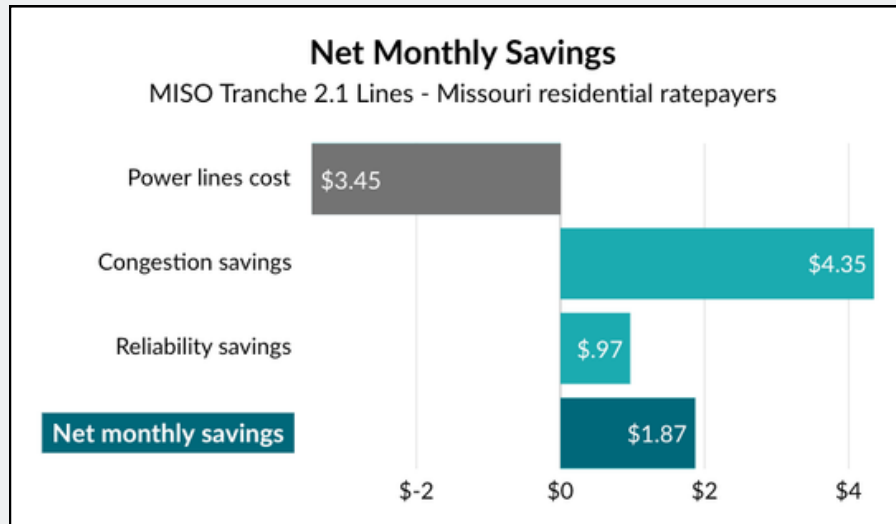


Missouri Household Electricity Bill Savings from New Power Lines



The Midwest electric grid operator, MISO, approved a set of 24 new power line projects (“Tranche 2.1”) for the Upper Midwest, with several lines to be built in Missouri. The transmission projects are needed to address bottlenecks and other grid deficiencies that are spiking electricity costs and heightening the risk of costly outages in the face of increasing extreme weather and rising demand.

MISO has calculated that these new long-range transmission lines will provide up to \$83 billion in net benefits to consumers over the estimated 40-year lifetime of the lines. 5 Lakes Energy has conducted additional analysis of MISO data to determine future electricity bill impacts at the level of the average Missouri household.

In Missouri, construction of the MISO Tranche 2.1 lines will result in a net savings for residents: \$1.87 in net monthly savings per Missouri household on average over the lifetime of the lines. The net savings come via two categories of financial benefits: “congestion savings” as the new transmission creates more room on the grid to alleviate choke points and maximize use of lowest-cost energy, and “reliability savings” as the new transmission lines avert the expenses of future outages.

How wil the MISO Tranche 2.1 transmission lines bring average annual bill savings to Missouri residents?

Our analysis of MISO Tranche 2.1 power line benefits finds that future financial savings produced for Missouri residents will greatly exceed construction costs for the new power lines. The new transmission will accomplish this by:

- Alleviating grid bottlenecks that restrict supply and spike electricity prices at choke points
- Maximizing the grid operator’s ability to use lowest-cost power to serve demand
- Averting the need to build as many new power plants
- Preventing expensive outages caused by overloaded lines or weather events
- Avoiding the extra future expense of replacing aging, smaller transmission lines piecemeal

Methodology

This economic analysis was developed with MISO’s detailed business case analyses for the costs and benefits of the MISO tranche 2.1 lines for Future 2A. Electric utilities were mapped to MISO’s local resource zones to conduct a state-based analysis. The metrics used in MISO’s business case analysis benefits were grouped into two categories: reliability benefits (reduced risks from extreme weather impacts and mitigation of reliability issues); and on-bill benefits (avoided capacity costs, capacity savings from reduced losses, congestion and fuel savings, energy savings from reduced losses, reduced transmission outage costs, and avoided transmission investment). The monetary value of reliability benefits is calculated based on MISO’s \$10,000/MWh value of lost load. All costs and benefits have been adjusted for inflation and are represented in real undiscounted 2026 dollars.