



Americans for a Clean Energy Grid

The Benefits of Electric Transmission

Electricity powers our daily lives. But most of our grid infrastructure has reached or exceeded its intended 50-year lifespan.¹ Numerous studies have found the U.S. needs to double or triple its transmission capacity to connect clean energy resources to the grid; accommodate the rapid electrification of everything from cars to home heating systems; and mitigate the disruption from extreme weather. An expanded grid will also lower consumer energy costs, protect natural security, create good-paying jobs, and address crucial environmental justice concerns.

Electric Reliability



Our grid must be able to withstand shocks from extreme weather, targeted attacks, or other system failures. Long-distance transmission helps to keep the lights on by allowing regions to share energy in the event of localized disruptions. Power outages during periods of extreme heat or cold can be deadly; as these threats become more frequent and demands for electric power — from cars, home heating systems, and more — steadily grows, the need for transmission connections between regions becomes even more vital.

Security



Long-distance transmission enables access to energy resources over wider geographic areas, making targeted cyber or physical attacks on the grid more difficult to plan and execute. Transmission also allows the U.S. to take full advantage of its domestic energy resources and limit its reliance on volatile foreign sources.

Consumer Costs



Improving our grid will save consumers money. Increased transmission reduces system congestion and enables access to more geographically diverse, low-cost energy resources, which reduces the total generation capacity it takes to power the grid. One study found that transmission expansion, and the resulting increase in wind and solar generation, could decrease the average consumer electric bill by more than one-third, saving the average household more than \$300 per year.² The potential savings from new electric transmission was greater in 2022 than at any point in the past decade, due to high electricity prices and extreme weather events.³



Clean Energy



America has an abundance of clean energy. But two-thirds of renewable resource potential is located in 15 central states, which account for only one-third of total U.S. electricity consumption.⁴ Transmission is needed to deliver wind and solar resources to all corners of the country. If the U.S. does not at least double its pace of transmission expansion, gas and coal-fired power plants will need to increase production to meet growing demand from EVs and broader electrification.⁵

There is no transition without transmission.

Environmental Justice



Many of the most polluting power plants are located in economically-disadvantaged areas. Compared to the overall community, people of color are exposed to nearly 1.3 times more particulate matter, and this disparity persists across income levels.⁶ Expanded transmission allows more clean energy resources to come online, reducing our reliance on greenhouse gas-emitting resources. Low-income Americans also face disproportionate energy affordability burdens.

Jobs



Transmission construction and maintenance creates domestic, good-paying union jobs. In the Eastern U.S. alone, expanding and modernizing the transmission grid would unleash \$7.8 trillion in investment and generate six million net new jobs, primarily in rural areas, according to an ACEG report.⁷ Domestic content also accounts for approximately 65% of transmission wires and towers.⁸

Sources

- 1 American Society of Civil Engineers, "[Policy Statement 484 - Electricity Generation and Transmission Infrastructure](#)," (July 2019).
- 2 Clack, Christopher et al, "[Consumer, Employment, and Environmental Benefits of Electricity Transmission Expansion in the Eastern U.S.](#)," (2020).
- 3 Millstein, Dev et al, "[The Latest Market Data Show that the Potential Savings of New Electric Transmission was Higher Last Year than at Any Point in the Last Decade](#)," (Feb. 2023).
- 4 David Gardiner and Associates, "[Transmission Upgrades & Expansion: Keys to Meeting Large Customer Demand for Renewable Energy](#)," (Jan. 2018).
- 5 Jenkins, Jesse et al, "[Electricity Transmission is Key to Unlock the Full Potential of the Inflation Reduction Act](#)," (Sept. 2022).
- 6 Mikati, Ihab et al, "[Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status](#)," (April 2018).
- 7 Goggin, Michael et al, "[Transmission Projects Ready to Go: Plugging into America's Untapped Renewable Resources](#)," (April 2021).
- 8 Pfeifenberger, Johannes et al, "[Employment and Economic Benefits of Transmission Infrastructure Investment in the U.S. and Canada](#)," (May 2011).