

# TRANSMISSION INFRASTRUCTURE RECOMMENDATIONS

Building a resilient, zero-carbon energy system where every organization has a viable, expedient, and cost-effective pathway to renewable energy.



As residential, commercial, and industrial buyers across the country increasingly call for full grid decarbonization, substantive and comprehensive action is required to ensure the nation's transmission system can reliably and cost effectively deliver zero-carbon generation to all customers. **In the immediate term, REBA endorses a transmission investment tax credit ("ITC") to develop a high-voltage, and an interregional transmission macrogrid, which would form a nationwide network to increase transmission capacity within and between regions. REBA also endorses an overhaul of Federal Energy Regulatory Commission (FERC) Order 1000 to fix planning and cost allocation issues that are blocking transmission projects.**

Large energy buyers are accelerating grid decarbonization. Corporate procurement has facilitated the development of more than 35 GW of new wind and solar generation over the past decade. In the last five years alone, the annual volume of contracts has quintupled with demand continuing to grow. However, customers are encountering challenges accessing projects in regions of the country where transmission is constrained, with congestion increasing prices and limiting project interconnections. The country's patchwork approach to transmission is inhibiting the broader vision of a reliable, interconnected clean energy grid and the tangible benefits that it would provide consumers.

## THE IMPORTANCE OF TRANSMISSION

Major studies show that well-planned transmission is crucial to least-cost decarbonization and 2-3 times current transmission capacity is needed.<sup>1</sup> **Every \$1 billion invested in large-scale transmission infrastructure creates \$2-3 billion in customer benefits,<sup>2</sup> about 7,000 construction jobs, and induces about 1,490 new related jobs.<sup>3</sup>** Expanding transmission will enhance grid operations by integrating renewable generation and clean energy resources, increasing grid resilience and reliability, and facilitating electrification initiatives. Transmission also enables markets to deploy and balance generation over large areas, which optimizes renewable energy resources that are best managed and delivered across diverse geographic regions. For example, fifteen states between the Rocky Mountains and the Mississippi River account for 88% of the nation's potential wind capacity and 56% of potential solar capacity, but those states are only projected to account for 30% of national electricity demand by 2050.<sup>4</sup> Constructing new high-voltage, interregional transmission lines as part of a macrogrid will enable the movement of electricity from renewable energy sources to major load centers.

1 In [The Value of Interregional Coordination and Transmission in Decarbonizing the US Electricity System](#), MIT researchers show that coordinating power system planning and dispatch regionally, along with a doubling of transmission capacity, reduces the cost of zero-carbon electricity by as much as 46% compared to a state-by-state approach. In [Carbon-Neutral Pathways for the United States](#), the National Academies offer deep decarbonization scenarios that would allow the U.S. to reach net zero or net negative CO2 emissions by 2050. The central case estimates that expanding interregional transmission by a 2.5-fold increase over 2020 transmission levels would increase the share of wind and solar to 60% of total generation. In [Net-Zero America: Potential Pathways, Infrastructure, and Impacts](#), Princeton University researchers identified a need for 3-5 times more transmission capacity to reach net-zero emissions by 2050.

2 Brinkman, G., Novacheck, J., Bloom, A., McCalley, J. "Interconnections Seam Study." NREL, October 2020. <https://www.nrel.gov/docs/fy21osti/78161.pdf>

3 Researchers from Iowa State University found that \$80 billion in transmission spending would create 562,000 construction jobs and a net gain of 3,083 jobs nationally across the energy sector. Swenson, D., "Economic Impact & Job Creation Relative to Large-Scale High Voltage Transmission Infrastructure." Iowa State University, July 2018. <http://www2.econ.iastate.edu/prosci/swenson/Publications/The%20Interconnection%20Seam%20Study%20Amended%20Title.pdf>

4 Wimsatt, K., "Transmission: A Key Aspect of New Climate Policies." Americans for a Clean Energy Grid, July 2019. <https://cleanenergygrid.org/transmission-key-aspect-new-climate-policies/>

# TRANSMISSION INFRASTRUCTURE RECOMMENDATIONS

Large energy buyers support a comprehensive and well-planned transmission buildout to unlock cost-efficient emissions reductions. Immediate priorities for federal policymakers to address include:

## 01 ESTABLISHING AN INVESTMENT TAX CREDIT (ITC) FOR NEW INTERREGIONAL TRANSMISSION LINES.

Implementing a 30% transmission ITC can incentivize the construction of new lines where development otherwise would not occur due to challenges with cost allocation for interregional projects. To qualify for the ITC, transmission lines should have a certain line rating (e.g., 275 kV and higher), begin construction within a specified timeframe, and be necessary for decarbonization and building a macrogrid. An ITC can benefit customers by accelerating transmission projects that expand access to zero-carbon generation, increase reliability, and ultimately mitigate rate increases on customer bills.

## 02 BUILDING A HIGH-VOLTAGE, INTERREGIONAL TRANSMISSION MACROGRID.

The nation's transmission system is years behind in planning and additional capacity is required to meet the growing need for power exchanges between regions. Taking steps to plan, site, and/or build a transmission macrogrid, which will benefit customers by increasing grid reliability and efficiency, accelerating decarbonization goals, and creating cost savings. This effort could be initiated by FERC and the Department of Energy (DOE) and include states, local authorities, and all stakeholders. As part of a macrogrid initiative, DOE should use existing authority to identify National Interest Electric Transmission Corridors and explore how frequently they should be updated.

## 03 REVISING THE INTERREGIONAL PLANNING AND COST ALLOCATION PROCESS.

FERC's Order 1000, issued by the Commission in July 2011, had three goals: (1) increase regional transmission development, (2) create competition, and (3) incentivize building projects. Order 1000 has not fulfilled its intended purpose and should be revisited to transform approaches for multi-benefit cost allocation methods that support a functional project approval process so that interregional transmission can get built.



**Every \$1 billion invested in large-scale transmission infrastructure creates**



**\$2-3 billion** in customer benefits



About **7,000** construction jobs



About **1,490** new related jobs