

FACT SHEET

TRANSPORTATION SOLUTIONS FOR THE 21ST CENTURY

The transportation sector is the largest contributor to the United States’ total greenhouse gas (GHG) emissions, the majority of which comes from passenger cars and light-duty trucks.¹ Reducing our GHG emissions—crucial to averting the climate crisis—will quite simply require a “greening” of the transportation sector. To this end, NRDC has identified several transportation policy solutions that will improve our climate while also benefiting our communities in an equitable way, and we summarize them here. The first section examines greener transportation solutions, the second focuses on general mobility solutions, the third discusses transportation electrification and clean fuels, and the final section outlines additional proposals that may be outside relevant House and Senate Committees’ jurisdiction but are possibilities for greater intergovernmental coordination.



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GREENER TRANSPORTATION SOLUTIONS

Increase funding for clean transportation and low-carbon mobility options. Making progress in reducing carbon emissions from transportation will require long-term, sustainable funding for green transportation solutions, including an expansion of high-capacity transit service, zero-emissions and low-emissions buses, safe bicycle and pedestrian networks, and electric vehicles (EV) and charging infrastructure. More reliable and faster transit options lead to lower fuel costs, cleaner air, and improved access to economic opportunity. This requires an increase in formula and grant programs such as:

- Congestion Mitigation and Air Quality (CMAQ) funding;
- Better Utilizing Investments to Leverage Development (**BUILD**) with modal, rural, and urban baseline set-aside using the current primary criteria;
- Capital Investment Grants-CIG (**5309**) for transit expansion and core capacity and expanded Transit Oriented Development grants (20005(b)) that encourage inclusive compact growth;
- Mobility on Demand (**MOD**) Sandbox Demonstration Program (**5312**) supporting projects that promote equitable mobility options for all travelers;
- Surface Transportation Block Grant (**STBG**) providing flexible funds to advance local planning priorities, not restricted by program eligibility, and specifically increases to the Transportation Alternative Program (TAP) set-aside;

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- Value Pricing Pilot Program (**VPPP**) that advances equitable congestion pricing strategies; and
- Zero Emission Research Opportunity (**ZERO**) that supports research, demonstration projects, testing, and evaluation of zero-emissions and related technology for public transportation applications.

The transition to low-carbon mobility will not take place without substantial investment and a drastic change in our funding priorities.

Establish clean transportation metrics that would require state benchmarking of GHGs and specifically carbon emissions. For the transportation system to meet a goal of carbon neutrality by 2050, the United States must institute requirements to measure, cap, and reduce. Legislation should require states to adhere to a GHG performance metric that includes emissions caps and reduction goals and aligns with a federal carbon neutrality goal.

Solution example: The Minneapolis Department of Transportation established a GHG emissions reduction goal for the transportation sector as part of the Statewide Multimodal Transportation Plan that aligns with the Minnesota Next Generation Energy Act. The department adopted the goal of reducing GHG emissions by 15 percent below 2005 levels by 2015, 30 percent below 2005 levels by 2025, and 80 percent below 2005 levels by 2050.²

Advance zero-carbon freight (port) electrification. Provide direct funding and incentives through the U.S. Departments of Energy (DOE) and Transportation (DOT) to cut carbon and associated emissions at ports and associated freight infrastructure, which in addition to reducing carbon emissions provides significant air quality and environmental benefits to communities near these facilities.

Solution example: The Ports of Los Angeles and Long Beach continue to emphasize green development in efforts that include a strong focus on zero-emissions technologies.³ The Port of Long Beach, Southern California Edison, and the California Energy Commission have launched a pilot project for zero-emissions cranes and other cargo-handling equipment for seaports.

Improve resiliency standards in transportation projects. The impacts of a changing climate (such as higher temperatures, sea level rise, and shifts in seasonal precipitation) and extreme weather events present significant and growing risks to the safety, reliability, effectiveness, and sustainability of the nation's transportation infrastructure and operations. Transportation projects should attempt to both mitigate and adapt to changing environmental conditions. Legislation should also consider the increased likelihood of flash or urban flooding and the effects of extreme heat on material performance. At minimum to address flooding and sea level rise, we recommend adopting the standards proposed in President Obama's Executive Order 13690. Natural infrastructure solutions, such as wetland restoration, should also be considered as part of a complete approach to stormwater management and its effect on transportation.



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Solution example: The Utah Department of Transportation is developing metrics and thresholds to incorporate annual risk information into transportation planning and investment decisions. Threats included in the analysis are wildfires, floods, and earthquakes.⁴

MOBILITY AND CONNECTIVITY SOLUTIONS

Measure Transportation Access to Multimodal Network Connectivity. Specifically, require states to assess and develop [multimodal network performance](#) metrics to increase the number of high-quality, low-carbon transportation options available for everyday trips.⁵ States should also set targets and goals to reach an ideal percentage of trips that do not involve single-occupancy vehicles, like biking, walking, and transit, as determined by the individual state, with federal guidance.

Solution example: The Atlanta Regional Council measured connectivity by calculating the number of homes and jobs near existing and planned low-stress transportation networks. A set of destinations that could be reached from neighborhoods in Atlanta within a specified time, or travelshed, was created for each network scenario using a three-mile distance threshold and overlaid with census data to calculate the number of households and jobs within the travelshed. This work helped Atlanta set connectivity goals, prioritize projects that would help it meet those goals, and track its progress.

Develop a community connections program. Develop a program to support communities that have been divided by past transportation investments and are currently experiencing gaps in existing transportation infrastructure and services. The program would support regional and local projects that (1) promote multimodal investment, (2) reconstruct highways and bridges at the end of their life cycle, (3) restore pedestrian access, and (4) encourage environmental stewardship activity. This proposal would advance the Federal Highway Administration's [Every Day Counts Community Connection](#) initiative.

Solution example: The Uptown and Downtown Arts District neighborhoods in Dallas were separated by the eight-lane Woodall Rodgers Freeway. Initiatives such as the Klyde Warren Park connected these neighborhoods and increased foot traffic downtown, with the hope of also increasing economic development and pedestrian safety.

Grant federal authority to cities and regions to institute comprehensive congestion pricing, including cordon pricing, time of day fees, occupancy fees or requirements, zone-based pricing, or other, similar policies. While cities generally have jurisdiction over local streets, state highways and federal highways often intersect local transportation grids, and this can create hurdles for a city trying to set up a cordon congestion pricing area or zone-based pricing. Specifically, there is a tolling limitation issue and a jurisdictional issue. The city may want to add tolls to the highways when they pass through the city limits, but that power is restricted by current law and under the purview of the state Department of Transportation.

One solution is removing the federal tolling restriction or increasing exemptions for tolling on existing highway lanes when used in conjunction with a local congestion pricing program.

Allocation of revenue is also important to consider. Ideally, congestion pricing revenues would go toward funding high-capacity, low-cost transportation alternatives along the same route, specifically transit investments. Additionally, allocating federal match dollars for every local dollar raised through such a program would provide a strong incentive to implement this type of program, which can be politically difficult. Finally, all revenues from congestion pricing systems implemented solely on city assets should return to the city. Congestion pricing programs that incorporate federal highways should split revenue with the Trust Fund at an acceptable rate, with the vast majority remaining in the region in which it was collected. Additionally, revenues should first go to administration and maintenance of the system, then to alternative (low-carbon) routes.

For legislative language on what a local congestion pricing program could look like, here is the [California Go Zone demonstration program](#) bill.

Solution example: The North Central Texas Council of Governments and Texas Department of Transportation assessed the effectiveness of various congestion pricing incentives that encourage alternatives to driving alone or driving during peak periods for the IH-30/Tom Landry Highway. The study included an equity assessment that explored the impact of congestion pricing on low-income travelers.⁶

Allow commercial and residential development near public transportation to be financed via the Transportation Infrastructure Finance and Innovation Act (TIFIA) and from Railroad Rehabilitation and Improvement Financing (RRIF) funds. Streamline TIFIA/RRIF transit-oriented development provisions into a credit enhancement mechanism with a separate application process that requires a value capture mechanism (via increased ridership or a minor increase in interest rate payments) to generate a new source of funding for transportation and other community infrastructure. To be eligible for the new mechanism, projects would have to include an affordable housing and community facilities requirement.



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Create a federal requirement for transportation data sharing, and provide resources to safely collect, store, and analyze these data. New regulations would require baseline data sharing from transportation network companies and bike/scooter rental providers. Individual bicyclists and pedestrians could also share their route data voluntarily. The data would be collected, stored, and analyzed using federal resources and shared with state and local entities to improve their infrastructure investments and safety interventions.

Increase availability of federal formula dollars to cities or local governments. Certain cities have an extremely high capacity to deliver projects and should be able to act autonomously. Allowing local agencies that meet a certain competency threshold access to federal formula dollars will enable them to prioritize local low-carbon transportation infrastructure projects, like low-stress bicycle networks, that are often ineligible or less competitive for scarce federal formula dollars. Precedent for this type of action can be seen in the ability of certain states to administer their own environmental review in lieu of requirements of the National Environmental Policy Act (NEPA).

Maintain environmental safeguards and protect the NEPA process. Our nation's bedrock environmental protections must be maintained and enforced, and never sacrificed in the name of infrastructure "streamlining." NEPA remains a critical federal screening mechanism to ensure that climate, environmental, and community impacts are considered before federal decisions are finalized. DOT should be required to publish categorical exclusions and fund communities to hire experts to assist in NEPA reviews. Current appropriations for the FAST-41 Dashboard, a clearinghouse meant to speed and streamline the NEPA process, are not adequate, and funding should be increased.

CLEAN VEHICLES AND FUELS

Remove barriers to installing electric vehicle charging infrastructure at federal facilities. Authorize installation of electric vehicle charging stations at federal facilities, such as agency buildings and national parks, and along federal roads where other fueling services are allowed, including rest areas.



Establish purchase incentives for government-managed electric vehicles. Create grants and financing, such as zero-interest loans, to encourage government agencies to purchase electric vehicles, including transit buses and other plug-in electric heavy equipment. Ensure that all government incentives encourage and support the creation of good domestic jobs, reward leadership, and adhere to environmental and labor standards.

Ensure that innovative mobility results in cleaner transportation and equitable access. The United States is, and should continue to be, a leader in emerging autonomous, shared, and networked transportation systems. As the nation grows in this role, we must also ensure that these new generations of transportation technologies and systems reduce pollution, improve public benefits, enhance equity, and are integrated with reinvestment and modernization of America’s transit systems. Efforts should include:

- Issuing annual reports on the impact (including emissions, equity, ridership demographics, access, congestion, etc.) of transportation network companies, such as Uber and Lyft, on publicly funded transit use.
- Requiring transportation network companies to establish GHG emissions reduction plans—including an emphasis on reducing hot spot emissions and cumulative impacts on minority communities—for their fleets on a per-passenger basis, and to track progress on plan achievement.
- Ensuring that any government funding to advance autonomous vehicle research and use goes exclusively to electric-only autonomous vehicles.

Ensure easy navigation to EV charging locations.

Standardize and install signage along all federally supported roadways that direct drivers to EV charging locations. Require new vehicle navigation systems to provide charging station location and charger availability information (and/or direct DOE to ensure development of an open standard for applications to collect and display this information).

Incorporate procurement standards that incentivize increased domestic manufacturing and good jobs across the supply chain for electric and other ultralow-emissions advanced vehicles. Supporting domestic procurement will curb the carbon pollution that is causing climate change while also creating domestic jobs in American-made technology.

ADDITIONAL AREAS OF COLLABORATION WITH THE DEPARTMENT OF ENERGY AND RELATED AGENCIES

Expand electric vehicle charging infrastructure through cross-collaborations between the Energy and Transportation Departments. Authorize and fund DOE’s Vehicles Technologies Office to provide competitive grants to states or utilities to ramp up financing for electric vehicle charging infrastructure, especially in typically underserved markets such as low-income communities and government-supported housing. DOE funds should be granted to states or utilities as part of complementary programs that enable widespread and efficient access to charging services for all types of vehicles (light-duty and heavy-duty transit and freight) and users, and crucially, this funding must serve as a catalyst for long-term investment in transportation electrification. The aims of existing DOE programs could be separately supported at DOT through TIGER/BUILD grants, the Low-No program, or CMAQ.

Establish building codes requiring retrofits and new construction to be EV charger-ready. Create model building codes to be adopted by state and local jurisdictions that require at least 20 percent of new parking spaces be wired to meet the needs of a level-2 charger operating at a minimum of 6.6 kW. Require the implementation of these codes in government-supported housing.

Encourage U.S. competitiveness and technological leadership through a national initiative to boost electric vehicle and infrastructure technology and related materials development and manufacturing in America.

ENDNOTES

- 1 U.S. Environmental Protection Agency, “Transportation Air Pollution and Climate Change,” <https://www.epa.gov/transportation-air-pollution-and-climate-change/carbon-pollution-transportation>.
- 2 Minnesota Department of Transportation, “Greenhouse Gas Emission Reduction,” <http://www.dot.state.mn.us/sustainability/ghg-reduction.html>.
- 3 Port of Los Angeles, “Zero Emissions Technologies,” <https://www.portoflosangeles.org/environment/air-quality/zero-emissions-technologies>.
- 4 Federal Highway Administration (hereinafter FHWA), “Building Resilient Infrastructure,” updated January 2019, https://www.fhwa.dot.gov/environment/sustainability/resilience/publications/brt_brochure2019.pdf.
- 5 FHWA, *Guidebook for Measuring Multimodal Network Connectivity*, February 2018, https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_connectivity/fhwahep18032.pdf.
- 6 FHWA, “Report on the Value Pricing Pilot Program Through April 2018,” last modified March 3, 2020, https://ops.fhwa.dot.gov/congestionpricing/value_pricing/pubs_reports/rpptocongress/vpp18rpt/ch2.htm#ss2-1-4.