CLIMATE 21 PROJECT

TRANSITION MEMO

Department of Transportation

CLIMATE **21** PROJECT Transition Memo

Department of Transportation

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This memo is part of the Climate **21** Project, which taps the expertise of more than 150 experts with high-level government experience, including nine former cabinet appointees, to deliver actionable advice for a rapid-start, whole-of-government climate response coordinated by the White House and accountable to the President.

The full set of Climate 21 Project memos is available at climate21.org.

Department of Transportation

Executive Summary

The transportation sector has become the largest contributor to GHG emissions in the United States. Transportation infrastructure and systems are also increasingly threatened by the impacts of climate change, and will require changes in how we plan, design, and maintain these systems. The public health and economic crises resulting from the COVID-19 pandemic introduce additional challenges and competing priorities. Incoming officials at the U.S. Department of Transportation (USDOT or DOT) will likely be asked to both address the adverse impacts of the pandemic on public transit ridership and identify the best approaches for new infrastructure investments to stimulate the economy and create jobs. This will create a complicated set of tradeoffs and opportunities. DOT leadership will need to consider how best to allocate management attention and political capital in addressing short-term economic damage from the pandemic and the longer-term, climate-informed changes to how DOT shapes our transportation system.

The Secretary (or senior designee from the Office of the Secretary (OST)) should chair an intra-departmental Climate Council that includes senior modal leadership—in other words, senior personnel overseeing individual modes of transportation—and other key personnel. The Council should drive climate priorities, including incorporating climate considerations into stimulus programs, identifying top priority projects of national significance to elevate for congressional and public attention, and developing guidance encouraging states and localities to innovate on climate-smart, multimodal surface transportation projects. Climate change should be integrated into the organization of each modal administration at a high level, including a climate-focused team within the administrator's office in each modal administration.

DOT's authorities and programs provide significant opportunities to reduce emissions and increase resilience to climate impacts, including through vehicle efficiency standards, investments in electric vehicle charging infrastructure, support for transit systems and other low-carbon transportation options, and a "climate in all policies" approach to require consideration of climate impacts of transportation projects. DOT leadership will need to work closely with the White House and EPA to decide how to prioritize and sequence new standards for light-duty passenger vehicles and for medium- and heavy-duty vehicles. DOT can play a lead role in building and installing the charging infrastructure needed to support the electrification of vehicles, including passenger vehicles, local freight delivery vehicles, buses, port equipment, and more. Electrification presents a major opportunity for emissions reduction and could be a cornerstone of efforts to reinvigorate the U.S. economy. DOT should initiate a task force with senior-level engagement to focus on electrification policy, including investment in electric vehicle charging infrastructure along the interstate highway system.

DOT should work to expand partnerships and relationships with state and local governments to foster innovation and gather feedback on opportunities for the federal government to support and facilitate subnational leadership. Additionally, DOT should increase staffing within its Office of Public Engagement to bring in climate and environmental justice expertise to help shape and communicate DOT's priorities.

This memo provides the incoming Secretary of Transportation, Chief of Staff, and key Department leadership with opportunities to maximize USDOT's contributions to an aggressive Administration-wide climate change mitigation and adaptation effort. It focuses on measures that can be undertaken within existing budgetary and legal authorities and prioritizes initiatives for the first 100 days that will either generate positive near-term impacts, or set the agency up to develop and implement a broader first-term climate agenda, including medium- and long-term climate policies to support the President's agenda and the United States' obligations under the Paris Agreement.

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Department of Transportation

TOP RECOMMENDATIONS: MANAGEMENT, BUDGET, AND STRUCTURE

- **Establish a USDOT Climate Council** to signal climate change as a top priority of the department, to coordinate across modal administrations, and to set agendas for climate policy and programmatic actions, including economic stimulus programs *(Day 1)*
- **Embed climate change personnel in modal administrations** by establishing new resilience and sustainability teams and leadership participation to communicate climate priorities *(100 Days)*
- **Announce a human capital restoration plan** to rebuild career staff capacity and expertise lost in recent years and identify needs for budget requests *(100 Days)*
- **Include staffing and programmatic needs** for expanded work on climate change in early budget recommendations and requests *(100 Days)*

TOP RECOMMENDATIONS: KEY PROGRAM OPPORTUNITIES

- **Utilize a Presidential Memorandum or Executive Order from The White House early on to provide direction on vehicle standards**, including a directive to DOT/NHTSA, EPA, and DOJ to resolve pending litigation around vehicle standards, announce the administration's priorities for vehicle standards, and establish initial deadlines *(Day 1)*
- **Initiate new transportation electrification task force** to focus on electrification policy and job creation and propose new budget and legislative initiatives *(100 Days)*
- **Initiate efforts to develop climate change criteria** for resilience and emission reductions, as well as related economic analysis, to incorporate in BUILD grant criteria and to update NEPA guidance *(100 Days)*
- **Develop proposal for a new ARPA-T** program to advance transportation innovation *(100+ Days)*
- **Ensure USDOT leadership in the International Civil Aviation Organization and the International Maritime Organization** to advance efforts to reduce global aviation and maritime emissions *(100+ Days)*

TOP RECOMMENDATIONS: INTERAGENCY PRIORITIES AND RELATIONSHIPS

- **Announce intent to establish a Visiting Mayors' Office** to improve and expand direct federal-local engagement and encourage local transportation innovation *(Day 1)*
- **Identify opportunities to engage with states and regions** through existing meetings of governmental associations *(100 Days)*

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1 Management, Budget, and Structure

Incoming USDOT leadership will be beset by near-term organizational decisions and budgetary deadlines. The transition period should be used to identify top priority requests for stimulus spending or FY2022 increases in appropriations, given calendar constraints.

The incoming Secretary and leadership team will have a very short window to begin identifying needs that include rebuilding USDOT's human capital and expertise, requesting funding increases for climate-related programs and the implementation of a wide variety of key initiatives.

With transportation being such a significant driver of emissions in the United States, USDOT will also play a major role in the next Administration's climate strategy.

With that in mind, USDOT should establish a new Climate Council that includes the heads of all modes of transportation, which will produce a detailed report within 100 days. It should also embed climate expertise within each of the modal administrations and their teams, to ensure a change in departmental culture and priorities. It must rebuild the morale and expertise of career staff, and build additional capacity internally through training on climate science.

And finally, USDOT must significantly scale up its outreach and engagement, to ensure that states, cities, communities and the public at large are more aware of efforts to decarbonize the American transportation sector.

MANAGEMENT AND BUDGET

An ambitious Day 1 plan will require both budget and personnel resources to achieve the desired outcomes. By design, this memo primarily focuses on the concrete actions the agency can take through existing resources and authority. Where significant budgetary and personnel resources are required, we identify them and how these recommendations are achievable through existing budget, authority and personnel. In addition, we also identify where significant new budget, authority and personnel are needed and how they may be acquired.

DOT leadership will have an opportunity to influence the economic recovery from the COVID-19 pandemic. A major federal economic stimulus program, or series of stimulus funding bills, could create opportunities to increase funding for existing transportation programs or fund new ones. These critical job creation stimulus programs can also have a climate co-benefit by accelerating a transition to a low-carbon transportation system. Many of the recommendations in this memo could be applied to stimulus programs.

In addition to any economic stimulus or pandemic recovery legislation, DOT leadership will likely face three major, regular budget deadlines that impact the climate agenda's success:

(1) **FY2021 omnibus appropriations.** It is likely that all or some agencies are on a continuing resolution (CR) as of inauguration day and that current year funding will be completed soon after (1-2 months) through an "omnibus" appropriations law. The spending levels will have been largely negotiated by appropriators by this time, so there is very little room for increased spending or change of spending authorities. That said, small accommodations may be made, so a short list of funding and/or authority requests should be identified in the first 1-3 weeks. As noted in sections below, these opportunities include: incorporating staffing (FTE) needs to rebuild human capital and expertise that has been lost across the agency broadly, and more specifically, staffing needs to integrate climate teams within modal

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administrators' offices and within the OST Office of Public Engagement, and to establish a permanent Visiting Mayors' Office.

(2) **FY2022 budget request.** In the first year of a first term, the President's budget for the following fiscal year is announced within the first 50 days. President Obama announced on March 11, 2009, or 37 days into the term. (Congressional budget and appropriations processes usually start in March.) Agency requests are due earlier. With such a short window, there is little time to generate support and advocate for major initiatives. Agency heads testify before the appropriating committees to support their budgets in March and April, and agency staff engage the committees until the appropriations acts are passed. If the agency leadership seeks to propose a major budgetary increase to address climate change, it is critical to start that work in the transition or prior, so it is ready. As noted in sections below, key opportunities for FY2022 include: incorporating staffing (FTE) needs to rebuild human capital and expertise that has been lost across the agency broadly, and additional staffing needs (if applicable after FY2021 omnibus) to integrate climate teams within modal administrators' offices and within the OST Office of Public Engagement, and to continue (or establish if not done via FY2021) a permanent Visiting Mayors' Office; requesting funding increases for discretionary, multimodal, and climate-focused programs, such as BUILD, transit grants, and federal-state partnerships on climate resilience; requesting funding for new ARPA-T and to create and staff a temporary task force on vehicle electrification.

(3) **FY2023 budget process.** After submitting the FY2022 budget, agencies will immediately begin work on the FY2023 budget request, which is due to the Office of Management and Budget in late July prior to announcement the following February. This window provides more time for major adjustments and initiatives. As noted in sections below, key opportunities will build on those from FY2022 and include more robust and expanded requests for BUILD and climate resilience partnership grants, and for the new ARPA-T program; maintaining or expanding, as needed, funding requests for added staffing of various offices with climate-focused teams; and funding to expand on or begin implementation of vehicle electrification task force recommendations.

KEY STRUCTURAL AND ORGANIZATIONAL OPPORTUNITIES

USDOT needs a culture shift away from the historic modal silos to foster greater collaboration across modal administrations, develop innovative multimodal solutions, and embed climate change as a priority of the department. Active leadership from the Office of the Secretary and regular engagement with modal, state, and regional offices are necessary to signal the new administration's climate change agenda. And to achieve any of the administration's policy and programmatic goals, an early push to rebuild human capital at USDOT will be critical, including improving morale across the staff and building new capacity.

Establish Cross-Modal USDOT Climate Council

ACTION ITEMS

(Day 1) Announce the establishment of the USDOT Climate Council, to be led by the Secretary of Transportation (or senior designee) and include at a minimum the Under Secretary for Policy, Assistant Secretary for Research and Technology, Chief Financial Officer, General Counsel, modal administrators and associate administrators.

(100 Days) Convene the Council and produce first report within first 100 days, including Year 1 agenda for USDOT actions on climate change priorities.

The Secretary (or senior designee from OST) should chair an intra-departmental Climate Council that includes senior leadership (administrators and associate administrators) across transportation modal administrations and other key personnel such as the Chief Financial Officer and General Counsel to ensure the Council's

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recommendations are actionable. The Council should be used to drive climate priorities—including incorporating climate considerations into stimulus programs, as well as discussing research needs and opportunities for multimodal research, identifying top priority projects to elevate for congressional and public attention, and developing guidance that encourages states and localities to innovate on climate-smart, multimodal surface transportation projects.

In general, the Climate Council should aim to drive climate leadership throughout the agency. Priorities established through the Council should be used to inform division leaders within the modal administrations, and leadership of modal regional and state offices.

Embed Climate Leadership within Modal Administrations

ACTION ITEMS

(Day 1) Announce the creation of climate change/resilience and sustainability teams within each of the major modal administrations.

(100 Days) Determine whether the modal administration has existing staff working on climate change that can be shifted to oversee climate work from the administrator's office. If not, determine staffing and budget needs.

> **Budget Implications:** As necessary, incorporate budget for FTEs in the department's FY2021 and FY2022 budget requests.

(100+ Days) Direct the Assistant Secretary for Transportation Policy (or other senior leadership in OST policy office) and modal Associate Administrators to participate in monthly (or other periodic) calls of regional/state division offices to communicate climate-related priorities established by the Climate Council. (E.g., in the case of FHWA, calls are convened monthly with the heads of state division offices.)

In addition to leadership provided by OST, climate change should be integrated into the organization of each modal administration at a high level. When selecting modal leadership, the administration and agency should include criteria regarding climate and resilience experience, particularly with NHTSA, FHWA, and FTA. There are candidates with experience from forward-leaning states and localities who would make excellent administrators for this critical issue. Modal leadership and OST should also ensure that this culture shift towards climate action is filtering down to the regional/divisional offices that are more directly responsible for overseeing the distribution and use of federal funds.

Beyond each modal administrator, USDOT should also aim to embed a climate-focused team (3+ FTEs) within the administrator's office in each modal administration. This is important to not only mainstream climate change, but also to begin making a measurable impact on this issue.[1]

[1] Currently, for example, FHWA's Sustainable Transportation and Resilience Team oversees and funds important research and partnerships with states on reducing emissions and improving system resilience, but this work is relatively isolated within the Office of Planning, Environment, and Realty. The team's broader impact depends on building one-on-one relationships and making the case for other offices to "buy in" to working on climate change.

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Rebuild Morale and Staff Expertise

ACTION ITEMS

(Day 1) Announce a human capital restoration plan that seeks to repopulate the agency with highly skilled and experienced staff and identify a leader to work with existing human resources team on this effort.

(100 Days) USDOT human capital restoration plan leader works with HR to assess the gaps, develops the positions descriptions, recruit and hire.

> **Budget Implications:** Early on in first 100 days, identify needs for new FTEs in the Omnibus FY2021 (due to Congress within first 30-50 days) and FY2022 (due to Congress from OMB within 50 days).

(Year 1) USDOT implements staff-wide training on climate science, including projected impacts on the transportation system, to build capacity and expertise within the department.

Early attention will need to be given to rebuild the morale among staff and to triage the loss of expertise at USDOT—which has seen the departure of many career civil servants who were experts in their fields.

This action will be a significant undertaking. Time should be invested by the Secretary, Deputy Secretary, Chief Human Capital Officer, chief of staff and others amid many other pressing priorities in the first 100 days. There may also be an opportunity to build capacity and increase expertise across the career staff through staff training programs on climate science.

Improve Public Outreach and Engagement

ACTION ITEM

(100 Days) Report from USDOT Climate Council to Office of Public Engagement, and/or bring Office staff to Council meetings. Add staff with climate expertise to the Office of Public Engagement to bolster outreach on climate initiatives.

> **Budget Implications:** This action would likely require the addition of 2+ FTEs. These positions may be sought through the FY2021 Omnibus (if applicable, likely due within 30 days) and if not achieved there, included in the FY2022 budget request (due to Congress from OMB within 30-50 days).

USDOT must make a more concerted effort to engage state and local governments, communities, and the public on the agency's efforts to address climate change. USDOT should enhance public participation (particularly in communities overburdened by pollution or underserved by current transportation systems) to ensure that climate initiatives meet community needs and to build broad support for USDOT's climate actions. This increased level of engagement will be particularly important as the federal government moves to support states and local governments' recovery from the COVID crisis. Effective engagement can help address public concerns relating to a transition to cleaner transportation solutions and generate buy-in that can create more robust support for the necessary programmatic reform needed at DOT. With this in mind, the department should increase staffing within its Office of Public Engagement to bring in climate and environmental justice expertise. USDOT should also identify and work with key messengers within the transportation community, including state and local agencies, universities (e.g., building on the University Transportation Centers), and labor, along with NGOs and community groups, to help shape and communicate the DOT's priorities. As the DOT transitions from more of a modal agency into an interconnected department that can be at the front of a new climate strategy, engaging directly with diverse groups will be an important aspect of raising the DOT's profile with elected officials, states, the financial community, as well as new climate activist groups that will be pushing hard from the outside for swift action.

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2 Key Program Opportunities and Recommendations

USDOT has a number of specific climate-focused policy and programmatic opportunities that it should embrace in the next Administration. USDOT may play a lead role in building the charging infrastructure needed to support electric cars, trucks, and buses.

USDOT should work with the DOJ to resolve litigation around vehicle emissions and efficiency standards and coordinate with the EOP and EPA on new vehicle standards that put us on a path to achieve our climate targets. It must begin to once again encourage state and local climate and mobility innovation, drawing attention to solutions that prove effective and helping them to become more widely adopted at scale. It must start requiring the careful consideration of climate impacts as a criterion in all requests for funding of USDOT projects. It should reinstitute GHG performance measurement, so as to begin to collect accurate emissions data across the board.

USDOT must make climate change a central focus of the future of transportation, including by building infrastructure resilient to climate impacts. And DOT should take a lead role in international transportation climate agreements.

The president-elect will have a platform for climate action that includes longer-term changes to USDOT programs to facilitate a shift to lower-carbon and more resilient transportation systems. However, there are many actions that USDOT can take on Day 1 and in the first 100 days to set the stage for some of the likely policy priorities.

The program opportunities and recommendations for reducing emissions in this memo primarily focus on on-road vehicles (including light-duty vehicles and medium- and heavy-duty trucks), which make up 82% of transportation-sector emissions. Early investments in electric vehicle charging infrastructure would complement vehicle standards, create demand for electric vehicles, and facilitate additional private sector investments and jobs.

Pre-COVID-19, emissions from other sources—including air travel and maritime transportation—were increasing and should be considered in policy development, along with DOT's role in siting pipelines.

VEHICLE EMISSIONS AND EFFICIENCY STANDARDS

ACTION ITEM

EOP Action (Day 1) The White House could utilize a Presidential Memorandum or Executive Order early on to provide direction on vehicle standards, including a directive to DOT/NHTSA, EPA, and DOJ to resolve pending litigation around vehicle standards, announce the administration's priorities for vehicle standards, and establish initial deadlines.

Vehicle fuel economy standards, set by the National Highway Traffic Safety Administration (NHTSA), have successfully reduced oil consumption, reduced fuel costs, and cut vehicle emissions. The Obama Administration's light-duty vehicle standards for model years 2012-2025 were projected to save consumers more than $1.7 trillion at the gas pump and reduce U.S. oil consumption by 12 billion barrels over the lifetime of the standards. These standards also created significant job growth in the auto parts supply chain throughout the United States (and these job creation benefits should be a key part of communicating the roll-out of new standards).

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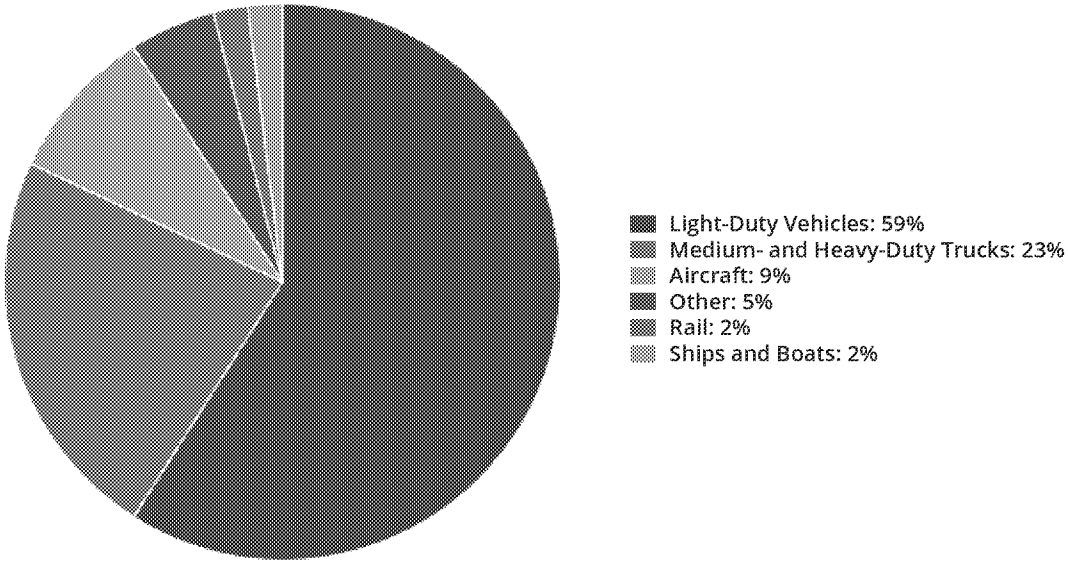
Transportation Sector Emissions by Source



One major policy determination for the new administration will be how to most effectively utilize the relevant statutory authorities and capabilities at DOT and EPA to set standards to reduce vehicle greenhouse gas emissions. DOT leadership will need to work closely with the EOP and EPA to determine the best path forward. DOT/NHTSA has a statutory requirement to set CAFE standards under the Energy Policy and Conservation Act (EPCA) that is independent from the EPA's authority under the Clean Air Act to set vehicle GHG standards. It may be advisable for NHTSA to set less stringent CAFE standards that act as a "backstop," rather than to develop CAFE standards that are harmonized with the EPA's GHG standards. In recognition of the EPA's greater latitude and flexibility in setting standards, the Obama Administration laid the groundwork for "decoupling" the CAFE and vehicle GHG standards. Decoupling may or may not be advisable, however, in the wake of pending federal court litigation regarding NHTSA and EPA's Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks.

The Administration will also need to decide how to prioritize and sequence new standards for light-duty passenger vehicles and for medium- and heavy-duty vehicles. There will be a significant opportunity for the next administration to strengthen the fuel economy and emissions standards for medium- and heavy-duty trucks, including a potential U.S. EPA zero emission truck program. Reducing diesel emissions from trucks, buses, and vocational vehicles, particularly in communities overburdened with air pollution and at heightened risk of respiratory illness, could create significant public health benefits and advance environmental justice.

The next administration should also consider whether and how to include factors like vehicle-miles traveled, connected and automated vehicles, and the rise of ride hailing services when setting vehicle standards. (Note: See the EPA memo for further recommendations and insights as to why EPA should take the lead on new vehicle standards).

PROMOTE STATE AND LOCAL INNOVATION

States, regions, and local governments are proven innovators in the effort to reduce emissions and improve resilience while promoting economic growth. In the transportation sector, USDOT has been an important partner in driving this innovation by providing competitive grant opportunities like the $1 billion BUILD discretionary grant program (formerly known as TIGER), and by partnering with states and MPOs on research to drive climate-smart and resilient solutions.

"Race to the top" programs like BUILD and TIGER have motivated applicants to develop proposals for projects and initiatives that are multi-modal and achieve multiple environmental, health, and mobility-related benefits. (Even projects not funded directly by the program often still get implemented.) These programs promote growth in jobs and industries supporting low-carbon or resilient transportation, which can provide immediate stimulus, workforce

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ACTION ITEMS

(100 Days) Following finalization of FY2021 omnibus, announce notice of funding for BUILD grants that includes climate change criteria for quantifying emissions and resilience benefits, as well as other benefits like improved health outcomes and access to jobs. Criteria should be developed with input from the Climate Council and oversight from the Chief Infrastructure Funding Officer and announced within 60 days of FY2021 budget authority.

(100+ Days) Request increases in FY2022 and FY2023 budgets for BUILD and other discretionary programs with flexibility to build in climate-related criteria.

(Year 1) Announce BUILD awards (within 270 days of budget authority), highlighting climate-related benefits of projects and those featuring innovative multimodal approaches.

(100 Days) Work with OMB and House THUD appropriations subcommittee for small increase in FY2021 omnibus (50 percent increase) to partner with states and MPOs on resilience efforts, and request larger increases in FY2022 (request due to Congress from OMB in first 50 days) and FY2023 (request due in August to OMB).

development, and long-term economic opportunities. Competitive, multi-benefit grant programs also can provide a unique opportunity to partner with philanthropy and the private sector, bringing in significant new sources of funding and technical assistance. By signaling demand for low-carbon transportation projects, federal funding can be leveraged to increase private sector hiring investment in these critical projects.

USDOT could build on the lessons from these past grant programs by adding in climate change-related requirements to the BUILD funding criteria, such as by demonstrating the emission reduction benefits that would be achieved and how the project would build in climate resilience. Longer term, a more targeted grant program could be utilized to stimulate new collaborations within government, such as new multi-state coalitions to reduce emissions from the transportation sector (like the Transportation and Climate Initiative).

Programs like FHWA's Resilience Pilots have also provided important funding to states and regions to take the first step towards understanding climate-related vulnerabilities and developing solutions for more resilient infrastructure and systems. Funding should be increased for these kinds of federal-state partnerships.

REQUIRE CONSIDERATION OF CLIMATE AND ECONOMIC IMPACTS OF USDOT PROJECT FUNDING

ACTION ITEMS

(100 Days) Establish the development of climate change and related economic analysis criteria as a priority of the Climate Council, and initiate efforts to update agency NEPA guidance to account for analysis of GHG emissions, vehicle miles traveled, climate change impacts and project resilience, and other environmental factors.

(100 Days) Engage with AASHTO regarding next update of Green Book, and announce intent to condition federal acceptance of Green Book on incorporation of resilience standards in the manual. The Green Book is the state DOTs' agreed-upon design manual, developed through AASHTO and adopted by USDOT through regulation.

(Year 1) Finalize updated agency NEPA guidance accounting for climate change.

(Year 1) Propose performance measures relating to climate change (emissions and resilience) to incorporate into a surface transportation reauthorization proposal.

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USDOT can help build an approach of "climate in all policies" at the federal level by requiring analysis of a project's expected contribution to or mitigation of climate change and a project's climate resilience. On the emissions side, this analysis should also include quantifying changes in VMT that are anticipated to result from the project, and identifying (or even requiring) measures to mitigate or offset increases in VMT and emissions—perhaps applying an approach similar to the national policy of "no net loss" of wetlands. On the resilience side, climate-related risks should be evaluated fully, and project proponents should demonstrate that cost-effective resilience measures are incorporated and that projects are designed to "fail safely" if an acceptable level of failure is reached.

In addition to these climate-related criteria, funding justifications should discuss how the project is considered "multi-benefit," and should account specifically for a project's economic benefits, including anticipated improvements in access to jobs, services, and goods. These issues, which typically resonate broadly across the political spectrum, will be particularly salient as the U.S. economy recovers from the COVID-19 pandemic. Moreover, projects that achieve greater accessibility often also produce significant reductions in greenhouse gas emissions as a co-benefit, and may provide benefits to underserved and over-burdened communities. USDOT could designate a portion of its research budget to build out a system for scoring projects according to access to jobs and services. In the short term, USDOT can encourage these considerations by developing NEPA guidance with climate change analyses, and by looking to incorporate resilience or other climate-related standards in other manuals utilized by transportation professionals (e.g., AASHTO's Green Book). In the longer term, USDOT should advocate for these criteria to be applied to formula funding as part of an effort to reform transportation programs through reauthorization or other infrastructure legislative packages.

GHG PERFORMANCE MEASURE

ACTION ITEMS

(100 Days) Announce intent to develop GHG performance measure and reporting requirements for state DOTs and MPOs.

(Year 1) FHWA work with Climate Council to develop performance measure rule and submit to OMB.

(Year 1+) Work with Climate Council and leading state DOTs to effectively implement performance measure (including technical support and resources for state DOTs) and identify opportunities to leverage performance measure to advance climate goals.

States play a critical role in U.S. transportation system management, investment, and policy. In the absence of legislative action (through a transportation funding reauthorization or other legislation), state departments of transportation have significant discretion on spending transportation funds (including on projects that significantly increase VMT and GHG emissions). One regulatory action that can influence state transportation investments is performance measurements.

The FHWA regulation establishing a GHG performance measure and requiring states to report on progress was repealed in May 2018. Reinstituting this performance measure could provide accurate and timely data on vehicle miles traveled and GHG emissions from transportation projects and investments and require closer consideration of the GHG impacts of state transportation spending. This performance measure may also encourage departments of transportation and metropolitan planning organizations to work more closely together on emissions reduction planning. The timing of any announcement of intent to develop an updated GHG performance measure should be considered in light of the significant budget and personnel impacts faced by state DOTs due to the COVID pandemic. As part of the roll out of any potential regulation, the FHWA might consider providing funding and technical assistance to help states calculate emissions and implement a GHG emissions performance measure.

One additional opportunity for the administration to influence state action is to rank states on performance; for example, on GHG emissions reductions, per-capita VMT reductions, or access to services such as jobs and

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healthcare. The Policy Office at USDOT has had success in influencing states to take action based on public performance rankings–encouraging a "race away from the bottom." (Note: U.S. FHWA is generally reluctant to rank states, absent directives to do so.)

TRANSPORTATION ELECTRIFICATION

ACTION ITEMS

(Day 1) Announce initiation of transportation electrification task force to focus on electrification policy, which should coordinate with the USDOT Climate Council.

(100 Days) The task force can hold first meeting and provide a framework for outcomes, including opportunities for federal economic stimulus to accelerate transportation electrification.

Budget Implications: An active task force would require 3-5 FTEs to provide policy support and executive secretariat services. These staffing requirements may be achieved thought internal secondments and external 1-2 temporary FTEs for a 1-2-year duration.

Electrification of vehicles—including passenger vehicles, local freight delivery vehicles, buses, port equipment, and more—presents a major opportunity for emissions reduction and could be a cornerstone of efforts to reinvigorate the U.S. economy. USDOT should initiate a task force with senior-level engagement to focus on electrification policy. This work should be coordinated with the U.S. Department of Energy, which has significant work underway funding research, planning, and deployment of electrification technologies. (Collaboration with DOE may be formalized, depending on how the EOP decides to organize interagency climate change work.) Advancing transportation electrification is a critical area for collaboration with states (including state departments of transportation, energy, and environment, as well as utility regulators), along with labor, business, and equity/environmental justice stakeholders.

ACTION ITEMS

(100 Days) Work with OMB and legislative staff to propose funding for EV charging corridors in FY2022 (request due to Congress from OMB in first 50 days).

(100 Days) Electrification task force announces initial recommended policy actions, including those that can be implemented through agency guidance or regulations (e.g., enabling highway specific service signs for EV charging stations).

(Year 1) Incorporate funding request for electrifying interstate highways (for passenger vehicles and freight trucks) in FY2023 budget proposal, due to OMB in August 2021, with recommendations developed by electrification task force.

USDOT may have a critical role to play in administering federal investment in electric vehicle charging infrastructure along the interstate highway system (although the magnitude of any federal investment will heavily depend on congressional appropriation and other legislative action). Investments in charging infrastructure along highway corridors could be a "plug and play" economic stimulus opportunity, providing job creation opportunities and long-term benefits. This effort could be accelerated by building on the federal designation of alternative fuel corridors by FHWA and significant planning efforts already underway through multi-state, regional collaborations (e.g., "REV West" and the Transportation and Climate Initiative).

An Electrification Task Force could play an important role coordinating this initiative at DOT, including by ensuring that federal funding for EV charging investments leads to significant public benefits (e.g., ensuring convenient experience for drivers through open-access/open payment charging stations and the prioritization of federal funding for "filling in gaps" in more rural corridor locations).

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The electrification task force could also develop policy recommendations that could be implemented through agency guidance or regulations. For example, DOT/FHWA could improve EV driver convenience and provide a significant consumer awareness benefit by updating the federal Manual on Uniform Traffic Control Devices to allow or require state DOTs to add EV charging station logos to specific service (food/fuel/lodging) signs.

STRATEGIES TO ACCELERATE FLEET TURNOVER

ACTION ITEMS

(100 Days) Work with OMB legislative staff to propose pilot program in FY2021 omnibus and request scaled-up program in FY2022 (request due to Congress from OMB in first 50 days) and FY2023 (request due in August to OMB).

(Year 1) Climate Council and electrification task force develop policy proposal to accelerate fleet turnover with a focus on emission reductions.

Working through the DOT Climate Council and interagency partnerships, the DOT can explore policy and programmatic opportunities to accelerate the turnover of older vehicles in the U.S.[2] This could include programs for both passenger and freight vehicles, and prioritize equity and environmental justice in addition to GHG emission reductions. One policy option is a scrappage and replacement program (e.g., Senator Schumer's Clean Cars for America proposal), which could provide significant equity benefits—in addition to emissions reductions—by making a clean transportation transition more affordable for low-income households. A federal program targeted towards emissions reductions, equity, and environmental justice could learn from and expand on existing state and local government programs (e.g., the South Coast Air Quality Management District 'Replace Your Ride' program). Such a program would likely require congressional appropriations, but may be considered as part of a stimulus bill or support for the US auto industry. If DOT leadership prioritizes the implementation of this program prior to FY2023, it would need to accelerate its legislative engagement to allow for consideration in stimulus legislation or the FY2022 budget, due within 30-50 days following inauguration.

AUTOMATED AND CONNECTED VEHICLE POLICY

ACTION ITEM

(Year 1) Announce intent to issue new guidance for automated and connected vehicle policy that seeks to maximize social benefits of this technology, including climate change and emissions reductions along with traditional safety considerations.

The new Administration should consider climate change implications and engage with the DOT Climate Council when developing updated guidance or regulations related to automated and connected vehicles. The National Highway Traffic Safety Administration has issued guidance for automated and connected vehicles, including on testing and safety. It will be important for future guidance, regulations, and legislative engagement around automated vehicles to include a climate change analysis. Projections show that automated vehicles could either lead to emissions reductions (if powered by zero-emission technology and largely shared) or lead to significantly increased emissions by accelerating VMT growth, facilitating suburban sprawl, and enabling longer commutes.

[2] The average age of passenger vehicles in operation in the United States as of 2017 was 11.6 years.

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PROMOTE A NEW ARPA-T RESEARCH PROGRAM FOR TRANSPORTATION INNOVATION

ACTION ITEMS

(100 Days) Discuss priorities for ARPA-T through Climate Council with involvement of additional OST-R staff, and develop proposal for language to include in budget.

(Year 1) Incorporate request for new ARPA-T in FY2023 budget proposal, due to OMB in August 2021 (if agency leadership prioritizes this action, it could seek to accelerate consideration for FY2022 due within 30-50 days following inauguration, but would require a major policy engagement).

Additional research innovation for low-carbon transportation solutions is needed if we are to rapidly decarbonize our transportation system. USDOT should engage Congress to advocate for the authorization and funding of a new research innovation agency for the transportation sector, modeled after the highly successful Advanced Research Projects Agency - Energy (ARPA-E). Whereas USDOT's existing research grant programs have funded important research in transportation sustainability primarily through University Transportation Centers (UTCs), a new "ARPA-Transportation (ARPA-T)" program could have much greater success at attracting innovators from the private sector who are at the forefront of addressing complex challenges like transitioning to a low-carbon future. As ARPA-E has been utilized to fund R&D in advanced energy technologies with high potential payoff if applied commercially, ARPA-T could fund R&D in areas such as roadway electrification, lower-GHG footprint materials and construction equipment, enhanced mobility systems (e.g. connected and automated vehicles) and more. Such efforts could help inform investments around stimulus and provide for innovation that results in long-term employment benefits.

ENSURE DOT LEADERSHIP IN ICAO AND IMO

ACTION ITEM

(100 Days) Ensure USDOT leadership in the International Civil Aviation Organization and the International Maritime Organization to advance efforts to reduce global aviation and maritime emissions.

The EOP and the State Department will lead on most international climate work. However, DOT leads or contributes to U.S. participation in two important international fora where climate work takes place: the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO). DOT participation and leadership in both fora will require early attention from the Secretary. The FAA leads U.S. participation in ICAO. ICAO has adopted a goal of "carbon neutral growth from 2020"—i.e., limiting the net emissions of international flights to year-2020 levels. Governments, industry and NGOs agreed on the crucial role of a global market-based-measure, under which airlines purchase high-quality emissions reductions to offset emissions above 2020 levels, prompting ICAO to adopt the Carbon Offsetting and Reduction Scheme for International Aviation, or CORSIA, in 2016. In 2018, the IMO adopted an initial strategy on the reduction of greenhouse gas emissions from ships, setting out a vision to reduce GHG emissions from international shipping and phase them out, as soon as possible in this century. More specifically, under the identified "levels of ambition," the initial strategy envisages for the first time a reduction in total GHG emissions from international shipping which, it says, should peak as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008, while, at the same time, pursuing efforts towards phasing them out entirely.

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3 Cross-Cutting Priorities and Relationships

With the majority of successful climate-focused efforts occurring at the state and local levels, USDOT must improve how it collaborates with governments, organizations and associations below the federal level to advance climate action. This must include establishing and expanding relationships and partnerships with states and cities, and sending a clear signal that USDOT is supporting and helping to scale innovations that can reduce GHG pollution and improve mobility.

In addition to organizational changes to improve intra-departmental collaboration, USDOT should view other federal departments, state DOTs, metropolitan planning organizations, and local governments as partners in their efforts to build climate-smart transportation solutions.

IMPROVE COLLABORATION WITH STATES AND MPOS ON CLIMATE CHANGE

ACTION ITEMS

(100+ Days) Organize a meeting as part of, or alongside, the semi-annual NGA meeting(s) (~Feb 2021 and summer 2021) to establish federal-NGA working group on climate change and transportation, and build on past NGA efforts like the *2019-2020 Chair's Initiative, Infrastructure: A Foundation for Success.*

(Year 1) Organize a meeting as part of, or alongside, the annual AMPO meeting (Fall 2021) to establish federal-AMPO working group on climate change and build on past partnerships. Use this meeting to discuss MPOs' opportunities to play larger roles in achieving emission reduction and other climate-related goals.

Most innovation occurs at subnational levels. USDOT should ensure that it is doing everything possible to encourage and enable this work by providing race-to-the-top grant opportunities, guidance, and technical assistance, and by promoting innovative solutions developed at subnational levels. USDOT should engage with organizations like AASHTO (American Association of State Highway Transportation Officials), APTA (Association of Public Transportation Agencies), NGA (National Governors' Association), AMPO (Association of Metropolitan Planning Organizations), and other governmental associations to expand federal-subnational partnership on climate change solutions in the transportation sector. USDOT should actively engage in and organize meetings to discuss and gather input on federal policy and programs. This engagement will be critical as many of these organizations are coordinating responses to the COVID pandemic—for example, around support for transit systems.

(continued)

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EXPAND DIRECT FEDERAL-LOCAL ENGAGEMENT

ACTION ITEMS

(Day 1) Announce intent to establish a permanent Visiting Mayors' Office to serve as a liaison for facilitating federal-local conversations and to help identify "opportunity cities" where USDOT can highlight innovative projects with the ability to transform neighborhoods in ways that improve mobility options, environmental and health outcomes, and equity.

Budget Needs: This office would require 3-5 FTEs. The positions are currently unfunded and would need to be included in FY2021 Omnibus or FY2022 budget request.

(100 Days) Convene leading cities to highlight model efforts within the first 100 days, perhaps alongside the U.S. Conference of Mayors' Winter Meeting (January 2021; likely immediately following inauguration) or as part of the BUILD grant criteria announcement.

Local governments, with elected leaders as champions, have proven to be innovators in many examples of climate-smart transportation and urban development solutions. Prior to the offering of TIGER grants, USDOT had little direct involvement with mayors and local governments because in most cases, the state served as a go-between. New leadership at USDOT should signal from the beginning that there will be more direct federal-local engagement as well as more encouragement for local jurisdictions to innovate.

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4 Federal Transportation Funding Reform (Legislative Engagement)

One of the most effective ways to reduce emissions from the transportation sector and prepare for climate impacts will be by updating federal funding programs and requirements. However, as most of the funding that USDOT administers is simply passed through to states and metropolitan planning organizations, there is little USDOT can do to change how that funding is used unless changes are made to the authorized programs. If, in the early days of a new administration, USDOT is operating on an extension of the FAST Act, USDOT should capitalize on opportunities to make recommendations and work with Congress in **Year One** to deliver surface transportation reauthorization legislation that fundamentally alters how transportation funding is administered, as congressional staff will often work from proposals put forth by USDOT. The USDOT Climate Council should play a key role in this effort, with oversight from USDOT's Government Affairs Office and the Office of the Under Secretary for Policy.

USDOT can advocate for federal transportation programs that help further climate-related goals by focusing on several key opportunities for reform in the next transportation authorization:

- **Prioritize state of good repair:** Proactive maintenance to ensure state of good repair should be a baseline requirement for recipients of transportation formula funding and a threshold to qualify for competitive grant programs. This policy could help ensure that unnecessary investments in new infrastructure (which can lead to more VMT and greater congestion) are minimized, and would have the added benefit of creating long-term jobs in operations and maintenance. Currently, some federal transit funding programs condition funding for new construction on a proven ability to maintain existing assets, whereas funding for new road construction does not require showing an ability to maintain existing assets. Adding to this challenge, operations and maintenance costs for transit agencies are ineligible under certain federal transportation funding programs. There may be a window of opportunity to promote this shift, as funding for road maintenance and repair creates more jobs per dollar of investment than new road construction.

- **Incentivize state policy that reduces vehicle miles traveled (VMT):** Currently, there is a linkage between federal funding dispersals and VMT, which disincentivizes state and regional policies that target VMT reduction as a way to reduce congestion and greenhouse gas emissions. This should be flipped in transportation funding by linking funding to VMT-related performance measures, so that states and localities working to reduce overall VMT receive more federal funding as an incentive. Reducing VMT is an essential strategy to achieve emissions reductions, alongside low-carbon fuels and more efficient vehicle technology.

- **Administer funding in a modally-agnostic manner:** Our current programs prioritize highway funding too strongly—and the modal administrations are unnecessarily siloed. Ideally, surface transportation formula funding could be administered through a single formula administration that encompasses all surface transportation modes to achieve more transit-focused and multimodal projects that improve intermodal connectivity.

- **Focus on outcomes (jobs, equity, environment, health, etc.):** Performance measures should be updated to focus on broader desired outcomes of transportation investments (e.g., incorporating inclusive planning and equity considerations, health, environment, access to jobs and creation of new employment opportunities, etc.). Additionally, competitive grant programs that emphasize innovation must also emphasize *outcomes* to ensure they achieve multiple benefits and an equitable distribution of benefits. Grant criteria and metrics should also be developed to ensure positive social, economic, and environmental outcomes in these areas.

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- **Ensure USDOT has adequate funding to oversee programs:** Any new or expanded grant programs, such as climate-focused competitive grants, should come with adequate administrative funding for USDOT to ensure that the program is implemented and overseen effectively.
- **Address legal barriers to climate-smart transportation:** Existing legal barriers hindering the development or scaling-up of low-carbon and resilient transportation infrastructure should be identified early and addressed in legislation. For example, one such barrier is the prohibition on commercial activity in the interstate right-of-way. A narrow legislative change could help to allow for innovations such as roadway solar power generation or the siting of EV charging stations along remote highway corridors with no commercial businesses (for example, in the inter-mountain west states).
- **Provide funding for research as a standalone administration:** USDOT's research arm lost autonomy when it was placed within the Office of the Secretary, and the funding that Congress designates for research sometimes gets repurposed for other offices within OST. In a new transportation authorization, research should again be separated out as its own administration within USDOT to ensure that research program dollars are spent as intended, including with an explicit focus on advancing climate-smart transportation solutions and partnerships.

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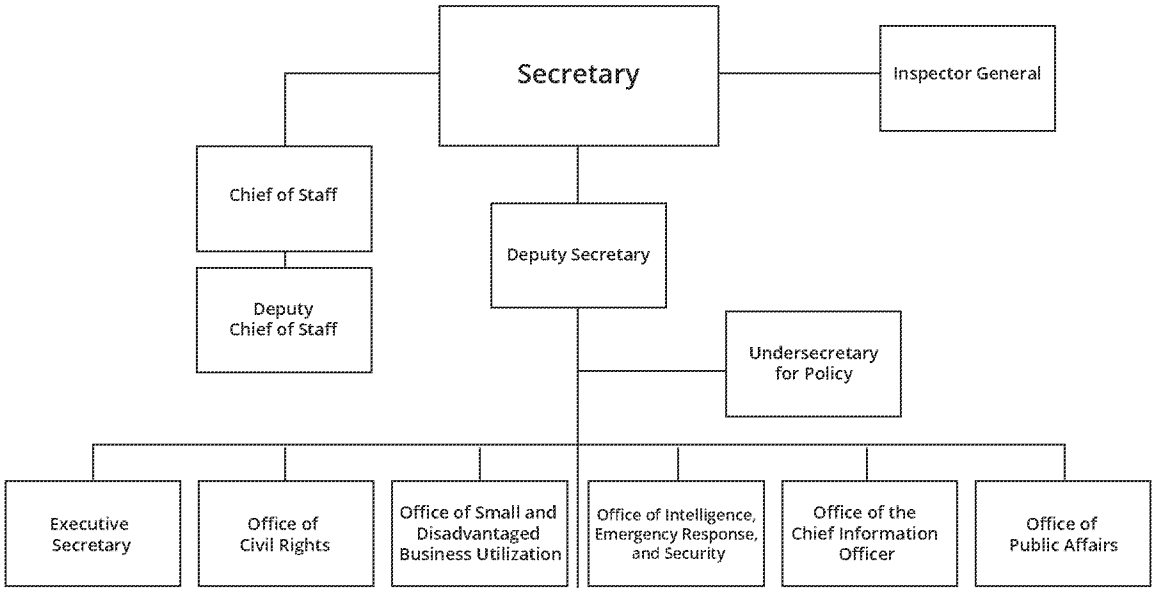
Appendix A: DOT Organization and Budget

USDOT employs almost 55,000 individuals across the country within 9 administrations, the Office of the Secretary (OST), and Office of the Inspector General (OIG). USDOT modal administrations include the Federal Highway Administration (FHWA), National Highway Traffic Safety Administration (NHTSA), the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA), the Pipeline and Hazardous Materials Safety Administration (PHMSA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA), and the Maritime Administration (MARAD). In addition, the Saint Lawrence Seaway Development Corporation is a wholly government-owned corporation for operating the US portion of the St. Lawrence Seaway between Port of Montreal and Lake Erie that is also under DOT jurisdiction.

Department of Transportation



Leadership within OST will be important for establishing departmental priorities on climate change and ensuring that they filter through the modal administrations and to regional and divisional offices across the country. Key offices within OST that will need to be involved in implementing various recommendations included in this memo include:

- **Office of the Under Secretary for Policy** (with key leadership to include the Under Secretary for Policy, who is third in succession at USDOT, the Assistant Secretary for Transportation Policy, and the Chief Infrastructure Funding Officer)
- **Office of Budget and Financial Management** (with key leadership to include the Assistant Secretary for Budget and Programs, Deputy Chief Financial Officer, Director of the Office of Credit Oversight and Risk Management)
- **Office of the General Counsel** (with key leadership to include the USDOT General Counsel and Chief Counsels of the modal administrations)
- **Office of Government Affairs** (with key leadership to include the Deputy Assistant Secretary for Government Affairs–Congressional and Deputy Assistant. Secretary for Government Affairs–Intergovernmental)
- **Office of Research and Technology** (with key leadership to include the Assistant Secretary for Research and Technology and the Deputy Assistant Secretary for Research and Technology)

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Budget Overview Department of Transportation FY2020 enacted funding $86 billion

Major modal components	Amount (bn)
Federal Aviation Administratrion (FAA)	17.6
Federal Highway Administration (FHA)	16.7
Federal Transit Administration (FTA)	12.9
Federal Railroad Administration (FRA)	2.8
Maritime Administration (MA)	1.0
National Highway Traffic Safety Administration (NHTSA)	1.0
Federal Motor Carrier Safety Administration (FMCSA)	0.7
Pipeline and Hazardous Materials Safety	0.3
Total	**53.0**

Major grants and programs	Component	Amount (mn)
Amtrak	FRA	2,000
Capital Investment Grants	FTA	2,000
Highway Infrastructure Programs	FHA	1,100
BUILD (aka Tiger)	BAB	1,000
Transit Infrastructure Grants	FTA	510
Port Infrastructure Development Program	MA	225
Environmental Sustainability	FAA	47
Highly Automated Systems Safety Center of Excellence	TBD	5
Transportation resilience metrics	TBD	1
Total		**6,888**

Major grants and programs	Component	Program loan limit amount (bn)
Transportation Infrastructure Finance and Innovation Act (TIFIA)	BAB	NA
Railroad Rehabilitation & Improvement Financing (RRIF)	BAB	35
Private Activity Bonds	BAB	15
Total		**50**

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Appendix B: High-Level Timeline*

DAY 1

- **Vehicle efficiency standards (EOP Action).** Announce intent to undo regulatory rollbacks and announce the administration's priorities for vehicle standards
- **DOT Climate Council.** Announce Secretary-chaired climate council includes all modes and initial agenda:
  - **Climate and economic impacts funding review.** Announce plan to measure and prioritize reduced emissions, improved resilience, and access to jobs, services, and goods on DOT funding
  - **Transportation electrification task force.** Announce task force regarding electrification
- **DOT cities office.** Announce mayors' point person to better partner with cities
- **Rebuild morale and staff expertise.** Announce human capital restoration plan

FIRST 100 DAYS (JANUARY 20–APRIL 30)

- **BUILD grants notice.** Announce award notice of funding that includes climate criteria (+60 days from omnibus)
- **States event.** Host major event at National Governors Association annual meetings (Feb. 20)
- **Omnibus FY2021 budget.** Announce wins (e.g., Office of Public Engagement, climate staffing) from FY2021 enacted (March 1)
- **DOT FY2022 budget.** Announce budget priorities (March 10)
  - Increases in key programs BUILD, Amtrak, transit grants, resilience metrics
  - Create ARPA-T
  - Create fleet retirement program
- **MPO event.** Hold or attend high-level MPO event (April 1)
- **Cities event.** Hold or attend high-level city event (April 15)
- **DOT Climate Council report.** Roll out detailed 2021 council agenda (April 30)
- **Transportation electrification task force report.** Roll out report (April 30)

YEAR ONE REMAINDER (MAY 1–DECEMBER 31)

- **Surface transportation re-authorization proposal.** Deliver proposal (Sep. 1)
- **BUILD grants award.** Announce awardees (Oct. 1)
- **GHG performance measurements & reporting.** Present Send GHG performance measure and reporting rule to OMB.
- **FY2022 budget.** Announce budget results upon enactment (Oct. 1-Dec. 31)

**Dates following Day 1 are illustrative.*

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