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Infrastructure bill contains less transmission funding than advertised

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Likewise, the bill directs $3 billion toward DOE's Smart Grid Investment Grant program — which funded nearly $4 billion in grid technology investments after the 2008 recession — and part of that could also go to transmission, Gramlich said.

But this level of funding still isn't commensurate with the need, according to last week's letter. The Princeton University *Net-Zero America* study released in December estimated the need for about $360 billion in U.S. transmission capacity investment over the next decade to enable the renewable energy growth needed to decarbonize the grid by 2035. At present, by contrast, the high costs and slow growth of new transmission are forcing the withdrawal of renewable energy projects from grid interconnection queues.

What's more, much of the transmission that should be added in the next decade will need to be built across the borders of states and regional grid systems to achieve the greatest benefits. The National Renewable Energy Laboratory's Interconnections Seam Study found that linking the Eastern and Western U.S. with high-capacity transmission would yield more benefits than costs, and another study from MIT indicates a nationwide transmission network could cut the cost of decarbonizing the grid nearly in half, compared to today's system.

Permitting and siting transmission projects vs. paying for them

Proponents of transmission development warn that existing policy won't enable the massive interregional transmission growth needed to achieve these targets, however. It's devilishly hard to secure cooperation from the state and local governments, private landowners and environmental stakeholders involved in projects

that stretch across thousands of miles.

There's also the challenge of getting utilities, state regulators and the groups representing electricity customers to agree on who should pay for those projects and how to measure the benefits those projects will deliver them.

The infrastructure bill does take aim at the first of these problems, in the form of new provisions regarding National Interest Electric Transmission Corridors. The NIETC designation was created by the 2005 Energy Policy Act and allows DOE to expedite siting and permitting processes — and potentially use federal eminent domain authority — to enable transmission projects deemed to serve the national interest.

The infrastructure bill's provisions direct the DOE to study capacity constraints and congestion when designating an NIETC area, expanding the scope of authority to include solving potential renewable energy bottlenecks. It also clarifies the authority of the Federal Energy Regulatory Commission to issue permits for such projects even if a state regulatory commission withholds or denies them — a power that's been placed in question after court decisions made early last decade.

FERC already has similarly broad authority over the siting and permitting of natural-gas pipelines, although that authority is under pressure by court decisions and advocacy aimed at forcing the commission to consider the climate change impacts of its decisions. The new provisions on NIETC in the infrastructure bill could give FERC greater power to push through transmission projects that haven't won approval from regulators in states they cross.

Whether FERC will use that authority in a way that supersedes states is another question. FERC Chair Richard Glick, a Democrat, recently launched a process to consider wide-ranging changes to the commission's transmission policy framework. But FERC Commissioner Mark Christie, a Republican and former Virginia state utility regulator, warned the industry in a speech last month that federal authority was unlikely to succeed in enabling projects that state agencies have nixed or tabled.

Last week's letter noted that previous efforts by FERC to use its authority in opposition to state decisions "has historically been time-consuming, characterized by significant uncertainty and subject to lengthy judicial review." FERC has also engaged states on cooperative efforts to build new transmission, indicating a strong

interest in finding ways to avoid conflicts.

No matter how this federal siting and permitting authority ends up being used, however, "it will not resolve the cost-allocation hurdle that has stymied transmission buildout for over a decade," said ACORE's Parsons. Industry observers and studies have found that disagreements on apportioning the costs of new transmission projects have been a bigger challenge than siting and permitting barriers over the past decade.

Most of the new transmission buildout over the past decade has been carried out by individual utilities or transmission developers outside of a shared cost or planning process. A few regional grid projects in the Midwest and Texas have succeeded in getting multiple parties to agree on cost-sharing to enable large-scale renewable energy growth, but it took years of debate and compromise.

Given how hard it can be, and how long it can take, to create this kind of consensus, the best way to start moving on the massive growth the country needs is to pass a federal tax credit for transmission projects, the signatories of last week's letter argue.

"A well-designed transmission [tax credit] with appropriate guardrails on eligibility and usable by all types of transmission developers, can spur needed investment in large-scale transmission necessary to cost-effectively decarbonize the electric grid," the letter states. "It will also help to keep customer electric rates affordable by directly reducing, through the tax credit, the customer cost of transmission."

The infrastructure bill comes up short on meeting other clean energy goals as well. The $7.5 billion for electric vehicle charging infrastructure in the bill, for instance, is much less than what many independent studies indicate is needed to reach the Biden administration's goal of halving economywide carbon emissions by 2030.

These various competing demands for clean energy and decarbonization spending are jockeying for position in the reconciliation package. Whether they'll all make it in — and how they'll fare in a Senate with a razor-thin Democratic majority that includes senators who have raised concerns about the size and scope of the legislation — remains an open question.

(Lead image: Jeremy Zero)