Americans for a Clean Energy Grid

STATEMENT OF

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Before the U.S. Senate Committee on Environment and Public Works

Hearing to Examine Opportunities to Improve Project Reviews for a Cleaner and Stronger Economy

April 26, 2023

Chairman Carper, Ranking Member Capito, and members of the Committee, thank you for the opportunity to speak about the importance of improving infrastructure project reviews to maintain a reliable grid and help facilitate the transition to a sustainable, high growth economy that works for all Americans.

My name is Christina Hayes and I serve as the Executive Director of Americans for a Clean Energy Grid, also known as ACEG. ACEG brings together a diverse coalition of stakeholders focused on the need to expand, integrate and modernize the high-capacity electric grid in the United States. The ACEG coalition includes multi-state utilities and merchant transmission owners that develop, own, and operate transmission; trade groups that count transmission owners and transmission equipment manufacturers among their members; renewable energy trade groups and advocates, environmental advocacy organizations; buyers and consumers of energy; and energy policy experts. Our coalition seeks to educate the public, opinion leaders, and public officials about the needs and potential of the transmission grid. My comments today do not necessarily reflect the views of individual members.

I. INTRODUCTION

Transmission is critical to moving power across America, yet it is at a disadvantage when it comes to siting and permitting. When Congress initially wrote the laws governing our energy infrastructure, most power was local in nature. Although Congress provided for exclusive and preemptive siting for other energy infrastructure, transmission siting remains piecemeal and haphazard as there is little to no coordination between the multiple states, the federal government, and—for some projects—the individual localities that must issue siting permits before a line may move forward and where federal review is required for segments of transmission lines, it can take more than 15 years. For these reasons, ACEG appreciates being able to speak today about transmission and how Congress can support this infrastructure critical to a clean and strong economy.

II. WHY DO WE NEED TRANSMISSION?

Electricity is an essential service. It is needed for almost every aspect of our modern lives—powering our homes, schools, hospitals and other community services, businesses, manufacturing, offices, communications network, and financial transactions. Because power plants and large solar and wind farms are not built adjacent to where we need the power, long-distance transmission lines are required to move power from their generation point to the end customer. Smaller "distributed generation" sources located adjacent or close to the end use, while extremely important to strengthening reliability, cannot by themselves meet, our nation's power needs.[1]

Most electric transmission lines in the U.S. were built in the 1950s and 60s with a 50-to-60 year lifespan – meaning the majority of lines have reached or surpassed their intended lifespan.[2] But simply replacing old lines will not resolve current and expected future problems. Our energy needs and transmission technology have evolved in the past 70 years, including the need for an energy system built to:

- withstand extreme weather events;
- be resilient;
- support a strong economy.

Our energy system must be able withstand extreme weather events. Droughts and dry conditions have laid the foundation for fires in the west, hurricanes in the south and east coast, and severe winter storms—and all of these have had severe impacts on our energy systems. Older transmission lines may not be able to stand up to modern weather. In 2021, Hurricane Ida knocked out eight high voltage transmission lines that supplied power to New Orleans, causing most of the power outages to 1.2 million customers that, in some cases, lasted nearly two weeks.[3]

Moreover, generation shortfalls resulting from severe weather and other threats are occurring with greater intensity and frequency. These events tend to be at their most extreme in areas lacking fully

[1] *See, e.g.* C. Clack, M. Goggin, A. Choukulkar, B. Cote, and S. McKee, *Consumer, Employment, and Environmental Benefits of Electricity Transmission Expansion in the Eastern U.S.*, at 8, Americans for a Clean Energy Grid, 2020; U.S. Department of Energy, Draft National Transmission Needs Study, at 87, 2023.

[2] American Society of Civil Engineers, *Policy Statement 484 - Electricity Generation and Transmission Infrastructure*, Adopted by the Board of Direction on July 13, 2019.

[3] Energy Information Administration, *Hurricane Ida caused at least 1.2 million electricity customers to lose power*, Sept. 2021.

interconnected power systems.[4] During Winter Storm Uri in February 2021, for example, power outages in the MISO and SPP regions were limited to a "handful of short duration events."[5] At the same time, more than 4.5 million Texans lost power — some for four days — while temperatures were below freezing. More than 200 people died, the majority from outage-related causes like hypothermia and carbon monoxide poisoning.[6] The impacts of the storm on power generating sources in MISO, SPP, and Texas were the same—the difference was transmission.

Because MISO has hundreds of tie lines with other regions, it was able to import sufficient power throughout the course of the storm— nearly 13,000 MW, most of it from its neighbor to the east, PJM—to minimize outages in both its own region and to deliver life-supporting power to neighboring regions. In contrast to the Midwest, Texas has only two transmission lines that connect it to its neighbor, the Eastern Interconnection. As a result, Texas was able to import only 800 MW of power. Transmission could have addressed such capacity shortfalls by enabling imports from areas less affected by the weather events.

Importantly, power flows both ways over transmission lines. Over the last December holidays, cold weather conditions during Winter Storm Elliott in 2022 caused rolling blackouts in the Southeast because local generation equipment could not produce energy. The limited interregional transmission between the Southeast and MISO and PJM allowed utilities to purchase some replacement power, reducing power outages that could have been even worse. Increased interregional transmission would have fully kept the lights on.[7] During Uri, Texas needed power, but during Elliot the Lone Star State could have sold its extra power to the Southeast. Experts have found that sufficient interregional transmission capacity during Elliot would have yielded nearly $100 million in benefits during the five-day event, and most areas could have saved tens of millions of dollars.[8]

[4] Goggin, Michael, *Transmission Makes The Power System Resilient To Extreme Weather*, 2021.

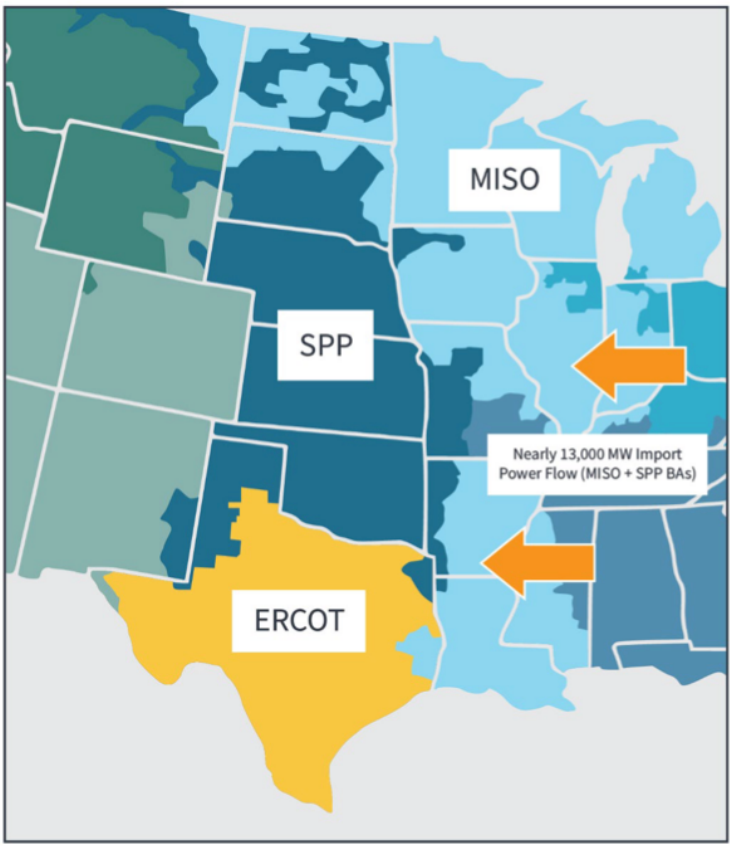
[5] MISO, *The February Arctic Event*, Feb. 2021.

[6] FERC - NERC, *Regional Entity Staff Report: The February 2021 Cold Weather Outages in Texas and the South Central United States,* Nov. 2021.

[7] Massie, Toth, *Wasted Wind and Tenable Transmission during Winter Storm Elliott*, Feb. 2023.

[8] Goggin, M. and Zimmerman, Z., *The Value of Transmission During Winter Storm Elliott*, at 1, ACORE, Feb. 2023.

Figure 81: East-to-West Import Power Flows into MISO BA Footprint, February 15



FERC - NERC, Regional Entity Staff Report: The February 2021 Cold Weather Outages in Texas and the South Central United States, Nov. 2021.

Our energy system must be resilient. A resilient grid can withstand and recover from shocks, including attacks and damages from natural events, systemic failures, cyber-attacks or extreme electromagnetic events, both natural and man-made. Indeed, national security experts have noted, "[o]ur electricity grid's resilience . . .has emerged as a major concern for U.S. national security and a stable civilian society."[9] According to leaked excerpts of a 2014 FERC report: "If terrorists are ever able to knock out nine of the nation's 55,000 substations, the U.S. could suffer coast-to-coast blackouts lasting 18 months or more."[10] The national security experts describe large scale, modernized, transmission as a solution, noting:

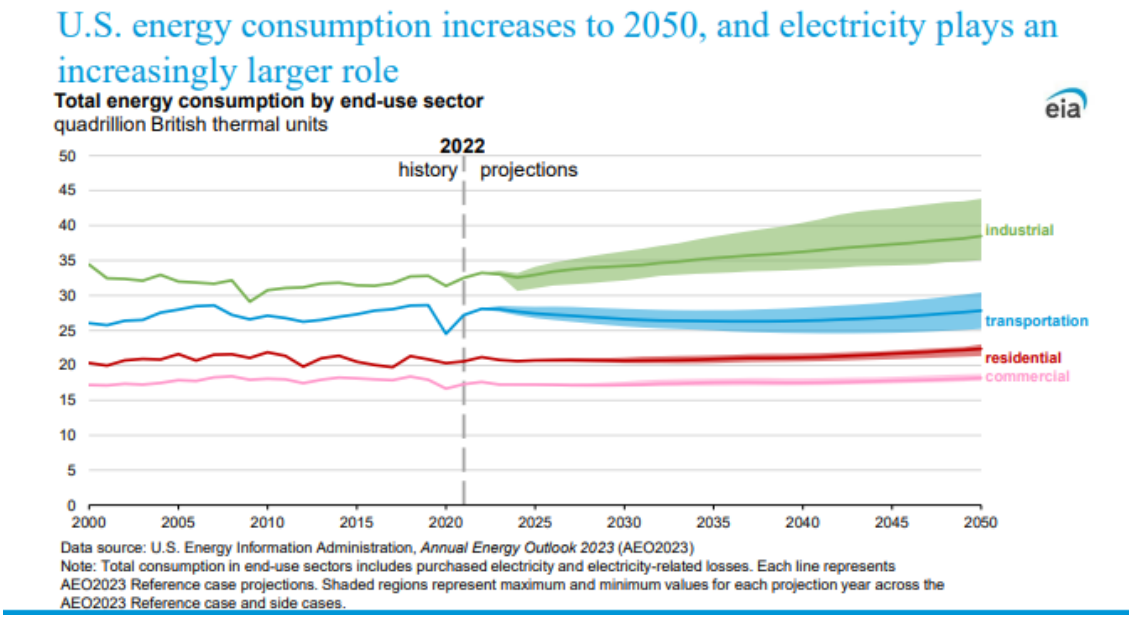
[9] National Commission on Grid Resilience, *Grid Resilience: Priorities for the Next Administration*, at 1, 2020.

[10] Davide Savenije and Ethan Howland, *Could terrorists really black out the power grid?*, Utility Dive, March 24, 2014.

> Transmission buildout is critical to resilience as it can relieve line overloading—or 'congestion' . . .—on the existing system, lessening the compounding risks that come with a strained grid that could then be tested by an extreme weather event or an attack incident. Moreover, by enabling further development of renewable energy resources over wider geographic areas, well-planned transmission expansion can make targeted attacks on the grid more difficult to plan and carry out.[11]

Our energy systems must be designed to support a strong economy. As technology has advanced, our power needs have evolved and increased. Total electric retail consumption increased five times from 1960 through 2000.[12] The U.S. Energy Information Administration 2023 outlook further anticipates load growth in every sector of the economy, from 2000 through 2050.

We must plan for the grid that we are going to have, not the grid that we used to have.



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2023*, at 17, March 16, 2023.

Further, our grid should optimize the use of free natural resources, and ensure our biggest economic engines – manufacturing, health care, banking, transportation, and virtual transactions –

[11] *Ibid*., at 42.

[12] U.S. Energy Information Administration, State Energy Data 2020: Consumption, at 30, 2020.

have sufficient power to stay competitive. America has abundant domestic clean energy sources: two-thirds of renewable resource potential is located in 15 states, which account for only one-third of total U.S. electricity consumption.[13] Transmission is needed to deliver wind and solar resources to all corners of the country; the geographic diversity of resources is a critical factor in developing a cost-effective reliable grid. Independent estimates indicate that high voltage transmission will need to double by 2030, at a cost of $360 billion, and triple by 2050, at a cost of $2.2 trillion, to achieve a zero-carbon future by 2050.[14] There is no transition without transmission.

This lack of transmission also poses unnecessary challenges to domestic industries like advanced manufacturing, which rely on a robust electricity grid. Globally, the semiconductor manufacturing industry will consume 286 terawatt hours of electricity worldwide by 2030.[15] To put this in context in 2021 TSMC, one of the world's leading semiconductor manufacturers, used more electricity than the states of Maine and Rhode Island combined.[16] To advance American leadership in semiconductor supply chains, which are critical to our economy and national security, transmission growth must keep up. Congress has already made enormous strides to bolster the domestic semiconductor industry with the bipartisan CHIPS Act. To finish the job, we must build the transmission infrastructure necessary to meet the demands of this vital industry.

In addition to sustaining a strong economy, transmission expansion also creates domestic, good-paying union jobs. For example, the completion of 22 projects that have already been planned and are waiting to move would create more than 1.2 million jobs, including 600,000 direct jobs.[17]

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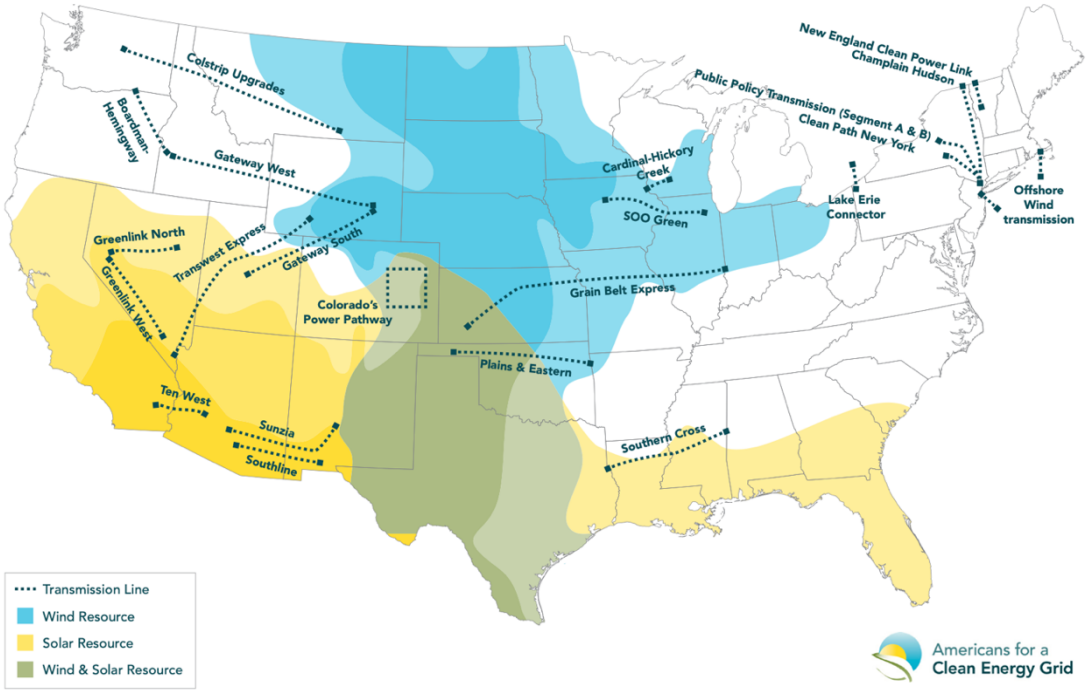
[13] David Gardiner and Associates, *Transmission Upgrades & Expansion*: Keys to Meeting Large Customer Demand for Renewable Energy, at 12-13, January 2018.

[14] Larson et al, Net-Zero America: Potential Pathways, Infrastructure, and Impacts at 108, (October 29, 2021), Princeton University https://netzeroamerica.princeton.edu/the-report; *see also DOE, "DOE Launches New Initiative From President Biden's Bipartisan Infrastructure Law To Modernize National Grid," January 12, 2022.*

[15] Rick, August, Katrin Wu, and Tianyi Luo, *Invisible Emissions: A forecast of tech supply chain emissions and electricity consumption by 2030*, at 5, Greenpeace, 2023.

[16] *Compare* TSMC, 2021 Sustainability Report, at 221 (total energy consumption of 19,192 GWh in 2021), *with* U.S. Energy Information Administration, *State Energy Data 2021: Updates by Energy Source*, (Maine: 11,585 GWh and Rhode Island: 7,398 GWh).

[17] Goggin, Michael, et al, *Transmission Projects Ready to Go: Plugging into America's Untapped Renewable Resources*, Grid Strategies & ACEG, April 2021.



Source: Goggin, Michael, et al, Transmission Projects Ready to Go: Plugging into America's Untapped Renewable Resources, Grid Strategies & ACEG, at 5, April 2021 (since publication, some of these lines have received their permits).

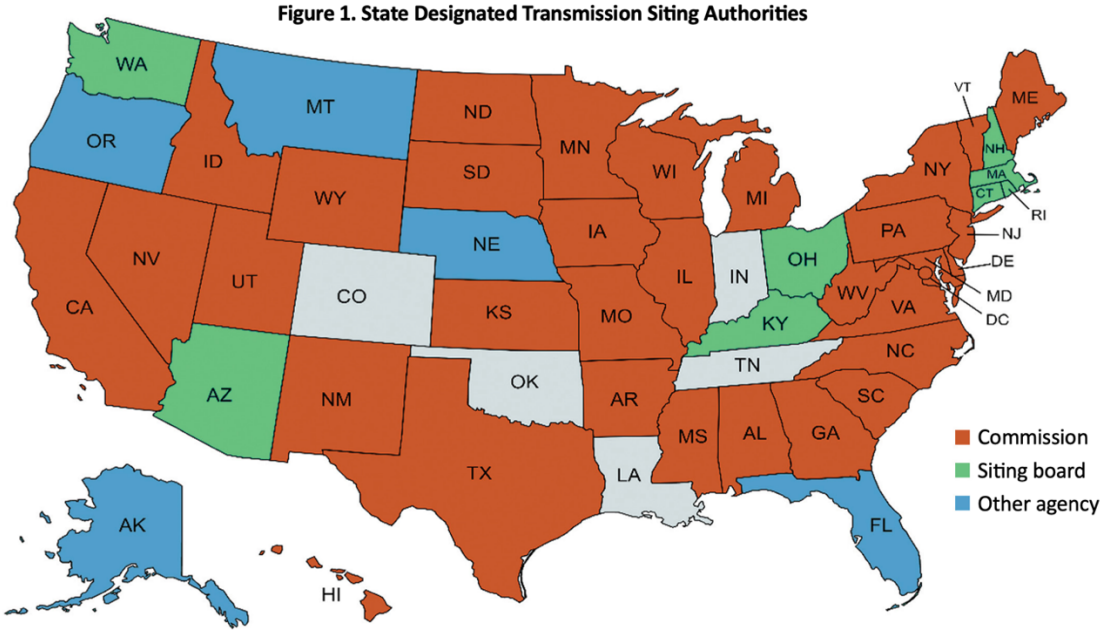
Finally, analysts have found that transmission expansion, and the resulting increase in wind and solar generation, could decrease the average consumer electric bill by more than one-third, saving the average household more than $300 per year.[18] Transmission is necessary to grow the economy, and to support customer needs for electricity. Regionally significant wires support reliability, enhance resilience, and promote energy security. It is in the public interest – and in the national interest – to support broader deployment of regionally significant, high-capacity transmission.

[18] Clack, et al, *Consumer, Employment, and Environmental Benefits of Electricity Transmission Expansion in the Eastern U.S.*, 2020.

III. WHAT ARE THE OBSTACLES TO BUILDING REGIONALLY SIGNIFICANT TRANSMISSION?

Despite the wide-spread acknowledgment that we need to expand and modernize transmission, the rate of construction has fallen behind the pace necessary to meet our present and future reliability needs and our climate goals. This is due to an array of challenges that fall into three categories: planning, paying, and permitting. In the last decade, regionally planned transmission investment has decreased by 50 percent and few, if any, interregional lines have been planned.[19] Even when lines get planned, transmission projects can take at minimum five to 10 years to plan, permit, and construct,[20] and in some cases have taken over 15 years to receive permits and begin construction.[21]

Figure 1. State Designated Transmission Siting Authorities



Source: Smith, William H, Mini Guide on Transmission Siting: State Agency Decision Making, National Council on Electricity Policy (Dec. 2021) (NCEP Mini Guide).

[19] Pfeifenberger et al., *Cost Savings Offered by Competition in Electric Transmission*, at 1, April 2019.

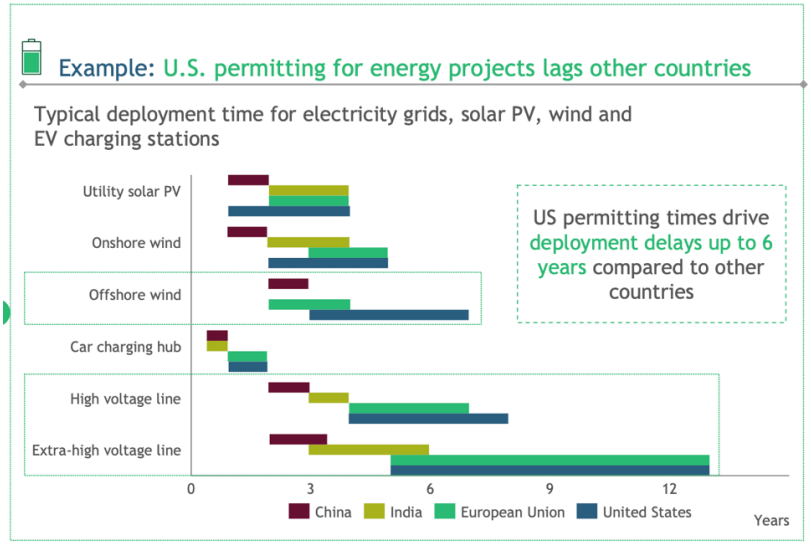
[20] Pfeifenberger, Johannes and John Tsoukalis, *Transmission Investment Needs and Challenges*, at 13, June 2021.

[21] *E.g.*, *BLM Clears Way for $3 billion TransWest Express Transmission Project to Start Construction this Year*, Ethan Howland, Utility Dive (April 12, 2023); *Gateway South Transmission Line to Proceed with Construction*, T&D World (June 8, 2022).

The current siting and permitting process for regionally significant transmission lines require the approval of every affected jurisdiction. This permitting process can include:

- Federal agencies, if the line crosses federal lands or lands which the federal government has a trustee relationship (e.g. recognized tribal lands), or has some other federal nexus;
- State governments, where the line crosses state and private lands, and each state has its own processes and procedures (see figure below); and
- In some states, individual local governments, as well.

Projects can get delayed at every stage in the review process. According to a new report issued by Breakthrough Energy, permitting for high voltage transmission lines takes less than half the time in China as it does in the United States.



Source: Boston Consulting Group, Impact of IRA, IIJA, CHIPS, and Energy Act of 2020 on Clean Technologies, at 8, April 2023.

IV. HOW CAN CONGRESS HELP SUPPORT TRANSMISSION?

It is imperative that Congress act. As noted above, federal processes can take five to 10 years to site and permit transmission, and planning and pre-application processes means that it can take even longer, including several recent lines that took approximately 15 years. This is much longer than any single presidential administration. For that reason, a predictable siting and permitting framework should be enacted through legislation, rather than relying on rules that may change mid-stream on a pending application.

Robust environmental review is critical; it leads to enduring and legally sustainable siting and permitting decisions that facilitate substantial investment in regionally significant transmission. However, parameters must be established to make sure that endless process does not strangle much-needed development. Fortunately, there are solutions that balance both of these important considerations.

To that end, ACEG recommends that Congress reduce barriers to siting and permitting regionally significant transmission by establishing the following:

- Unified federal siting and permitting authority
- Firm agency deadlines, no more than five years from start to finish
- Robust early outreach to communities and stakeholders

Set a clear threshold for unified federal jurisdiction over regionally significant transmission lines. As noted above, these lines provide economic and reliability benefits across multiple states, yet siting can be required to take place at a very granular level – in some places, county by county. The framework for siting and permitting these regionally significant lines was never established, and instead developed in a haphazard way that is ill-suited to the modern grid. This Congress should rectify this longstanding oversight by establishing a clear threshold, so developers have certain guidance as to how to develop these much-needed lines that provide broad-based benefits.

This idea is not new: S.946, the SITE Act introduced by Senator Whitehouse (D-RI), currently proposes that federal jurisdiction apply to siting transmission lines that are no less than 1000 MW and traverses two states. A review of proposed transmission lines by the Niskanen Center shows that this would apply to less than 10 percent of the lines currently under consideration.[22] Considering the range of projects that would provide these wide-ranging benefits, ACEG

[22] Reed, Liza and Eberhard, Kristen, What to eep and what to fix in Manchin's permitting proposal, Niskanen Center, October 25, 2022.

recommends that the clear federal threshold apply to a more nuanced definition, of projects at least 345kV or 750 MW, and that cover two states, or one state and the outer-continental shelf, or a minimum of 150 miles.

When paired with a single point of contact for environmental review under existing law – as Congress provided for in the 2005 Energy Policy Act – Federal Power Act (FPA) section 216(h), this would provide unified siting and permitting authority for regionally significant transmission lines, similar to that provided for other major energy infrastructure at the Federal Energy Regulatory Commission (FERC). Section 216(h) authority is currently assigned to the Department of Energy, which is working diligently to establish a permitting office and a memorandum of understanding with other relevant federal agencies so that they can collaborate in permitting transmission lines in a timely fashion.

Establish a timeline of no more than five years, from beginning to end. There are many components to siting and permitting: a pre-application process that ensures robust outreach to communities and landowners, consultation with all relevant federal agencies, the environmental review – whether an environmental assessment (EA) or environmental impact statement (EIS) – followed by a record of decision, then – finally, if appropriate – compliance requirements and a notice to proceed. The notice to proceed is the last step before shovels can turn dirt and steel can go into the ground.

Even though much has been made of the time limits for an EA or EIS, the truth is that the process can be held up at any point. In fact, the process can be conducted much more quickly, through categorical exclusions and quick review of relatively uncontroversial projects. While these solutions are also helpful, ACEG recommends addressing the totality of the problem by ensuring that no siting and permitting process be extended beyond five years. That will allow for significant outreach and evaluation of the project, while ensuring that no step of the process languishes.

Additional considerations may be needed to achieve this deadline – such as greater funding for agency staff to address the applications and stronger coordination between federal agencies so that no one agency can hold up the process. Further, any new law should retain the existing provision in FPA section 216(h) that allows for an appeal to the President – or likely, the President's designee – if an agency misses its deadline.

Provide for robust early outreach to better meet final deadlines. An essential piece of the puzzle in meeting deadlines is ensuring that developers and siting and permitting authorities reach out to impacted tribes, communities, and landowners in the early stages of the development

process. Thoughtful developers already engage in early outreach, as they know that it reduces conflict and litigation at the end of the siting and permitting process.[23]

Federal agencies have provided thoughtful guidance for voluntary outreach for other energy infrastructure projects. In its Integrated Interagency Pre-application (IIP) Process, the U.S. Department of Energy specified ways in which developers could reach out to stakeholders, including a website and single point of communication, responses to requests for information, and even "the type of location (for example, libraries, community reading rooms, or city halls) in each county potentially affected by the proposed qualifying project, where the project proponent has provided publicly-available copies of documents and materials related to the proposed qualifying project."[24] Similarly, FERC provides for an extensive pre-filing process – including extensive detail on open houses, site visits, and stakeholder notification – that may take no more than one year before considering a certificate application.[25]

Pairing meaningful deadlines – up to and including the notice to proceed – with required significant early outreach will ensure a legally sustainable decision within a reasonable amount of time.

Provide support for communities and landowners impacted by regionally significant transmission. One of the greatest challenges in generating support for these lines is that the benefits are widespread and may not seem immediate for the communities and landowners that are most impacted by the construction and ongoing presence of new major infrastructure. The bipartisan Infrastructure Investment and Jobs Act (IIJA) provided for one-time funding to support siting and permitting efforts. Congress should consider ways to make this support evergreen.

One model is revenue sharing, highlighted in H.R.1, section 20602. That proposal would allocate federal revenues from offshore wind leases for conservation, mitigation, and resiliency programs for communities onshore near facilities related to offshore wind facilities. Additionally, H.R. 178 provides for sharing revenues from renewable energy development on federal land with programs that would restore and protect natural habitats as well as preserve and improve recreational access to federal lands and waters.

[23] *Report: Recommended Siting Practices for Electric Transmission Developers*, Americans for a Clean Energy Grid (February 13, 2023).

[24] 10 CFR §900.4.

[25] 18 CFR § 157.21.

Shorten the period for judicial review. Currently, an appeal of a federal agency decision under the National Environmental Policy Act is six years. Shortening the appeals period to provide certainty for transmission projects must be balanced with providing sufficient due process. To that end, it is appropriate to consider other periods of review for similar infrastructure decisions. Note that the FAST-41 Act requires that a claim to be filed within two years from date of publication in the Federal Register;[26] the Natural Gas Act provides for 60 days after denial of rehearing of a FERC order;[27] and appeals of transportation siting decisions must be filed within 150 days of publication in the Federal Register.[28]

Thank you again for the opportunity to discuss these issues with you. ACEG stands ready to work with the Committee on developing legislation necessary to accelerate the development and modernization of the nation's electric grid.

Attachments:

Attachment A	About ACEG
Attachment B	Transmission Benefits
Attachment C	Transmission for All
Attachment D	ACEG Transmission Legislative Principles

[26] 42 U.S. Code § 4370m–6(a)(1)(A).

[27] 15 U.S. Code § 717r(b).

[28] 23 U.S. Code § 139 (l)(1).

Attachment A: About ACEG



About ACEG

Americans for a Clean Energy Grid

Americans for a Clean Energy Grid (ACEG) brings together a diverse set of stakeholders, including customers, renewable resource developers, labor advocates, traditional utilities, environmental advocates, manufacturers of transmission technologies, and merchant transmission developers. Together, we advocate for policies that will modernize the United States' electric power network.

A resilient and reliable transmission grid is the backbone of a clean electricity system and a strong economy. Smart state and federal policies that improve the way the grid is developed, planned, and paid for will help it become a more cost-effective, robust, reliable, and secure network that supports expansion of clean energy, distributed energy resources,competitive power markets, and consumer benefits.

Our Work

Since 2008, ACEG has educated lawmakers, regulators, advocates, academics, and other stakeholders about the benefits of a clean energy grid and the challenges we must overcome to maintain, upgrade, and expand it.

- **Groundbreaking Analysis:** ACEG and its partners develop and commission analyses that examine the benefits of and barriers to a modernized grid.
- **Engaging Policymakers:** ACEG takes an active role in educating lawmakers and the administration, as well as advocating for smart transmission policies.
- **Proactive Education:** ACEG hosts frequent webinars and organizes meetings with community groups to explore transmission benefits and the roadblocks to building needed transmission.

Transmission and America's Future

- **Improved grid reliability:** Expanded interregional transmission will dramatically reduce power outages during extreme weather events by allowing grid operators to tap resources from other regions. Unconstrained transmission could result in more than $1 billion in savings during extreme weather events and even greater annual savings.[1]
- **Supporting our present and future energy demands:** With low-cost, clean energy sources often located in remote areas, strategic growth of the electric grid will help deliver that power to the families and businesses that need it. Every path to 100% clean energy requires increased transmission. Without it, gas and coal plants will need to produce more energy to meet growing demand from EVs and broader electrification.[2]
- **Lower electric bills:** Investing in transmission lines reduces electricity production costs, decreases energy losses in the transmission process, reduces congestion, increases reliability, and encourages competition — all of which lower consumers' utility bills.
- **Improved health:** Expanded transmission can reduce pollution by allowing cleaner resources to connect to the grid. The emissions from fossil fuel generation are associated with serious health consequences, and many of these plants are located near marginalized communities.
- **American jobs:** Investing in transmission can spur the creation of 6 million net new jobs, increasing electric sector employment more than five-fold by 2050.[3]

ACEG Policy Priorities

- **Siting:** ACEG supports streamlining the transmission siting process to reduce the time needed to build clean energy transmission infrastructure.
- **Permitting:** ACEG supports improving the transmission permitting process without unduly weakening environmental or community protections.
- **Planning:** ACEG supports improved regional and interregional planning to develop high capacity transmission lines that reduce congestion, improve remote energy delivery, and improve reliability and resilience.
- **Cost Allocation:** ACEG supports broad cost allocation that accounts for the many benefits transmission lines bring to electricity customers, including reliability, economic, and environmental benefits.

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Sources

1 Tandon Manz, Sheila, "Economic, Reliability, and Resiliency Benefits of Interregional Transmission Capacity," Oct. 2022.

2 Denholm, Paul, et al, "Examining Supply-Side Options to Achieve 100% Clean Electricity by 2035," Aug. 2022.

3 Clack, Christopher, et al, "Consumer, Employment, and Environmental Benefits of Electricity Transmission Expansion in the Eastern U.S.," Oct. 2020.

Attachment B: Transmission Benefits



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).

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6 Mikati, Ihab et al., "Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status," (April 2018).

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Attachment C: Transmission for All

TRANSMISSION FOR ALL

Americans for a Clean Energy Grid

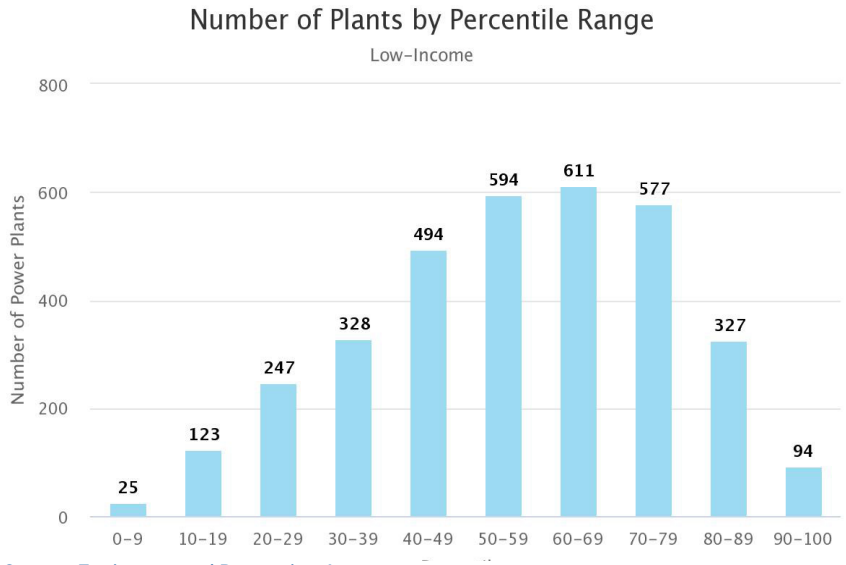
Electricity is an essential service. But most electric transmission lines in the U.S. have reached or surpassed their intended lifespan, and almost no new interregional lines have been planned in the past decade.[1] Failure to expand our grid and connect to diversified generation resources will lead to increased personal energy bills, inhibit progress toward our climate goals, and leave the grid more vulnerable to outages and natural security threats.

But the impacts of grid failure, climate change, and thermal pollution do not fall evenly across communities. Historically, the nation's energy system has operated in a manner that disproportionately harms low-income communities and people of color. In recent comments to FERC, WE ACT for Environmental Justice wrote that **"grid unreliability is an urgent environmental injustice issue."**[2]

Responsible, well-planned transmission can help relieve inequities by delivering clean and reliable energy to all communities.[3]

Many of the most polluting power plants are located near low-income areas and communities of color. Compared to the overall population, communities of color are exposed to nearly 1.3 times more particulate matter pollution, which is linked to numerous health issues.[4] The racial disparities persist across income levels.

Transmission allows more clean energy to connect to the grid and power homes across the country, reducing our reliance on greenhouse gas-emitting resources.



Source: Environmental Protection Agency.

Transmission keeps the lights on during extreme weather events.

During Winter Storm Uri in 2021, low-income Texans bore of the brunt of prolonged power outages.[5] More than 200 people died, the majority due to outage-related causes, including hypothermia and carbon monoxide poisoning.[6] The Federal Reserve Bank of Dallas also estimated the outages caused up to $130 million in economic losses.[7]

Meanwhile, the Midwest states suffered only a handful of short-term outages during Uri. The difference is that MISO, grid operator for the Midwest, is well-connected to its neighbors by transmission. On just one day of the storm, MISO imported 13,000 MW power and exported 7,000 MW to keep the lights on. By contrast, Texas was able to import just 800 MW over the course of the entire week.[8]

Transmission can reduce power costs.

Low-income communities face disproportionate energy affordability burdens. Increased transmission can reduce line congestion and enable access to more geographically diverse resources, helping to lower system-wide costs to provide electricity.

One study found transmission expansion, and the resulting increase in wind and solar generation, could reduce the average consumer electric bill by more than one-third, from more than 9 cents/kWh to 6 cents/kWh by 2050. This would save a typical household more than $300 a year based on current electricity consumption levels.[9]

"When energy system failures occur, already vulnerable communities suffer unequal harms … [T]he transmission planning process can help resolve these inequities." – *NAACP of Greater Grand Rapids*

Case Studies

South Bronx, New York

In New York City, neighborhoods with poor air quality will see relief in coming decade with the commissioning of two new HVDC transmission lines, which will deliver clean, renewable solar, wind, and hydroelectric power from upstate New York and Canada through lines undergrounded in the South Bronx – a predominantly low-income, non-white neighborhood already experiencing cumulative impacts of multiple sources of pollution, such as gas plants and highways.[10] Areas of South Bronx as well as Northern Manhattan experience one of the highest rates of death and disease from asthma in the country.[11]

Hunters Point, San Fransisco

Due to the construction of the Trans Bay Cable, residents of the Hunters Point community in San Francisco can breathe cleaner air. The new, high voltage direct current (HVDC) transmission line delivers reliable power to San Francisco and led to the 2010 closure of the Hunters Point Power Plant, a generator that has long contributed to a disproportionate number of asthma and cancer cases in the city.[12]

SOURCES

1 American Society of Civil Engineers, "Policy Statement 484 - Electricity Generation and Transmission Infrastructure," 2022; Caspary, Goggin, Gramlich, and Schneider, "Disconnected: The Need for a New Generator Interconnection Policy," at 21, 2021.

2 WE ACT for Environmental Justice comments to FERC Docket No. RM21-17, E-library #20220818-5001, 2022.

3 ACEG's primary objective is to advocate for well-planned transmission. This is one of many steps needed to address historic inequities.

4 Clack et. al., "Consumer, Employment and Environmental Benefits of Electricity Transmission Expansion in the Eastern U.S.," at 17, 2020; Ihab Mikati, et al., "Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status," 2018.

5 The Texas Tribune, "Already hit hard by pandemic, Black and Hispanic communities suffer the blows of an unforgiving winter storm," 2021.

6 FERC - NERC - Regional Entity Staff Report, "The February 2021 Cold Weather Outages in Texas and the South Central United States," at 13, 2021.

7 Federal Reserve of Dallas, "Cost of Texas' 2021 Deep Freeze Justifies Weatherization," 2021.

8 Goggin, Gramlich, Caspary, and Schneider, "Fleetwide Failures: How Interregional Transmission Tends to Keep the Lights on When There Is a Loss of Generation" at 4, 2021.

9 Clack et. al. Report at 9.

10 Clean Path NY.

11 Columbia Center for Children's Health, "Asthma."

12 Shao, Elena, "In San Francisco's Bayview-Hunters Point Neighborhood, Advocates Have Taken Air Monitoring Into Their Own Hands," 2021.

Attachment D: ACEG Transmission Legislative Principles



Americans for a Clean Energy Grid

Legislative Principles to Support Transmission Deployment

April 2023

Americans for a Clean Energy Grid (ACEG) is a non-profit advocacy coalition focused on the need to expand and modernize the North American high-capacity grid. **Through extensive consultation, the following legislative principles were crafted to accelerate transmission buildout and develop a reliable grid that meets evolving U.S. electric needs.**

Transmission Tax Credit

Congress should enact a transmission tax credit that provides a 30% credit for regionally significant transmission lines. The credit should include the same standards of domestic content, labor standards, prevailing wage and apprenticeship requirements, normalization opt-out, transferability, and duration that were provided in the Inflation Reduction Act.

- ACEG recommends the threshold for regionally significant transmission be set at 750 MW or 345kV or greater and extend over at least two states, or one state and the outer continental shelf, or 150 miles.
- The credit should apply to 750 MW circuits that can be aggregated in the same ROW for offshore wind.
- Eligible projects should also include upgrades of at least 500 MW and shared network interconnection facilities of at least 230kV.

Siting and Permitting Reform

The federal government should have plenary jurisdiction for siting and permitting of regionally significant transmission lines. When consolidated with Federal Power Act (FPA) section 216(h) authority, jurisdiction over these lines would lead to unified siting and permitting in a single federal agency. In addition, such projects should also be automatically entered into the Federal Permitting Improvement Steering Council (FPISC) process, where deadlines among agencies should be established within 60 days of the filing of an application.

Congress should require that the federal permitting process for transmission projects take no more than five years from the initial application through record of decision, and including, if appropriate, the notice to proceed.

- Federal agencies should not be able to delay deadlines without agreement from the applicant, and any delay should last no more than six months. If an applicant independently requests a delay, the agency should accommodate.
- The siting process should allow for a pre-application consultation with stakeholders in affected communities, including notice and engagement with stakeholders and affected communities.
- If a federal agency misses its deadline, the appeal process in FPA section 216(h)(6) should apply.
- A project must be analyzed in a single environmental review, including any review associated with a corridor designation under FPA section 216(h)(5)(A).
- The period of time for judicial review of a final siting decision should be shortened from six years to provide greater certainty and should be consistent with other periods to seek judicial review for other infrastructure projects. For example, the FAST Act provides for two years to seek an appeal.

Community Engagement and Benefits

Ongoing funding should be made available for potentially impacted communities (including environmental justice and tribal communities) to participate in:

- ◊ regional and interregional planning and
- ◊ project-specific siting, routing, pre-development and technical assistance processes.

Congress should also implement a revenue sharing arrangement for transmission projects. For instance, a portion of federal lease payments for transmission lines could be allocated to a community benefit fund for communities and tribes impacted by regionally significant transmission lines.

Developers should be able to seek recovery of costs in transmission rates for community benefit payments to jurisdictions impacted by a project.

Interregional Transmission Planning and Cost Allocation

FERC should be required to issue a rulemaking within 180 days, and finalize a rule no later than one year after enactment, to establish a formula to set an interregional transfer capability minimum between any two adjacent Order No. 1000 planning regions and to require planning regions to meet or exceed that minimum capacity. In determining the need for interregional transfer capacity, the Commission must evaluate costs as well as full electricity system benefits.

Congress should direct FERC to require that every region develop an interregional transmission planning process based on expected needs and net benefits 20 years in the future that: (a) accounts for full electricity system benefits; (b) selects projects to meet identified interregional needs through a single, coordinated assessment; and (c) provides for predictable cost recovery and cost allocation roughly commensurate with benefits.

- ◊ Benefits include improved reliability, enhanced resilience, reduced congestion, reduced power losses, greater carrying capacity, reduced planning and operating reserve requirements, and improved access to generation, in accordance with FERC's existing cost allocation principles.
- ◊ Regions must adopt common metrics – including benefits, needs, and input assumptions – and methods to facilitate interregional transmission planning.
- ◊ All interregional plans must be completed within two years of enactment of this legislation, and updated not less frequently than every two years thereafter. Interregional planning processes should consider all potential transmission solutions regardless of regulatory or business model.

If an interregional plan with the above characteristics is not in place, a transmission developer should be able to file at FERC to recover costs of transmission lines that interconnect with more than one planning region, upon a showing that the benefits outweigh the cost of the project. Costs should be allocated to regions roughly commensurate with electricity system benefits discussed above, consistent with FERC precedent.

Interregional planning and cost allocation requirements should also apply to transmission owners and operators in ERCOT, but the construction or operation of any interregional facility or allocation of costs to meet a minimum interregional transfer capability should not affect the Commission's jurisdiction over ERCOT or any ERCOT utility.

Have questions?
Contact info@cleanenergygrid.org