

All aboard?

Dreaming of a train travel revolution that might never come to be

BEFORE he was president, Joe Biden spent decades as the Senate's patron saint of Amtrak. He fought Republicans who wanted to cut its budget while riding the trains back to Delaware every night. Biden's infrastructure plan contains, not surprisingly, generous funding for rail. During a speech this month commemorating the 50th anniversary of Amtrak, he invited Americans to dream about the possibilities:

"Imagine a two-hour train ride between Atlanta and Charlotte going at speeds of 220 miles an hour. And (a) two-and-a-half-hour trip between Chicago and Detroit. Or faster and more regular trips between Los Angeles and Las Vegas, a route that I imagine could be pretty popular on Fridays."

It's not hard to imagine; passengers take 17.1 million similar trips every year on Amtrak's Northeast Corridor between Boston and D.C. On the other hand, I can also imagine taking the same journey by plane in roughly an hour — two if you allow time to check luggage and clear security. Why would we invest billions in putting those passengers on high-speed trains instead?

The standard answer is: for the environment. But building high-speed rail systems isn't as obvious an environmental good as some think.



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People tend to conceive of rail as "green" because hopping on a regional train from Washington to New York is indisputably better for the environment, in terms of emissions, than driving your own car solo or taking a short-haul flight. But making trains go very fast consumes quite a bit more energy than conventional rail, even if it makes them more competitive with air travel. More important, high-speed rail requires a lot more infrastructure than existing rail or air networks.

For optimal performance, in terms of environment and speed, high-speed rail is best run on reasonably straight tracks, ideally ones that aren't shared with slower trains. This often necessitates an entirely new system or gut-renovating existing ones — preparing rail bed; laying many miles of track; going under, over, through or around obstacles such as mountains; and often, for peak performance, laying an equal length of electric cable so your high-speed train doesn't have to run on dirty diesel fuel.

This costs a lot of money, of course. It also costs a lot of carbon to cast the rails, pour the cement and move

the dirt that's in the way. Environmental impact estimates that include construction find that, depending on the source of electricity to power them, high-speed trains might repay that upfront investment slowly, and only if they run relatively full by diverting a lot of passengers from air travel.

Rail advocates understand this but hope that "If you build it, they will come" — in other words, solve the political obstacles to rail now, and later we can solve the problem of getting fliers onto trains. But if passenger traffic lags hopes, we could end up committing to a huge environmental expense that might never pay off.

Investments in high-speed rail are a clear solution to several political problems Democrats have: it appeals to the union construction workers who would build it, environmentalists who think of trains as "green" and young, educated progressives who have fallen in love with high-speed rail abroad.

But to actually help the environment, Democrats need to address more than the political problem. They need to solve the very real problem of getting people outside the Northeast onto trains.

Amtrak's Northeast Corridor is so heavily trafficked because trains really are an attractive alternative to air

travel there. The cities in this region have retained sizable commuter-rail systems and the urban architecture — oriented around a central business district and close-in residential neighborhoods — that rail demands. So Amtrak is often a preferred alternative to air, even though it's slower than the equivalent flight, because it puts people right where they want to go, without the hassle of clearing security. But most states in other regions don't have even one such city, much less a bunch of them strung close together like beads on a string.

Of course, people are more interested in walkable cities than they used to be, and maybe high-speed rail is part of a denser urban future across these United States. But unless we're pretty sure people will abandon planes for new trains, it might make more sense to look for less capital-intensive ways to decarbonize — better videoconferencing, for example, or longer-range electric cars. These advances might not make for big political ribbon-cutting ceremonies or fire up the political imagination the way futuristic trains and miles of gleaming rail do.

But on the other hand, they just might work.

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