Land Use Is Step One for Decarbonizing Transportation

Four federal agencies have released a first-of-its-kind, holistic strategy for the decarbonization of the U.S. transportation sector.

by Elizabeth Waters

Four federal agencies recently committed to work together to decarbonize the U.S. transportation sector, the country's largest source of emissions, by 2050. The departments of Transportation, Energy, and Housing and Urban Development, along with the Environmental Protection Agency, signed a memorandum of understanding (MOU) in September 2022, based on the premise that transportation, housing, energy, and climate policy are interdependent.

Along with the MOU, they released *The U.S. National Blueprint for Transportation Decarbonization*, which provides an overview of our transportation system and guidance for the research, policy, and deployment necessary to achieve equitable, sector-wide decarbonization over the next thirty years. It illuminates the immensity of the undertaking, which will require unprecedented coordination among all levels and areas of government, nonprofits, and the private sector. The blueprint describes how eliminating transportation emissions is contingent upon community design and land-use planning that will shift our transportation needs. Efficiency improvements and widespread adoption of clean energy will also be needed.

Our current transportation system, the blueprint explains, is inadequate, costly, dirty, vulnerable, and inequitable:

- Many people don't have access to a car or reliable and convenient public transportation.
- Transportation costs are second only to housing for U.S. households.
- Emissions from the transportation sector cause bad air quality and poor health outcomes.
- The system is vulnerable to global markets and infrastructure damage from climate change.

These burdens fall most heavily upon underserved, disadvantaged, low-income, and rural communities for whom transportation is often less accessible and a more significant proportion of household income. These communities are also more likely to be situated close to highways and industrial areas, increasing their exposure to pollution.

The blueprint identifies three strategies to begin addressing these problems immediately. The first is to increase convenience. Transportation systems connect our built environment. How can we design our communities to reduce the need to commute by car and make it easier to walk, bike, and use public transit?

The second is to improve the energy and operational efficiency, accessibility, and affordability of passenger and freight transportation across the country.

And the third is to transition to zero-emission vehicles and fuels in every transportation category. The blueprint notes that this last strategy will likely result in the most substantial reduction of greenhouse gas emissions, but only if the first two are in place. It concludes by setting three longer-term milestones for which the four agencies will release detailed action plans:

- Before 2030—Maximize the impact

of the Infrastructure Investment and Jobs Act and the Inflation Reduction Act investments, and catalyze collaboration and private investments.

- 2030–2040—Adapt strategies and implementation plans in response to global events, consumer response, and technology progress.
- 2040–2050—Ensure that no one is left behind and do our part to achieve a net-zero-emissions economy.

The blueprint makes it clear: our transportation system is inextricable from our built and natural environments, energy systems, and social structure—and if siloed, we cannot effectively solve its problems. The agencies challenge us to reimagine, advocate for, and build communities that enable a safe, secure, clean, and equitable transportation system, a linchpin of a sustainable and resilient society.

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