Policy Brief

Series Information:
This policy brief is part of the EPINOVA Policy Brief Series on AI-Enabled Warfare, Sustainability, and Global Security Governance.

Recommended Citation:
Wu Shao-Yuan (2026), Managing Structural Where Data Centers Get Built? Institutional Friction and the Spatial Logic of Compute Infrastructure in the United States, Policy Brief No. EPINOVA–2026–PB–04, Global AI Governance and Policy Research Center, EPINOVA LLC, https://doi.org/10.5281/zenodo.18592482

GLOBAL AI GOVERNANCE RESEARCH CENTER

EPINOVA

Where Data Centers Get Built?

Institutional Friction and the Spatial Logic of Compute Infrastructure in the United States

Author: Shaoyuan Wu
Affiliation: Global AI Governance and Policy Research Center, EPINOVA LLC
Date: February 09, 2026

Executive Summary

Large-scale data center development in the United States is increasingly shaped not by purely technical or market-based considerations, but by differences in institutional feasibility across jurisdictions. While recent public discourse often describes a "southward shift" of data centers, this framing overstates the degree of relocation and obscures the underlying structural drivers.

This policy brief argues that current development patterns are better understood as the outcome of institutional site selection: data centers are built where governance, permitting, and utility coordination allow rapid, low-friction deployment. To analyze this logic, the brief introduces the concept of the **Infrastructure Friction Boundary (IFB)**, a diagnostic framework for identifying where hyperscale compute infrastructure can be accommodated with minimal procedural resistance.

Understanding institutional friction is essential for anticipating the long-term governance consequences of AI- and compute-intensive infrastructure expansion.

1. Problem Statement

Traditional explanations for data center location—cheap electricity, climate, tax incentives, and network proximity—remain relevant but incomplete. As hyperscale and AI-driven facilities demand unprecedented power, water, and land-use commitments, institutional constraints increasingly determine whether projects can proceed at scale and speed.

Jurisdictions vary significantly in:

- Permitting timelines and approval authority
- Exposure to litigation and public contestation
- Utility coordination capacity and infrastructure readiness

These differences create uneven conditions under which high-lock-in infrastructure is approved, raising concerns about long-term governance flexibility and public accountability.

2. Analytical Framework: IFB

The IFB is not a geographic or political dividing line. It represents a composite feasibility threshold derived from three interrelated dimensions:

a) **Institutional Friction:** Land-use regulation, zoning rigidity, public hearing requirements, litigation exposure, and the density of local veto points.

b) **Utility and Energy Feasibility:** Grid redundancy, substation approval processes, water dependency, and coordination between developers and utilities.

c) **Network and Infrastructure Embeddedness:** Existing fiber backbones and cluster effects, contingent on institutional capacity to enable expansion.

When projected spatially, these dimensions produce an apparent north–south pattern. This pattern reflects institutional gradients, not intrinsic regional advantages.

3. Key Findings

- Regions absorbing a disproportionate share of new data center capacity are **not uniformly superior in technical or economic terms**, but consistently exhibit **lower institutional friction**.
- Lower-friction jurisdictions are characterized by:
    - Streamlined approval processes;
    - Centralized or coordinated decision authority;
    - Reduced procedural contestation.
- Conversely, jurisdictions with advanced digital ecosystems and mature infrastructure often face rising governance resistance, rendering projects institutionally constrained despite commercial viability.
- The observed concentration of development reflects **where data centers can be built most easily**, not necessarily where they are strategically or socially optimal.

4. Governance Implications

Data centers are high-capital, long-lived, and path-dependent infrastructures. Once deployed, they can:

- Lock in specific energy generation and transmission pathways
- Create fiscal dependence on a narrow set of corporate actors
- Constrain future land-use, environmental, and regulatory options

A critical asymmetry emerges: jurisdictions with the lowest institutional friction often possess **weaker long-term governance safeguards**. This does not indicate governance failure, but a structural trade-off between short-term feasibility and long-term adaptability.

Unchecked, this dynamic risks producing **infrastructure–governance asymmetry**, in which deployment decisions made under low resistance conditions narrow future policy choices.

5. Policy Recommendations

a) **Treat Institutional Friction as a Governance Signal:** Low friction should trigger enhanced scrutiny, not automatic approval, for high-lock-in infrastructure.

b) **Integrate Long-Term Governance Impact Assessments:** Approval processes should evaluate fiscal dependence, energy lock-in, and land-use constraints over the full lifecycle of data center projects.

c) **Strengthen Utility–Governance Coordination:** Align power, water, and infrastructure planning with public oversight mechanisms before large-scale commitments are made.

d) **Use IFB as a Diagnostic Tool:** Policymakers should apply the IFB framework to identify structural vulnerabilities in data center siting decisions, rather than treating spatial concentration as a market inevitability.

Conclusion

The central policy challenge is not whether AI and compute infrastructure is necessary, but whether governance capacity is being structurally constrained before long-term societal choices can be fully evaluated.

Mapping and monitoring institutional friction is therefore essential—not only for infrastructure planning, but for safeguarding democratic governance in the next phase of AI-driven development.