 2000s, conservative political pundits advised that “global warming” should be rebranded as “climate change” because it sounded less frightening.



Language plays an important role in building support, and it can be used by partisan actors to sow division where there is broad agreement. Most Americans don't support racial discrimination of any kind, but the language used by DEI policies and advocates can be academic (structural and institutional racism, intersectionality) or divisive (cancel culture).⁴⁶ A majority of American voters support climate-friendly policies,⁴⁷ yet climate communications are failing to resonate with the majority needed to enact climate solutions.⁴⁸

As language around sustainability, climate, and energy evolves, we must use language that better connects with people and their lived experiences.

Despite most Americans believing that the government should do more to act on climate change,⁴⁹ a Pew survey of voters in 2024 showed that addressing climate change ranked as the third lowest priority out of 20 issues.⁵⁰ By shifting language about the climate to focus more on simple messages that connect to the most tangible issues in people's lives, pro-climate policies can work their way toward the top of the heap.

KEY TAKEAWAYS

- Climate and renewable energy advocates should simplify their messages and connect them to everyday issues.
- Overly technical language alienates public audiences. Listen carefully to the language that the community uses to talk about renewable energy projects. If most people call wind turbines windmills, why not just run with it?
- For investors, it's time to drop "ESG" and describe how you are really investing: Managing risk, investing in climate technology, avoiding companies that engage in human rights abuses.

17th

Where climate change ranks among American voters' top 20 most important issues

Rhetoric Meets Reality

A global race for AI dominance is underway, and the U.S. has no intention of falling behind.

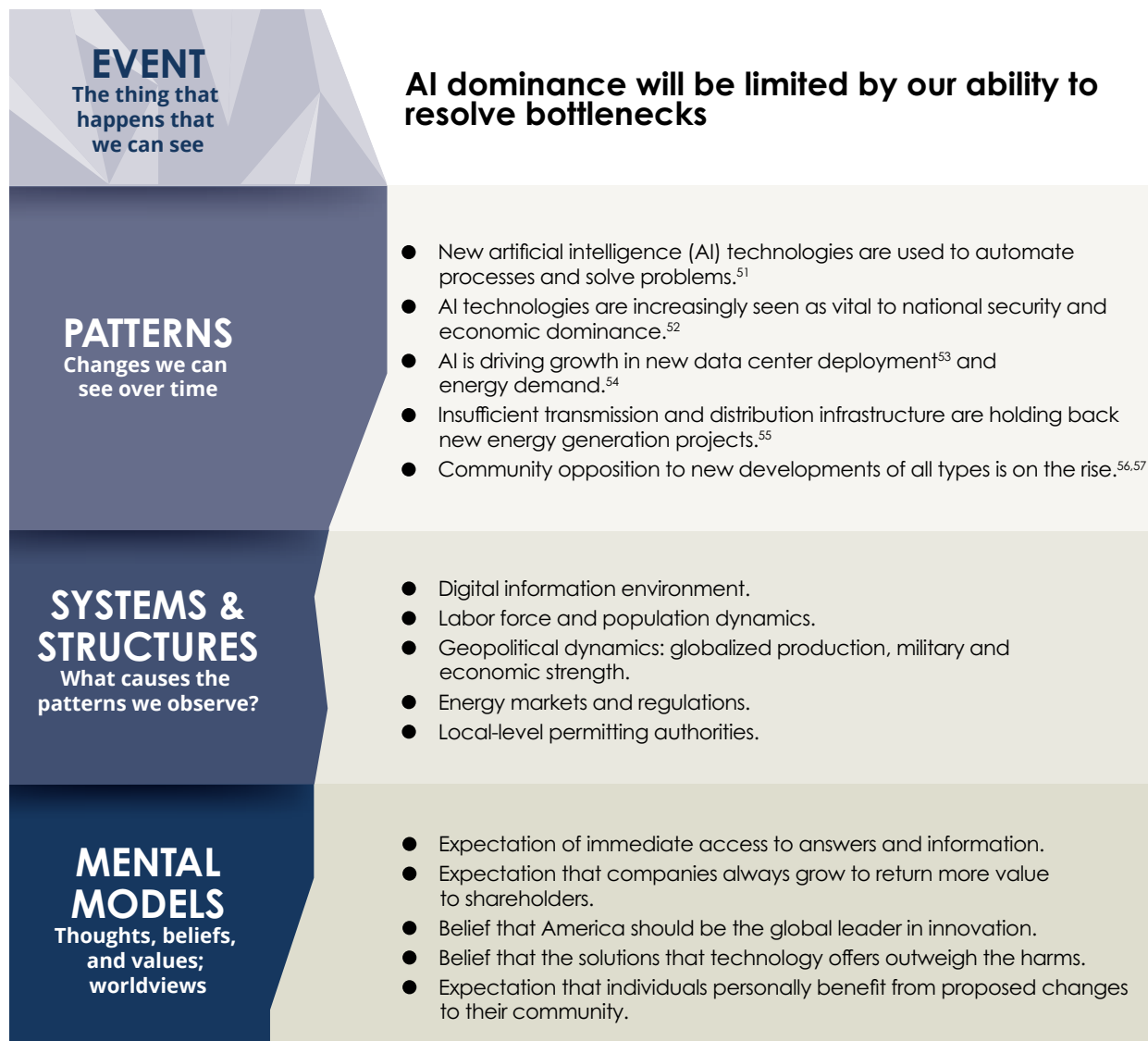
One goal of the current Administration, outlined via executive order, is “to sustain and enhance America’s global AI dominance in order to promote human flourishing, economic competitiveness, and national security.”⁵⁸ Establishing AI dominance means building data centers, and many states are signaling their appetite to build within their borders: 36 states are offering tax incentives for data center development.⁵⁹

Data centers also require electricity – and a lot of it. According to one estimate, data centers will account for nearly 10% of all electricity use in the U.S. by 2030.⁶⁰

In a separate order, the Trump Administration outlined its plan to accelerate the development of domestic energy resources defining energy or energy resources as “crude oil, natural gas, lease condensates, natural gas liquids, refined petroleum products, uranium, coal, biofuels, geothermal heat, the kinetic movement of flowing water, and critical minerals.” Renewable energy resources like solar and wind energy do not appear on the list.⁶¹

These orders will quickly run up against the current reality of the electric system. Electricity demand is already surging in the U.S.,⁶² and more than 90% of the projects waiting to come online are wind, solar and storage projects.⁶³ In other words, renewables are effectively the only resources prepared to meet the immediate demands of data centers while also supplying reliable and affordable energy to households.

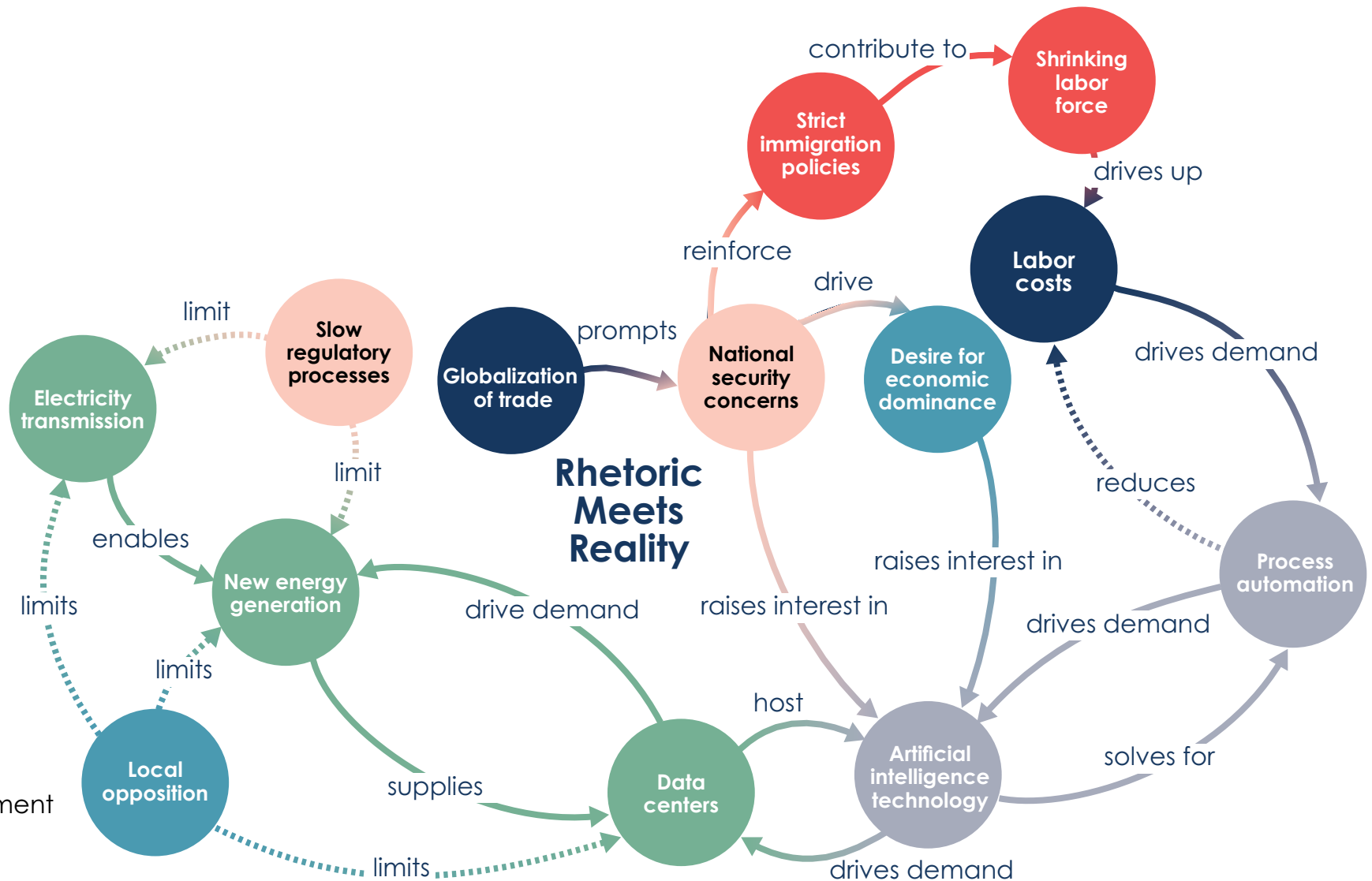
And while the President’s words have power, rhetoric alone does not drive energy investments and development. The market tells a different story: capital is increasingly shifting away from fossil fuels⁶⁴ towards carbon-free investments and climate solutions.⁶⁵



Rhetoric Meets Reality System Map

Legend

- Supports
- ⋯ Opposes
- Economy
- Information
- Behavior
- Government
- Built environment
- Labor



Rhetoric Meets Reality Analysis

Americans tend to think big and dream big. Achieving those dreams comes down to implementation, and that's when reality sets in.

Executive orders alone cannot build the data centers necessary to establish the U.S. as a leader in AI. Data centers require extensive planning and resources, including access to land, water, and electricity. To secure the latter, developers will need to know if the necessary energy supply exists and, if not, how to procure it. Connecting to the grid will not always be easy or feasible. Some may find the best or only option is a behind-the-meter system, where a data center connects directly to new electricity generators and bypasses the grid altogether. Data center developers who hope to co-locate new generation alongside a new grid connection, or build their project adjacent to existing generation, are finding utility regulators unreceptive. Proposals that avoid paying for the cost of maintaining or updating the electric grid, or those that pass on the cost to local ratepayers, are a nonstarter in most places.

Other policy tensions and supply shortages could limit growth in data centers and AI, and ambitions to expand U.S. fossil fuel production. Electrical transformers, needed for everything from new home construction to industrial developments and grid expansion, are in critically short supply. These shortages are exacerbated by everything from the destruction of climate-fueled extreme weather to labor scarcity and availability of electrical steel.⁶⁶ New tariffs on steel and aluminum will make all development projects more expensive, and strict immigration restrictions could limit much-needed labor.

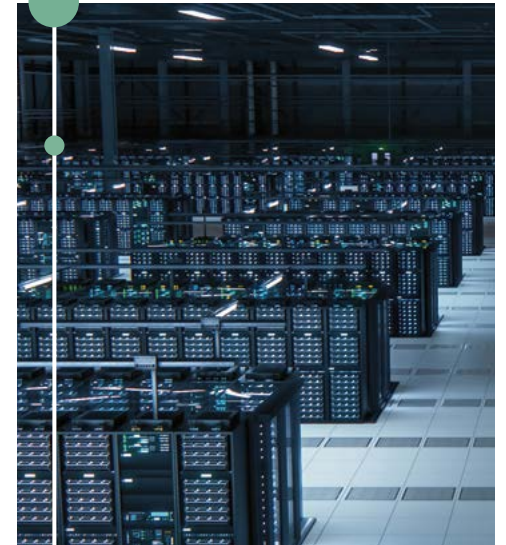
Finally, there's local pushback. Communities have an expectation that new development will benefit them over the long-term. Opposition against data centers is cropping up in host communities over concerns about impacts on housing affordability and the lack of long-term job creation.⁶⁷ Developers

will need to undertake rigorous community engagement efforts in order to collaboratively solve for each community's specific concerns and build support ahead of siting procedures.

The constraints inherent in the U.S. electricity system – from how it collects and delivers energy, to how projects are permitted and built – make the most critical ambitions the hardest to accomplish.

Take the “electrify everything” campaign that encourages Americans to switch away from fossil fuels and instead use cleaner and cheaper electricity for everything from heating buildings to transportation and manufacturing. Americans are huge consumers of energy – we use 16% of the world's energy despite being only 4% of the world's population⁶⁸.

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Over a quarter of the U.S. population lives in a location with a state or local zero-emission building ordinance which supports the push toward cleaner sources of energy

In 2019, Berkeley, Calif. became the first city in the U.S. to ban the use of natural gas in new construction. While the ban was reversed in 2024 after facing legal challenges⁶⁹, the broad trend towards electric vehicles and buildings continues. As does the reshaping of America's energy landscape. Over a quarter of the U.S. population lives in a location with a state or local zero-emission building ordinance, which supports the push toward cleaner sources of energy.⁷⁰

Building the electricity infrastructure needed to meet these ambitions requires addressing all the challenges noted here, while the U.S. Bureau of Labor Statistics expects the country to need nearly one million new electricians in the next decade.⁷¹

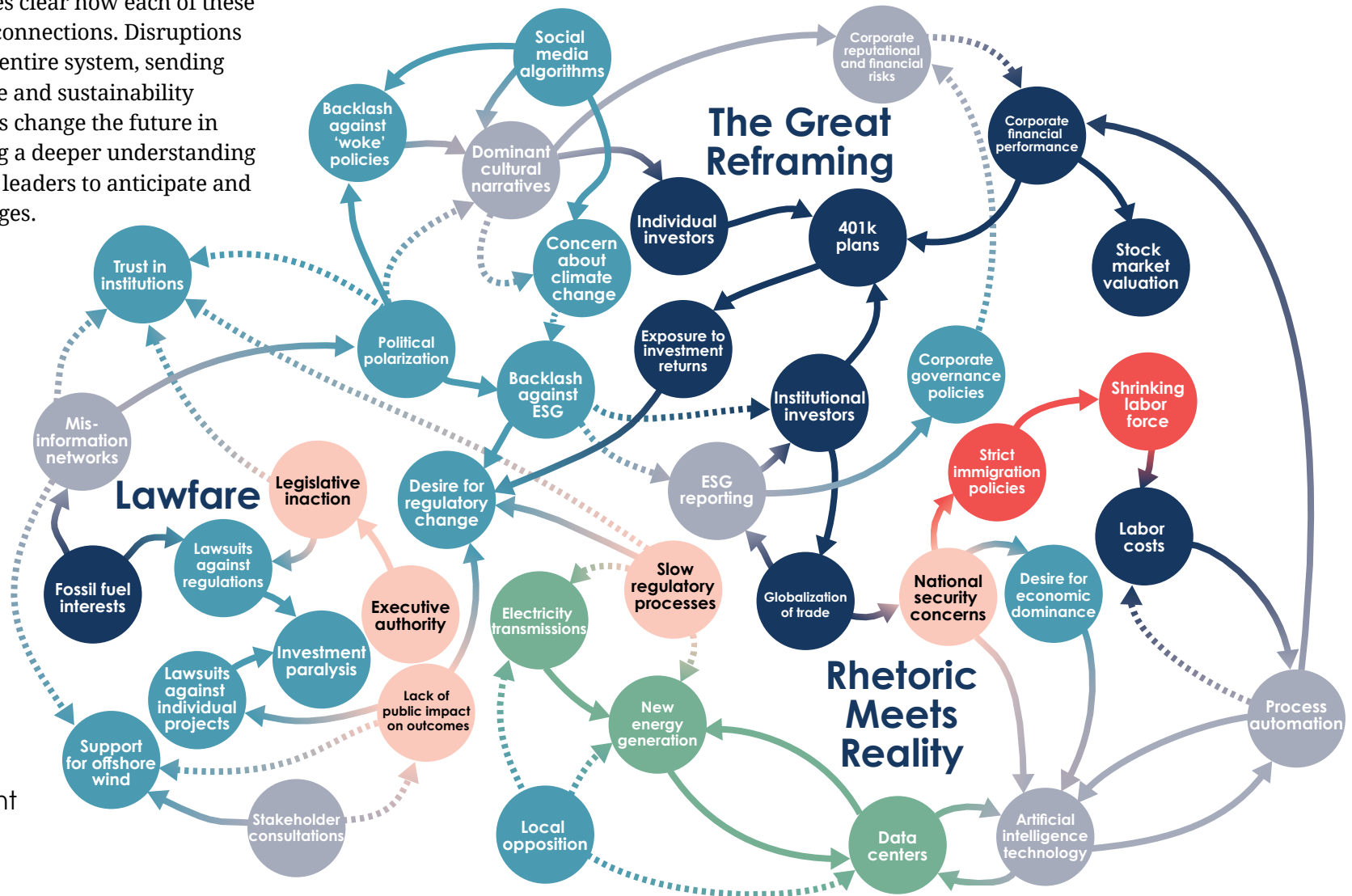
Meeting this surge in energy demand is possible – with the use of renewables, transmission needed to support them, supportive communities, and build-out plans that respond to the reality on the ground, not hyped-up rhetoric.

KEY TAKEAWAYS

- A data center strategy is an energy strategy. Developers should analyze local energy availability, expectations for transmission upgrades, and regulatory dynamics that dictate access to energy supply.
- Executive orders can set the tone, but delivering on AI or electrification ambitions will take more than that, especially for data centers which are inherently AI infrastructure and energy projects rolled into one.
- Don't let the noise obscure reality. Understand the circumstances under which you're operating, and act accordingly. That doesn't mean you should ignore the rhetoric – the emotions it can reveal are essential to understanding what motivates the decision-makers that affect project development, from policymakers to the local community.

In the end, it's all connected

When we zoom out, it becomes clear how each of these system maps share common connections. Disruptions in one area can influence the entire system, sending shockwaves across the climate and sustainability landscape. These ripple effects change the future in unexpected ways, but building a deeper understanding of the broader context equips leaders to anticipate and prepare for these future changes.



Legend

- Supports
- ⋯ Opposes
- Economy
- Information
- Behavior
- Government
- Built Environment
- Labor

Understanding the signals

Zoning litigation, college admissions policies, immigration policies. At a glance, these topics might not seem like such obvious signals to watch if you're looking to make climate and sustainability investments in 2025. This report demonstrates how macro trends influence the micro trends driving the energy transition.

Understanding why is the secret to building a successful strategy. As the year unfolds, The Groundwire Group will be monitoring these trends as we advise our clients on how to turn observation into action.



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About Groundwire

The Groundwire Group is a boutique strategy and communications consulting firm. We build the stories and strategies that shape our climate future.

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