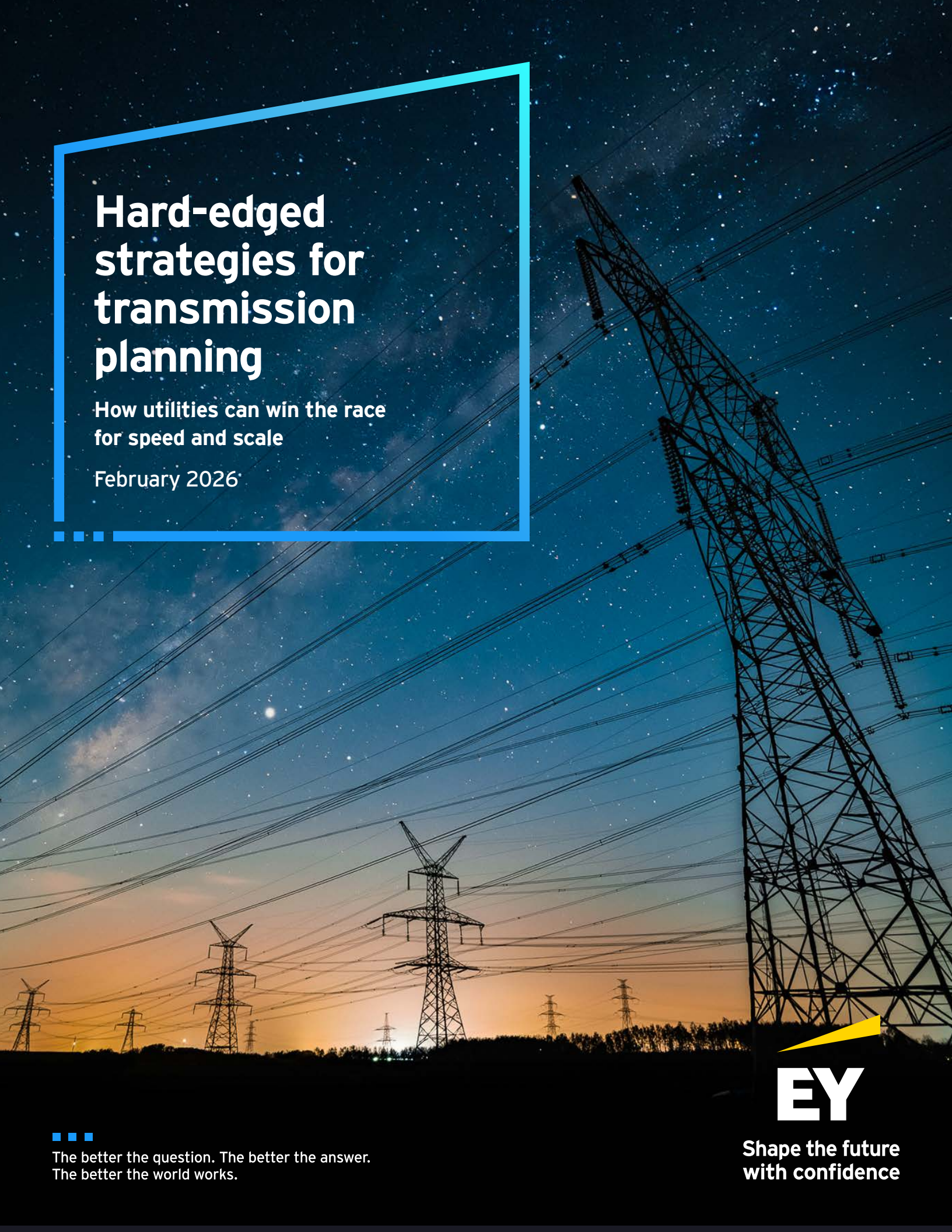

Hard-edged strategies for transmission planning

How utilities can win the race for speed and scale

February 2026

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The industry's competitive dilemma

The transmission system has emerged as the defining battleground for competitiveness in the power and utilities (P&U) sector.

The ability to plan, permit, and deliver transmission projects will determine whether P&U companies can meet the surging demand from data centers, advanced manufacturing and national electrification — or remain a bottleneck to growth. The sector's legacy operating model, built for predictability and compliance with lengthy delivery cycles, is misaligned in a market that demands speed, certainty and execution discipline.

Transmission planning, once viewed as a routine combination of administrative and engineering tasks, is now a key driver of strategic decision-making that defines both positioning and capability choices for P&U companies.

This paper sets out eight hard-edged strategies for utility leaders to rebuild transmission-planning capability as a source of competitive advantage — anchored in speed, control of scarce resources and institutional alignment.

Transmission as the decisive arena

Transmission is now the critical bridge that connects industrial policy, data center expansion and power supply integration. It's a critical enabler for AI computing, semiconductor fabrication, electric mobility and regional re-industrialization.

The problem is current transmission planning systems and methodologies were designed for incremental growth, relying on sequential, document-driven processes that prioritize consensus over speed. Each step — forecasting, permitting, interconnection, procurement, construction, commissioning, and rate recovery — adds time, resulting in project cycles that take more than five to seven years in the US to complete. In contrast, hyperscale demand in concentrated corridors has compressed interconnection timeline expectations to 24 to 36 months. The mismatch between these two timelines defines the industry's competitive dilemma that needs to be resolved.

The new strategic question for utility executives and boards is not what projects are in the pipeline but what can be energized first, and how rivals can be denied the same advantage.

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Leading utilities no longer view energy transmission as merely a neutral public good required for long-term reliability. They see it as a decisive strategic asset which can position their companies to capture the next wave of industrial and digital load. Utilities demonstrating early wins are anchoring their planning and build-out strategies on a set of guiding beliefs starkly different from those of the past. In the current environment marked by uncertainty and complexity, traditional reliance on deterministic plans is often failing to materialize as historical data becomes unreliable, milestones shift and fixed targets fall out of sync with reality. To counter that, transmission planning must be dynamic and adaptive, allowing for adjustments as variables and decision points change.

Three core beliefs define this logic:

1. **Control of scarce transmission assets creates advantage:** Rights-of-way, permits and OEM production slots are the new strategic assets.
2. **Time determines value:** Every month saved in the planning-to-energization cycle converts directly into lower cost, higher return and stronger investor confidence.
3. **Adaptation outperforms prediction:** In a volatile and uncertain demand environment, flexible plans and adaptive execution beat deterministic planning.

This shift away from waiting for uncertainty to clear recasts transmission planning from a compliance-driven process into a race for speed, optionality and sector leadership. When decision-making is anchored in beliefs about the future rather than bounded forecasts, organizations gain the capacity to act under uncertainty instead of pausing in search of stability. In effect, they begin treating time as the first-order optimization variable. Costs and technology risks remain material, but speed to energization becomes decisive. Compressing execution timelines — from initial service request to energization — not only reduces financing costs through faster revenue realization and the time value of money but also helps avoid cost escalation in labor, equipment and materials. More importantly, it establishes speed as the organizing principle for transmission planning. By redesigning processes and workflows around rapid decision-making, organizations lower risk profiles and enhance their ability to sense and adapt to technology shifts — turning planning into a dynamic capability rather than a procedural burden.

Eight winning plays in transmission planning

With only a few utilities pulling these levers and/or embedding changes into their transmission planning function, many are still struggling to rethink and reconfigure their planning operations.

The imperative now is to move more effectively in fulfilling customer demand and to rearchitect transmission planning to move with urgency. Early adopters are intentional at preserving their first-mover advantage and recognize that sluggishness and indecision invite competition. The eight critical plays that follow offer a set of guiding principles, empowering utilities to carve out a competitive advantage in the transmission planning space.

1 Focus on speed-to-permit.

Winning utilities no longer wait for demand to announce itself; they move first to shape it. The new contest is not just responding to load but preempting it.

Forward-thinking operators are building adaptive demand-forecasting systems anchored on insights into industrial expansion, data center growth, digitalization and electrification. They translate forecasts into early physical and regulatory positioning such as filing preliminary 500 kilovolt (kV) corridor applications, securing water and substation sites, and conducting programmatic environmental reviews that pre-authorize multiple projects under a single umbrella.

For instance, one mid-Atlantic utility pre-filed transmission corridors years before hyperscale commitments, allowing it to energize first; and secure both exclusive tariff agreements and long-term load contracts. Sector leaders view anticipatory planning as a competitive discipline and banking environmental approvals and rights-of-way not as idle inventory but as "real options." This foresight allows them to respond swiftly to hyperscale customer requests. When interconnection requests emerge, those options convert instantly into schedule advantage and, by extension, cost advantage. The result is a self-reinforcing position: foresight becomes speed, and speed becomes advantageous comparative economics.

2 Exploit constraints and seize scarcity.

Locking down critical scarce resources — capital, talent and expertise, systems and tools — before competitors has given a competitive edge to a small set of utilities leading in data center deployment. These resources also include corridor acquisition, right-of-way control and transformer manufacturing slots, which have become strategic leverage.

A few years ago, a consortium of large transmission owners anticipated renewable growth and established a pooled transformer reserve, reducing replacement lead time from 24 months to under 10 weeks. The result was a supplier network competitors could not easily replicate. Leading utilities are actively pursuing scarce resources by executing multi-year supply agreements with original equipment manufacturers (OEMs) and forming shared transformer reserves. Along with load developers, they are actively pushing independent system operators/regional transmission organizations (ISO/RTOs) to reform and fast-track the interconnection processes, a significant barrier to timely load energization in many geographies.

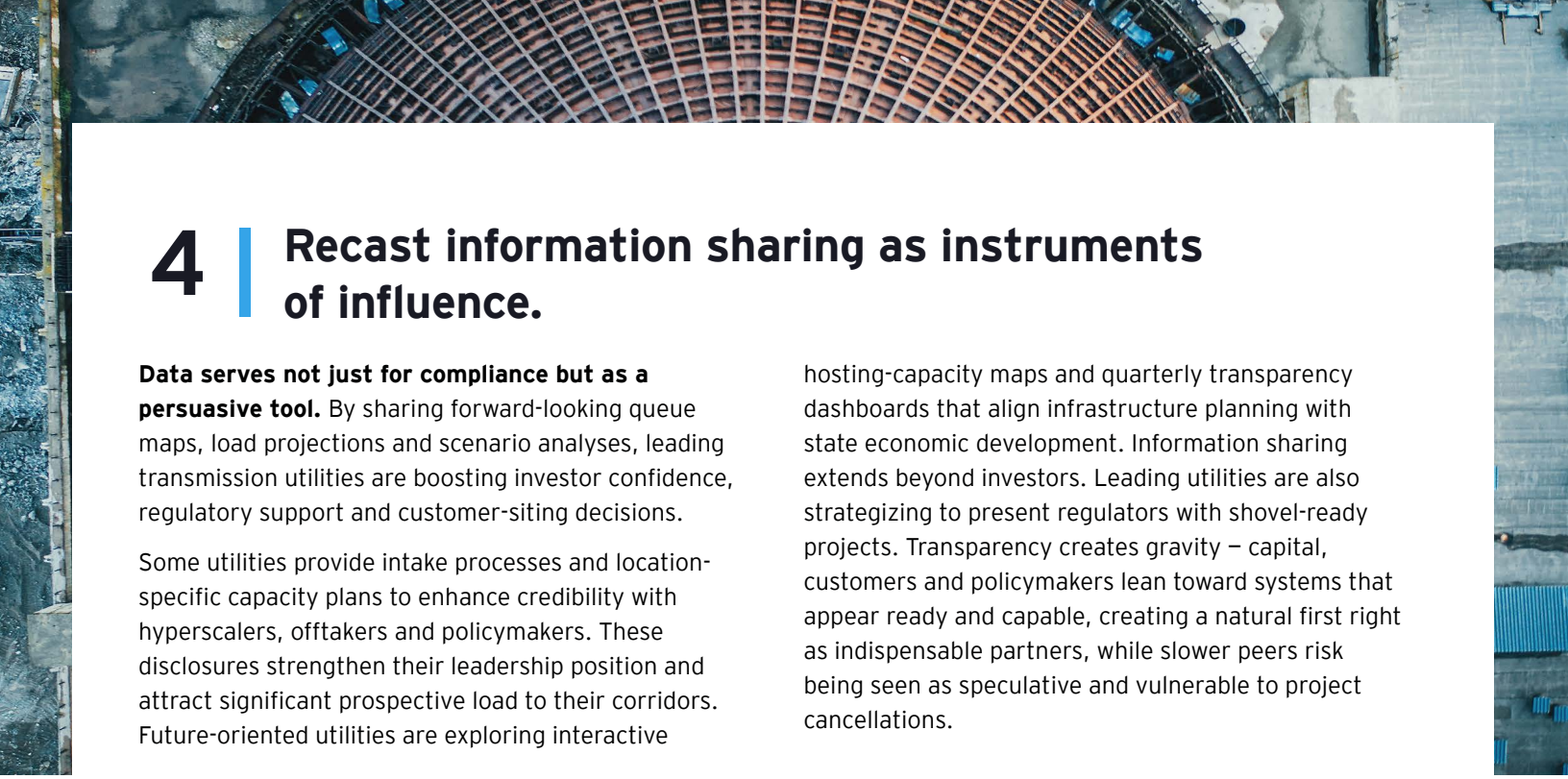
More recently, some are considering agreements with local economic development to provide direct financial incentives that can mitigate potential not-in-my-backyard (NIMBY) and affordability concerns, which, if not addressed, can delay permitting and execution substantially.

A consortium of large transmission owners anticipated renewable growth and established a pooled transformer reserve, reducing replacement lead time from 24 months to under 10 weeks.[1]

1. Industry-led solution improves grid resilience and recovery, Grid Assurance, accessed Dec. 1, 2025, https://gridassurance.com/grid-resilience-solution.

3 Design for value, cost and affordability.

Traditional design begins with functional and technical specifications, optimizing for performance, and treats value and costs as a downstream outcome. However, lessons in large project execution show that optimizing costs, value and affordability as primary design objectives can lead to greater cross-functional alignment and improved economic and beneficial outcomes. Leading utilities realize that to achieve design fidelity at speed and scale, standardization is the single greatest accelerator of transmission execution. High-voltage line families, modular substations and preapproved foundation templates streamline design cycles and simplify procurement, allowing for early ordering and quantity management of equipment. These utilities use reference designs with digital libraries for standardized 230 kV, 345 kV and 500 kV deployments, including protection schemes and bay layouts for large-load interconnections. This shortens engineering time by months and drives more predictable costs and quality outcomes, leading to lower economic dispersion and greater cost and schedule certainty. It enables long-term engineering, procurement and construction (EPC) alliances with significant fixed-cost contracting, elevating design and engineering to both operational discipline and a strategic advantage.



4 Recast information sharing as instruments of influence.

Data serves not just for compliance but as a persuasive tool. By sharing forward-looking queue maps, load projections and scenario analyses, leading transmission utilities are boosting investor confidence, regulatory support and customer-siting decisions.

Some utilities provide intake processes and location-specific capacity plans to enhance credibility with hyperscalers, offtakers and policymakers. These disclosures strengthen their leadership position and attract significant prospective load to their corridors. Future-oriented utilities are exploring interactive hosting-capacity maps and quarterly transparency dashboards that align infrastructure planning with state economic development. Information sharing extends beyond investors. Leading utilities are also strategizing to present regulators with shovel-ready projects. Transparency creates gravity — capital, customers and policymakers lean toward systems that appear ready and capable, creating a natural first right as indispensable partners, while slower peers risk being seen as speculative and vulnerable to project cancellations.

5 Redesign tariffs and capital structures to enable new economics.

Financing capability drives construction speed. With forecasted capital investments in the sector exceeding $1.1 trillion[1], efficient financial structuring and innovation emerge as a decisive source of competitive advantage. Forward-thinking utilities embed finance into the planning process rather than treating it as an afterthought. Tariff design is critical for financial planning, particularly with growing concerns about customer affordability and protecting ratepayers who may not directly benefit from investments. This is particularly important as utilities undertake large transmission projects for aging asset renewal while facing natural disasters like wildfires and storms. Leading utilities work proactively with regulators to create new tariff classes for large-load customers, preventing cross-subsidy backlash from hyperscale or industrial growth. They also establish project-specific subsidiaries and structured vehicles to attract lower-cost capital by clearly delineating and pricing risk.

To address affordability, a range of options like tiered pricing and levelized billing are considered to moderate customer bills over time. By linking returns to measurable milestones, such as time-to-energization or load-enabled megawatts, utilities can align investor and regulatory incentives for faster delivery while managing risks and costs.

$1.1 trillion+

forecasted capital investments in the utility sector from 2025 through 2029[2]

2. Electric utilities will invest more than $1.1T by 2030 to meet demand growth: EEI, Utility Dive, https://www.utilitydive.com/news/electric-utilities-will-invest-more-than-11t-by-2030-to-meet-demand-growt/753783/

6 Exploit structural gaps and partner to shape rules.

In many jurisdictions, policy is lagging market adoption, creating ambiguity for participants. This lack of clarity creates opportunities for utilities. Where siting authority is fragmented or interconnection rules outdated, the boldest utilities step in to rewrite the playbook. They collaborate with state agencies, economic development offices, and local governments to create expedited review procedures and standardized approval paths for their transmission projects.

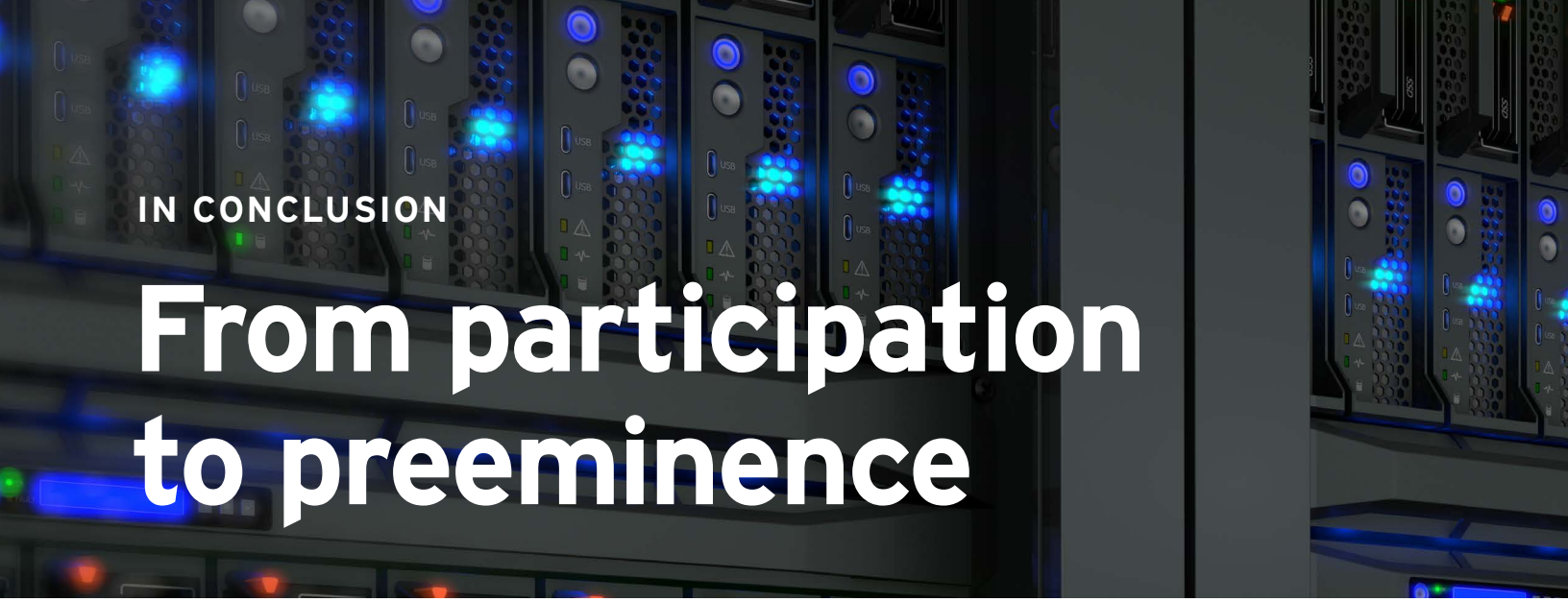
A southern utility co-developed fast-track legislation for transmission permitting, turning an administrative weakness into a competitive advantage that drew major manufacturers to its grid. By working with regional planners, counties and industrial recruiters, these utilities, often in conjunction with independent power producers, fill governance gaps with practical frameworks that become institutional norms, building resource adequacy and load fulfillment.

7 Create irreversibility through visible commitment.

Commitment signals are clear indicators of intent. Large-load customers, policymakers, OEM vendors, local governments and EPCs view these commitments as proof that a utility can operate faster and more reliably than more cautious peers. Utilities demonstrate early commitment by securing OEM capacity years ahead of approvals through advance announcements and reservations for long-lead equipment such as transformers and high-voltage circuit breakers. In parallel, they begin clearing rights of way and preparing sites, often moving dirt before final permits are issued. They reinforce that commitment by posting interconnection deposits, paying commitment fees and engaging RTOs early to secure and defend queue positions, while placing steel in the ground to build momentum that encourages regulatory follow-through. This commitment effect acts as a credibility flywheel. Early moves showcase execution discipline, attracting more hyperscale demand and enhancing leverage with regulators, vendors and investors. Over time, proactive companies set the pace, while laggards must respond under less favorable terms. This "irreversibility premium" accelerates project approval and draws follow-on demand from customers seeking reliable timelines. Decisive action begets trust, which, in turn, attracts load and reinforces competitive advantage.

8 Turn process enablement as a core differentiator.

Process enablement that catalyzes operational readiness is not a checklist; it is a deliberate enablement of a value-driven ecosystem. Leaders are investing holistically, building full-stack enablement capabilities rather than piecemeal fixes. These capabilities span various cross-functional areas, including demand forecasting, siting intelligence, stochastic scenario modeling and county-level real estate mapping. They also encompass zoning approvals, water rights, and geographic information system (GIS) overlays linking load growth to corridor availability and intake and tracking processes to identify delays in queues, permits and supply chains. Utilities adopt time-based key performance indicators (KPIs) to monitor cycle-time bottlenecks and use early warning dashboards coupled with value at stake analytics to anticipate and arrest slippages. Key is to recognize and understand the economics of months saved versus months lost. Leaders are focusing on execution playbooks, standardized EPC modules, design kits and "plug-and-play" substations. A leading southern utility is establishing a transmission portfolio office to align capital allocation and prioritize projects based on speed-to-energization (beyond traditional return of equity) with "fast-track" units for data center and industrial loads. Strategic decisions about these integrated capabilities will enhance their ability to attract and energize large-load customers at speed.



IN CONCLUSION

From participation to preeminence

After years of stagnant growth, utilities face unprecedented opportunities for concentrated load growth, driven by hyperscale data centers, semiconductor fabrication facilities and advanced manufacturing corridors.

This shift marks a significant change in market dynamics, compressing scale, speed and capital intensity into specific nodes that redefine how value is generated across the grid. These load centers, which offer geographic flexibility and considerations beyond power — water, fiber, talent, community permissions and economic incentives — enable utilities to transcend their traditional role as mere energy providers. This opens the door to unorthodox actions, unleashing a ruthless new contest for primacy. The utilities that move first can capture schedule certainty, command customer confidence and define the regulatory narrative. Those that hesitate become price-takers inside their own jurisdictions and elevate the risk of losing customers and becoming less relevant. In this context, preeminence, not mere participation, is the relevant measure of strategy. Preeminence becomes more achievable through coordinated action across five fronts:

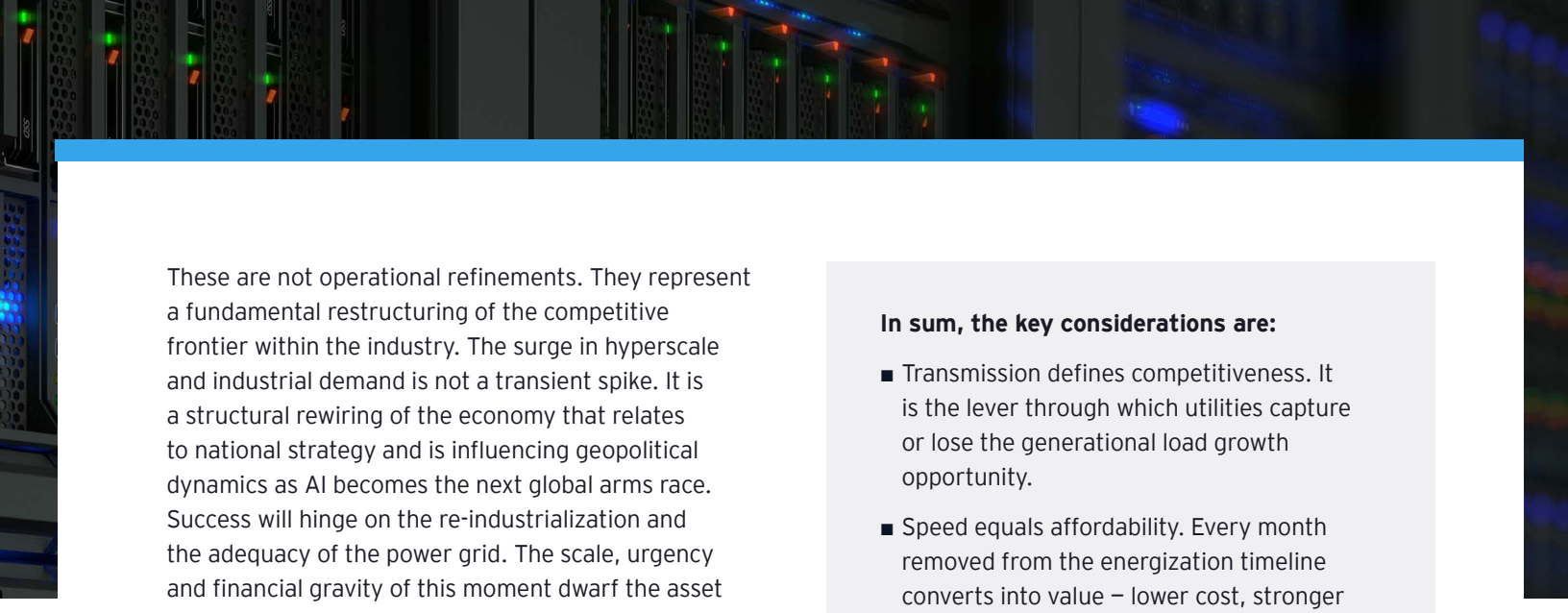
1. Engage stakeholders: Tie every major transmission project to visible economic outcomes — local jobs, tax revenue and industrial development — so that potential NIMBY and community opponents evolve into political sponsors. A stable working stakeholder alignment model can become an insulation barrier against new entrants and de-risk deployment.

2. Enhance regulatory transparency: Maintain a relentless focus on transparency by deeper and more frequent engagement with the government and regulatory agencies with complete, defensible data, and project rationale. Proactively secure regulatory bandwidth and engage until decision-makers view the transmission developer as the inevitable executor.

3. Accelerate interconnections: Anticipate load before it is officially submitted. Own the hosting-capacity intelligence. Replace sequential reviews with concurrent assessments to significantly reduce study-to-permit cycles by half, aligning more closely with customer timelines.

4. Lock in supply chains: Pre-empt scarcity and lock critical equipment, contractors, specialists and craft labor. Lock transformer and cable capacity years in advance, not only securing your own delivery certainty but quietly delaying everyone else's.

5. Monetize time: Recognize time has become the hidden currency of competitive advantage. Measure, track and treat every saved month as enterprise value created, and communicate the correlations of activities and decision on removing dead and wasted time.



These are not operational refinements. They represent a fundamental restructuring of the competitive frontier within the industry. The surge in hyperscale and industrial demand is not a transient spike. It is a structural rewiring of the economy that relates to national strategy and is influencing geopolitical dynamics as AI becomes the next global arms race. Success will hinge on the re-industrialization and the adequacy of the power grid. The scale, urgency and financial gravity of this moment dwarf the asset modernization programs of prior decades, be it the death spiral concerns from distributed energy or grid digitization and decarbonization point solutions. While these motivations have not faded away, they are increasingly subsumed within the large load growth and affordability narrative.

Utilities that remain anchored in legacy, risk-averse models will not merely be outflanked by peers; they will likely be displaced by their own customers. Many industrials, such as oil and gas companies, have experience building captive power plants. Global technology firms are building generation portfolios and testing backward integration strategies through "bring your own power" initiatives. As necessity drives innovation, the line between customer and competitor is dissolving. In this environment, utilities must learn to play offense:

- Make time the dominant performance variable.
- Embed adaptability into planning, governance and execution.
- Treat institutional alignment as a strategic asset, not an administrative formality.

The new order will not reward those who react. It will reward those who pre-commit — those who make their advantage sustainable.

In sum, the key considerations are:

- Transmission defines competitiveness. It is the lever through which utilities capture or lose the generational load growth opportunity.
- Speed equals affordability. Every month removed from the energization timeline converts into value — lower cost, stronger earnings and reduced public resistance.
- Moats are built by controlling scarce resources. Rights-of-way, permits, OEM and talent slots are the new strategic resources.
- Institutional design matters. Governance, data transparency, and stakeholder coordination determine legitimacy and reduce cycle time.
- Offense wins. The race will reward those who act first, learn fastest and shape the rules that others must follow.

The next decade will reward utilities that treat transmission planning not as a compliance burden but as a competitive instrument. Those who accelerate, standardize and institutionalize speed will not only deliver power faster — but also, they will define the economic landscape of the digital and industrial age.

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