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An Outlook on Whether Competition in High-Voltage Transmission Line Development is Necessary?

By: Andrew Leahy



Various concerns, such as climate change, supply issues, and bad actors with vast energy resources, have increased global interest in increasing power grid security and efficiency.[1] One method to increase power grid security and efficiency that has gained popularity is using high-voltage powerlines, cables transporting energy over long distances with minimal power losses along the route.[2] The People's Republic of China has been at the forefront of implementing high-voltage powerlines within its borders.[3] For example, the Changji-to-Guquan project, which began in 2019, consists of a 1,100-kV direct current line spanning 2,046 miles, "roughly the distance between Los Angeles and Cleveland."[4] This powerline can transmit 12,000 MW from China's rural western territories to the more populated east, enough electricity for 50 million households.[5] Other nations have taken an interest in expanding high-voltage power lines within their sovereign borders as Table 1[6]demonstrates:

Announced high voltage	direct current line projects > 4	00 kV

m-country proj	Distance of domestic projects (km)	Total electricity generation capacity (GW)	Total distance of projects / el gen capacity
Mexico	2,740	67	40.6
Brazil	4,640	156	29.8
China	27,953	1,519	18.4
Indonesia	876	57	15.3
UK	1,187	95	12.5

While there are many steps to operationalizing a powerline project, this article focuses on one specific aspect of the process: competitive procurement, where state entities put out public offerings and allow various developers to place bids for projects. The idea is the "selection of the supplier with the lowest price or, more generally, the achievement of the best "value for money."[7] In the United States, competitive procurement often leads to a debate around whether local utilities should be given a "right of first refusal" to construct high voltage lines before outside developers are allowed to bid on projects.[8]

Considering the free market approach of the United States, the ongoing battle to decide whether major utility transmission projects in the United States should be open for competitive procurement may seem strange. However, while multiple nations such as Argentina, Peru, the UK, and India have embraced competition in transmission development for decades, the United States only started to embrace it slightly over a decade ago. This was embodied in 2011 when the Federal Energy Regulatory Commission ("FERC"), a federal entity tasked with "promot[ing] the development of a strong national energy infrastructure," [9] passed Order No. 1000, which abolished the federal "right of first refusal", a mechanism providing incumbent transmission companies the first opportunity to bid on any interstate utility project. [10] Allowing non-incumbent companies to enter the development market was meant to increase investment in the sector and get projects delivered at better rates. [11] However, the reality has been that since Order No. 1000 was enacted, a whopping 97% of U.S. transmission investments have occurred outside the competitive process. [12] The lack of competition has been so extensive that FERC recently proposed reinstating the "right of first refusal". [13] This would allow incumbent transmission companies to skip a bidding process. [14]

Should competition really be stifled to provide incumbents virtually complete control of projects in their respective territories? The answer is not so clear, and requires an understanding of what both competition and a "right of first refusal" entails in the expansion of a high-voltage power lines in the United State:

Advocacy for competition:

Competition in this sphere is intended to lower consumer costs by lowering the bids companies will submit to secure jobs. Throughout the globe, nations have been turning to competitive procurement to maximize competition and transparency.

[15] Two primary modes of procuring project developers are "open" or "restricted" tenders.

a. Open:

Under this model, a procuring entity publishes the project opportunity in a publicly available forum and invites interested parties to submit a proposal for consideration. The main premise is to maximize competition while setting out detailed project specifications and bid evaluation mechanisms to ensure fairness.[16] Proposals are submitted, and whoever arrives at the highest score receives the contract.

b. Restricted:

Restricted tenders limit the number of parties to a select group of developers.[17] This allows the procuring entity to specify the needed skill and accelerate the procurement process. The selected parties submit proposals and go through the same evaluation as an open bid. However, should the chosen bidder fail to finalize a contract, a reserve bidder is chosen from the selected parties. Overall, restricting the pool of proposers allows a faster procurement process.

Advocacy for the "Right of First Refusal"

The goals of competitive procurement are indeed promising. Nonetheless, considering the decentralized platform the United States grid operates in demonstrates that relying on incumbent utilities is the faster and more efficient way to get projects underway. Since states still retain a massive amount of autonomy, allowing a streamlined process for incumbents to get projects done is not unreasonable. Not only are these companies familiar to local rate-payers, which would likely make citizens more comfortable with the construction of high-voltage power lines that need to be constructed. Allowing incumbents to provide high-voltage powerlines will incentivize them to invest in a modern, long-range grid. Optimally, setting the stage for interstate interconnections and moving closer toward a nationally connected grid where local utilities sell energy from far-reaching high-voltage powerlines.

The "right of first refusal" has been of interest to different areas of the United States at the state level. A 2019 Texas statute, S.B. 1938, sought to exclude out-of-state transmission companies from competing in the market.[18] The bill set outs "that a certificate to build, own, or operate a new transmission facility that directly interconnects with an existing electric utility facility may be granted only to the owner of that existing facility.".[19] Should the new transmission facility directly interconnect with facilities owned by different utilities, each entity must be certified to build, own, or operate the new facility in separate and discrete equal parts unless they agree otherwise.[20] While a court held that the Texas law violated the Commerce Clause by inhibiting interstate projects, states retain a wide degree of autonomy within the intra-state realm. Michigan, Iowa, the Dakotas, and Minnesota also have taken measures to eliminate competition in large transmission development.[21]

Especially in the realm of power lines, which we all rely on, it may seem almost unnatural to say that competition should be limited. Nonetheless, reliance on local utilities and to invest in local projects rather than long-range high voltage demonstrates that we need to involve them in a more meaningful capacity. The more equity incumbent utilities have in high-voltage projects, the simpler it becomes to transition to a modern nationwide grid.

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- [2] Power Systems in Transition: Electricity security matters more than ever, IEA (Oct. 2020), https://www.iea.org/reports/power-systems-in-transition [https://perma.cc/ZET9-3B4Q].
- [3] Ye Roulin & Yuan Ye, China's Growing Network of Ultra-High Voltage Power Lines Has Hit Its Fair Share of Snags —

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- [4] Bloomberg, *World's Biggest Ultra-High Voltage Line Powers Up Across China*, T&D World (Jan. 2, 2019), https://www.tdworld.com/overhead-transmission/article/20972092/worlds-biggest-ultrahigh-voltage-line-powers-up-across-china [https://perma.cc/8DB9-X39A].
- [5] *Id.*; see also Molly Lempriere, China's mega transmission lines, Power Technology (Mar. 6, 2019), https://www.powertechnology.com/features/chinas-mega-transmission-lines/ [https://perma.cc/2E3C-PYKY] (claiming the powerline can provide electricity for up to 25.6 million people).
- [6] Michael Cembalest, Eye on the Market: J.P. Morgan Annual Energy Paper, J.P. Morgan 16, 17 (2018).
- [7] Competition Committee, Competition and Procurement, Org. for Economic Co-Operation and Development 7 (2011).
- [8] Josiah Neeley, *Right of First Refusal Laws for Electric Transmission are Anti-Competitive in Interstate Commerce*, R Street (Jun. 24, 2021), https://www.rstreet.org/research/right-of-first-refusal-laws-for-electric-transmission-are-anti-competitive-in-interstate-commerce/ [https://perma.cc/9HKG-PDZ7].
- [9] What Ferc Does, Federal Energy Regulatory Comm'n., https://www.ferc.gov/what-ferc-does [https://perma.cc/B8D8-M2KN].
- [10] FERC Rule 1000: What Does it Mean?, Power (July 1, 2012), https://www.powermag.com/ferc-rule-1000-what-does-it-mean/ [https://perma.cc/D9HU-84RZ].
- [11] *Id*.
- [12] Johannes P. Pfifenberger et al., Cost Savings Offered by Competition in Electric Transmission, LSP Transmission Holdings at 5 (Apr. 2019).
- [13] Zack Hale, *Transmission owners, consumers spar over changes to FERC's competition rules* (Aug. 18, 2022), https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/transmission-owners-consumers-spar-over-changes-to-ferc-s-competition-rules-71763240 [https://perma.cc/D43H-8ENE].
- [14] Id.
- [15] Understanding Power Project Procurement, 3 Power Africa Understanding Series 17 (2013).
- [16] *Id.* at 78.
- [17] Id. at 80.
- [18] Tex. Bus. & Com. Code Ann. § 1938 (West 2019).
- [19] *Id*.
- [20] *Id*.
- [21] Jeffrey Tomich, *States unwind FERC plans for grid expansion*, EnergyWire (Jan. 19, 2022, 6:58 AM), https://www.eenews.net/articles/states-unwind-ferc-plans-for-grid-expansion/ [https://perma.cc/2LY3-UHEC].
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