



**GREAT PLAINS
INSTITUTE**

Lessons Along the Road to Transmission Deployment

Executive Summary

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About the Great Plains Institute

A nonpartisan, nonprofit organization, the Great Plains Institute (GPI) accelerates the transition to net-zero carbon emissions for the benefit of people, the economy, and the environment. Working across the US, we combine a unique consensus-building approach, expert knowledge, research and analysis, and local action to find and implement lasting solutions. Our work strengthens communities and provides greater economic opportunity through the creation of higher-paying jobs, expansion of the nation's industrial base, and greater domestic energy independence while eliminating carbon emissions.

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Executive summary

To meet rising energy demand and decarbonization goals while keeping energy affordable, the United States needs to expand transmission capacity by two to five times by 2050.¹ However, social, regulatory, and supply chain barriers² have made it increasingly difficult to achieve these goals. Local opposition to high-voltage transmission lines (HVTLs) is one of the key barriers to rapid development. Lengthy, costly lawsuits can delay projects for years and even lead to their cancellation.³ Additionally, organized opposition and protests have prompted some county governments and state legislatures to consider and pass laws that jeopardize the feasibility of some projects.⁴ Finally, projects have faced public scrutiny from federal and state legislators, spurred on by local opposition, which has arguably led to significant delays and some projects even being denied approval.⁵ Though local opposition to HVTLs has been studied since the 1950s,⁶ the need to rapidly expand HVTL development and the growing efficacy of opposition movements have made understanding the origins of, and solutions to, local opposition to HVTLs of paramount importance.

To better understand community and local perceptions of transmission development and merge previously siloed research on areas relevant to transmission siting, the Great Plains Institute (GPI) embarked on a grassroots research effort.

GPI conducted semi-structured interviews with 110 local stakeholders, developers, and government officials, among others, across 11 states and 11 shovel-ready HVTL projects (shown in figure 1) to uncover significant drivers of opposition and best practices across diverse regulatory schemes, geographies, and communities to both mitigate that opposition and build overall support.

Projects were chosen due to their relative significance, geographic location, type of development, or levels of observed opposition. Figure 1 also shows how this research builds on the author's prior research in the Western United States.

¹ Eric Larson, Chris Greig, Jesse Jenkins, Erin Mayfield, Andrew Pascale, Chuan Zhang et al., [Net-Zero America: Potential Pathways, Infrastructure, and Impacts, Final Report Summary](#) (Princeton University, October 29, 2021), 28–29.

² International Energy Agency, [Building the Future Transmission Grid](#) (International Energy Agency, 2025), 19–32.

³ Olga Baranoff and Zachary Norris, [A closer look at the role of litigation and opposition in transmission undergoing federal permitting](#) (Niskanen Center, March 4, 2024); Matthew Eisenson, Jacob Elkin, Harmukh Singh, and Noah Schaffir, [Opposition to Renewable Energy Facilities in the United States](#) (Sabin Center for Climate Change Law, June 2024), 5.

⁴ Wesley Muller, ["Law will help wealthy Louisiana Landowner in Dispute with Power Line Builder," Louisiana Illuminator](#), May 30, 2024; Robin Allen, [Let's make a deal: high-capacity transmission edition](#) (Niskanen Center, June 10, 2024); Teghan Simonton, ["Senate passes changes to eminent domain, but Grain Belt Express can proceed," Columbia Missourian](#), May 5, 2022; Eisenson et al., [Opposition to Renewable Energy](#), 22.

⁵ Russell Gold, *Superpower: One Man's Quest to Transform American Energy* (Simon & Shuster, 2019); Carson Swick, ["Lawmakers oppose Maryland Piedmont Reliability Project at Fox 45 town hall," The Baltimore Sun](#), March 27, 2025; Josh Hawley, ["Senator Hawley Calls on Department of Energy to Cancel Grain Belt Express \\$5 Billion Loan," U.S. Senator for Missouri Josh Hawley](#), March 25, 2025.

⁶ Lita Furby, Paul Slovic, Baruch Fischhoff, and Robin Gregory, ["Public Perception of Electric Power Transmission Lines," Journal of Environmental Psychology](#) 8, no. 1 (1988): 21.

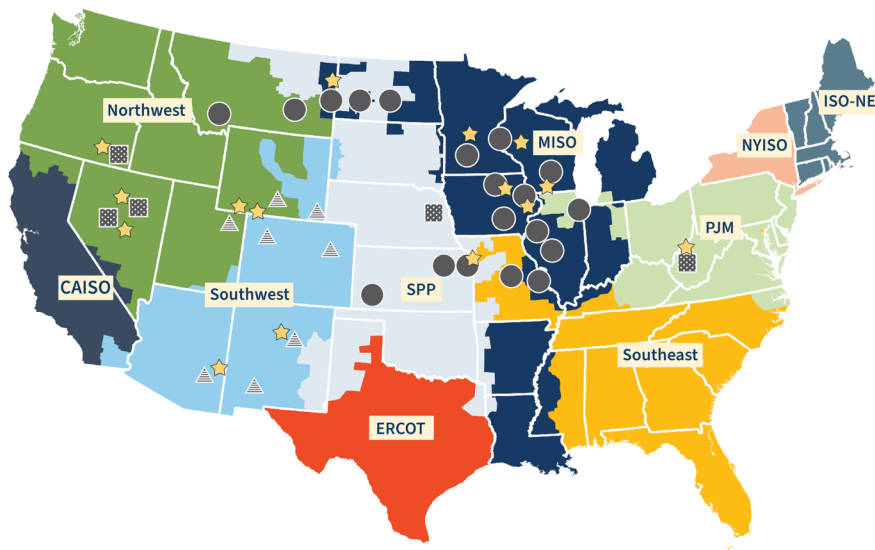


Figure 1. Geographic scope of GPI's grassroots research

- In-person interviewee
- Virtual interviewee
- ▲ Prior in-person research
- ★ Transmission projects studied

Note: Multi-color regions on the map represent transmission planning regions.

Sources: Figure by Aime Bitá, Great Plains Institute, and Esther Ramsay, Horizon Climate Group, based on data from Joshua Rogers, Great Plains Institute, and transmission planning regions by Elizabeth Abramson, Horizon Climate Group, and Aparna Narang, Clean Grid Initiative, 2025, adapted from Federal Energy Regulatory Commission (FERC) Order 1000 Regions shapefile, December 2024.

The vast majority of these interviews were conducted in person by the author of this report, who traveled and lived along proposed transmission routes for five months. The interviews were anonymous and semi-structured to promote candor and avoid response bias. Interviewees were contacted based on their expected or observed involvement with selected projects. For example, government officials for every county hosting a transmission line studied in this report were contacted. The author also used articles, dockets, public meetings, and the recommendations of other interviewees to connect with other stakeholders. Additional research was conducted to corroborate claims made by interviewees.

The resulting research represents what we believe to be the largest and most geographically diverse study of local opposition to HVTL development conducted to date. The following sections will address the literature surrounding opposition to HVTLS, the methodology utilized in this paper, and the high-level results of interview responses, as well as provide in-depth discussions about influential drivers of opposition and support.

The discussions will include key findings and considerations identified throughout this study for developers and policy makers. The discussions will also tell the stories of interviewees impacted by development from across the regions studied. Of the 37 distinct drivers of opposition or support identified in this study (shown in the "Interview results & opposition framework" section), 13 of the most common drivers are discussed at length throughout this report.

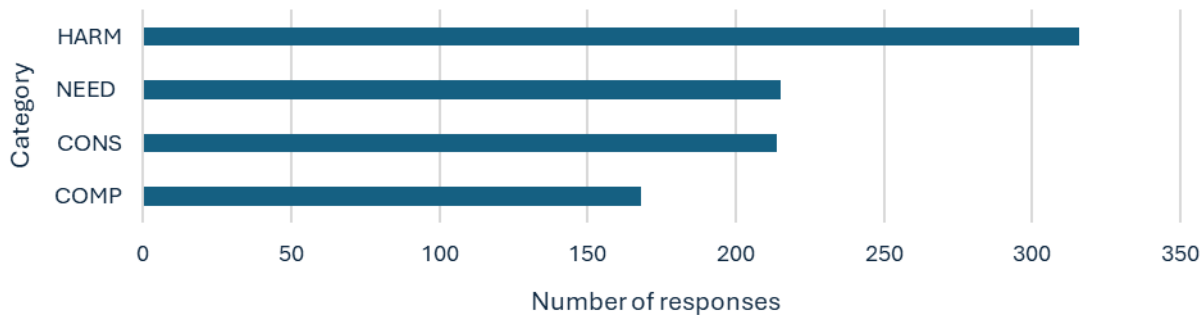


Table 1. Common drivers of opposition and support

<i>Driver category</i>	<i>Primary driver</i>
Agricultural impacts	Opposition
Environmental impacts	Opposition
Property values	Opposition
Cultural impacts	Opposition
Electromagnetic fields	Opposition
Transmission's association with renewable energy	Both
Transmission alternatives	Both
Early and often engagement	Support
Micrositing	Support
Eminent domain	Opposition
Collective action	Support
Local tax revenues	Support
Monetary incentives	Support

The report aims to give researchers, policy makers, and developers broad categories to pull from when engaging stakeholders during high-voltage transmission development. It also discusses specific elements of those categories and relevant literature associated with them. The resulting framework, highlighted below in figure 2 and introduced in the section “Interview results & opposition framework,” is a one-stop shop for transmission siting concerns that can be used by developers, policy makers, local stakeholders, and landowners alike.


Figure 2. Opposition framework: Interview responses





Developers can use this framework in future projects as a baseline, ensuring their messaging, stakeholder engagement processes, and development techniques adequately address each proposed category. Similarly, policy makers aiming to ensure developers follow equitable practices can use this framework in their efforts to address local stakeholders' concerns. Finally, landowners and other local stakeholders may use this framework to communicate the kind of engagement and policies they would like to see from developers and policy makers *and* use it as a standard for the kind of engagement they should expect during the development process.

Through this first-of-its-kind approach to researching transmission siting and permitting, GPI is offering readers a deeper understanding of how communities hosting this infrastructure engage with and often react to transmission developers. Furthermore, readers will gain a more nuanced perspective on factors that can inform and improve transmission siting practices and policy proposals across the country.



“This study aims to both understand why people dedicate their time, money, and effort to oppose necessary infrastructure and provide developers and policy makers with tools to earn trust and secure buy-in from host communities. I was driven by principles core to GPI’s mission, most notably the notion that meeting people where they are, both physically and mentally, is the best way to understand perspectives contrary to your own.”

– Joshua Rogers, report author and
Energy Systems fellow at GPI