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Before the
House Select Committee on the Climate Crisis

May 20, 2021

Good morning Chair Castor, Ranking Member Graves, and members of the Select Committee. My name is Emily Fisher, and I am here today on behalf of the Edison Electric Institute (EEI). Thank you for the opportunity to speak about modernizing and expanding the energy grid. I am honored to be here with Linda Apsy, President and Chief Executive Office of EEI member company, ITC Holdings, and with a representative of our labor partners, Donnie Colston from the International Brotherhood of Electrical Workers.

EEI is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for more than 220 million Americans and operate in all 50 states and the District of Columbia. Collectively, the electric power industry supports more than 7 million jobs in communities across the country. EEI's member companies deliver the safe, reliable, affordable, and clean energy that powers our economy and enhances the lives of all Americans.

EEI's member companies are leading a clean energy transformation. Thanks largely to the efforts of EEI's members, carbon emissions from the U.S. electric power sector are at their lowest level in more than 40 years and were 40 percent below 2005 levels as of year-end 2020. At the same time, 40 percent of the electricity that serves customers now comes from clean, carbon-free resources, including nuclear energy, hydropower, wind, and solar energy.

Along with significant reductions in carbon emissions and increases in clean energy, America's electric companies have made equally significant reductions in emissions of more localized air pollution, which improves the health and well-being of the communities that our member companies serve. Since 1990, our industry has cut sulfur dioxide emissions by 95 percent and nitrogen oxides emissions by 88 percent. As a result of the Mercury and Air Toxics Standards and other Clean Air Act regulations, from 2010 to 2017, the power sector has reduced mercury emissions by 86 percent and total emissions of hazardous air pollutants by 96 percent. Nationally, total power sector mercury emissions have been reduced by 95 percent over the period 1990 to 2020.

These trends in emissions reductions and the deployment of clean energy will continue. EEI's member companies are united in their commitment to get the energy they provide as clean as they can as fast as they can, without compromising the reliability and affordability that our customers value. To this end, EEI's members will continue to reduce their emissions in future

years, with more than two dozen members committing to reach zero or net-zero carbon emissions by 2050 or earlier.

A wide range of factors are driving the clean energy transformation, including declining costs for natural gas and renewable energy resources, technological improvements, changing customer expectations, federal and state regulations and policies, and the increasing use of distributed energy resources. As a result, the mix of resources used to generate electricity in the United States has changed dramatically over the last decade. This cleaner electricity will play a key role in reducing emissions economy-wide—particularly in the transportation, industrial, and building sectors—through increased electrification.

Transmission and the Clean Energy Transformation

Electric transmission infrastructure is the backbone of the nation’s energy grid and will be critical in facilitating the continued transition to clean energy. Our industry is the nation’s most capital-intensive industry, and, since 2010, EEI’s member companies have invested more than \$1 trillion to build smarter energy infrastructure and to integrate more clean energy into the energy grid affordably, reducing both emissions and costs. These significant investments ensure that customers receive the electricity they need, when they need it, safely and reliably. The transmission system also helps optimize the energy grid’s performance, reducing congestion, enabling the deployment of new technologies, and enhancing reliability and resiliency.

In addition, transmission investments create jobs and provide a range of other benefits. They offer communities access to lower-cost, cleaner sources of electricity that often are located far from densely populated urban centers.¹ They support the economic viability of clean energy projects by reducing costly curtailments of service due to congested pathways and overproduction, which allows more clean energy to reach more end-use customers.² Electric transmission investments also are essential to enabling greater transportation electrification.³

The benefits of transmission are not in dispute, and there is broad agreement that more transmission investment is needed and is needed relatively quickly when thinking about the timeline for building critical infrastructure.

According to a study by Princeton University, to achieve a zero-carbon future by 2050, the existing high-voltage transmission capacity will need to expand by approximately 60 percent by

¹ See, e.g., American Council on Renewable Energy (ACORE), Macro Grid Initiative, <https://acore.org/macro-grid-initiative/#1601561682191-976f8114-ec26>.

² See World Economic Forum, Why Transmission and Distribution Are the Clean Energy Transition’s Secret Weapons (Jul. 16, 2020), <https://www.weforum.org/agenda/2020/07/transmission-distribution-clean-energy-transition/>.

³ See Weiss et al., The Coming Electrification of the North American Economy – Why We Need A Robust Transmission Grid, prepared for WIRES (Mar. 6, 2019), <https://wiresgroup.com/the-coming-electrification-of-the-north-american-economy/>.

2030 and triple compared to 2020 capacity through 2050 to connect more wind and solar energy resources. Total capital investment in transmission will need to reach \$360 billion through 2030 and \$2.4 trillion by 2050.⁴ The Brattle Group, meanwhile, estimates that, to meet ambitious clean energy goals and low-carbon solutions around the country, \$300 to \$700 in transmission investment is needed per each kilowatt (kW) of large-scale renewable energy capacity added to the system.⁵

Obstacles to Needed Transmission Investments

Despite this broad agreement that we need more transmission this decade to meet clean energy, reliability, and resilience goals, the pace of transmission development is slow. Transmission projects typically take 7 to 10 years to plan, site, permit, construct, and energize—yet we have many examples of projects that have taken more than a decade from conception to completion, and just as many examples of proposed transmission projects that were abandoned because progress was too slow and too costly. Litigation can be a significant factor in these delays, too, and groups that support clean energy often oppose the infrastructure necessary to integrate more of it.

EEl’s member companies and our labor partners can help build the transmission needed to meet and accelerate the achievement of clean energy goals. Unfortunately, the way the nation plans, permits, and pays for transmission are significant obstacles to building the infrastructure we need quickly. Making changes that align these processes with long-term clean energy goals will not be easy but is essential. Local communities, states, Tribes, and the federal government all have a role, and many stakeholders’ views and perspectives must be considered. Today, I offer some high-level observations about what the federal government may be able to do to help deploy more transmission more quickly.

Planning

Current regional planning processes are hindering, not helping, stakeholders identify necessary projects and get them built. Existing planning frameworks are too narrow in terms of scope and scale. Planning should be oriented toward policy goals and priorities. Planning also should be able to take into consideration longer-term clean energy goals at the state and federal levels, as well as future electrification scenarios, and should take a broader approach to costs and benefits. Transmission projects can and should serve multiple goals, from clean energy integration and improved reliability to increased cost-efficiency and increased resilience.

It also is essential that planning frameworks focus on getting all stakeholders, including states and state economic regulators, on the same page with respect to goals and benefits as early as

⁴ See E. Larson, C. Greig, J. Jenkins, E. Mayfield, A. Pascale, C. Zhang, J. Drossman, R. Williams, S. Pacala, R. Socolow, EJ Baik, R. Birdsey, R. Duke, R. Jones, B. Haley, E. Leslie, K. Paustian, and A. Swan, *Net-Zero America: Potential Pathways, Infrastructure, and Impacts*, interim report, Princeton University, Princeton, NJ, p. 106 (Dec. 15, 2020).

⁵ See Weiss et al., n. 1, *supra*.

possible in the process to ensure that proposed projects can move forward quickly once identified, both with respect to permitting and cost allocation. This will be especially important in the context of inter-regional planning.

In general, planning frameworks should take a more holistic approach to assessing the need for, and benefits of, transmission. They also should be flexible enough to take into consideration regionally important issues, such as wildfire mitigation or offshore wind interconnection. While the Federal Energy Regulatory Commission (FERC) has indicated that it intends to revisit planning frameworks and requirements, congressional direction may be essential in reorienting the planning process in a timely way.

In addition, the Department of Energy, in coordination with the National Labs, could be directed to provide some assistance by conducting a nationwide analysis to identify the areas with the most potential and need for transmission projects to address clean energy and system resilience needs.

Permitting

In order to build large-scale transmission, a host of state and federal approvals are needed to site and permit projects. The federal government can take several steps to reduce the time it takes to receive these permits, consistent with environmental obligations and requirements.

For example, critical clean energy infrastructure projects frequently require federal permits that trigger environmental reviews under the National Environmental Policy Act (NEPA), which can take years to complete and increasingly have become the focus of even more protracted litigation. This significantly adds to the time and costs of critical transmission projects necessary to meet these clean energy objectives. EEI supports a NEPA process that is clear, transparent, and as efficient as possible while meeting all environmental requirements.

To that end, there are four process revisions that can contribute to an efficient, environmentally sound, and defensible NEPA review:

1. **Tiering:** Utilizing “tiering”—considering existing studies and environmental analyses in the NEPA process—allows federal agencies to build upon these previously conducted environmental studies, as well as decisions made during earlier state or local public reviews, instead of starting from scratch.
2. **Categorical Exclusions (CE):** Agencies may now apply a CE established under another agency’s NEPA procedures, if the action covered by that CE and the adopting agency’s proposed action are substantially the same. This sensible step reduces duplication and should be allowed to continue.
3. **Greenhouse Gas (GHG) Emissions Analysis:** GHG emissions are relevant to NEPA analyses, and considering such emissions is appropriate in the context of environmental

reviews designed to ensure well-informed decision-making. Agencies should consider existing emissions estimates when relevant, including sector-wide estimates, when assessing GHG emissions impacts. For example, transmission projects that displace emissions by enabling more clean energy integration should be recognized as such, even if that requires a broader assessment of emissions impacts.

4. **Applicant Engagement in the NEPA Process:** Allowing permit applicants and their contractors to participate in the preparation of documents for environmental reviews promotes efficiency by utilizing those in the best position to provide critical information about proposed projects to regulators. Applicants and contractors have ready-made information regarding project alternatives and potential effects, and they possess significant environmental and technical resources and engineering information that could enable more efficient and timely preparation and evaluation of environmental reviews.

Another option to help expedite siting and permitting for some transmission projects includes incentives to use existing rights-of-way, including those for transportation.

Transmission permitting and siting is complex. These suggestions would not solve all delays if implemented, but they could help expedite the process.

Paying

Perhaps one of the most contentious issues is how to pay for necessary new transmission infrastructure. Current processes focus on assigning costs to those customers who benefit from the investment, but some states that serve as conduits for new transmission often are concerned about whether they will see benefits from these projects. This process does not take into consider the broader benefits of transmissions for all customers.

To remove a critical obstacle to increased investment, it may be necessary to broaden the scope of benefits and beneficiaries considered, particularly as the transmission system, the generating resource mix, and policy goals change and are expected to change over time. As noted, getting all stakeholders on the same page with respect to the need for—and benefits of—proposed transmission projects during the planning phase will be critical in determining how to allocate costs fairly.

There are other ways to address the costs of transmission. Grants to help pay for measures that will harden the energy grid and make it more resilient in the face of wildfires, hurricanes, and other natural disasters can help to reduce cost pressures on customers, particularly when many customers are still recovering from the economic impacts of the COVID-19 pandemic.

EI's member companies take their commitment to providing reliable and resilient electricity seriously and are investing billions to harden the grid—they are installing concrete poles, moving substations to higher ground, putting technology on the grid that can sense fire and

shut off a power line, and more. Federal dollars could help accelerate these adaptation investments. In addition, some federal funds can support ongoing efforts to modernize the energy grid to use the latest technologies and to improve two-way communication on the system with everything from smart meters to appliances to private solar and storage systems.

Conclusion

Increased transmission investment is essential to meeting our nation's and our industry's clean energy goals. A robust transmission system also enables electric companies to deliver energy where it is needed, to integrate more clean energy into the energy grid, to enhance the reliability and resiliency of the grid, and to lower the cost of delivering energy by reducing congestion. EEI's member companies are committed to investing in the energy grid and to continuing to make it smarter, cleaner, stronger, more dynamic, and more secure. We look forward to working with this Committee and Congress to help achieve these goals.

Thank you again for the opportunity to testify. I look forward to any questions you may have.