U.S. Department of Transportation

Office of the Secretary of Transportation

Sustainability Plan

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1. DOT Sustainability Plan Summary

Executive Order (E.O.) 14057 details the President's bold and ambitious vision for the federal government — using a whole of government approach and the power of procurement to achieve net-zero emissions economy-wide by 2050. Critical goals include transitioning to zero emission vehicles (ZEVs) and energy efficient, net-zero emissions buildings, both powered by carbon pollution-free energy sources. To achieve these goals and support the nation's international commitment to reduce greenhouse gases (GHGs), the U.S. Department of Transportation[1] (Department or DOT) will transform its practices and operations—the way we design and operate our buildings, the products and services we acquire, the federal vehicles used for official business, and the way we travel to work every day. DOT will deploy novel technology and business processes in the service of our mission, while delivering improvements to exceed the ambitious goals in E.O. 14057.

2. Priority Actions Towards Goals

A. 100 Percent Carbon Pollution-Free Electricity

DOT seeks to generate and purchase Carbon Pollution-Free Electricity (CFE) that reduces costs and improves operational resiliency at its facilities. DOT will increase its use of CFE through performance contracts for onsite renewable energy installations, power purchase agreements, and offsite electricity supply arrangements. In 2021, DOT consumed over 120,000 megawatt hours (MWH) of CFE. DOT projects 15 percent CFE consumption in FY 2022 and will be poised to achieve 100 percent CFE by 2030. Priority actions in FY 2022 and FY 2023 include:

- Quantify emissions from purchased electricity by e-GRID region to prioritize locations for CFE purchase and onsite installation.
- Prioritize locations for CFE purchases based on CFE offerings from the local utility.
- Participate in General Services Administration (GSA) area-wide contracts or power purchase agreements to transition to at least 30 percent CFE by end of 2023.
- Utilize an existing energy performance contract or other mechanism to perform a feasibility study to develop new onsite CFE generation and energy storage in 2022.

B. 100 Percent Zero Emission Vehicle Fleet

Given its mission, the Department has the opportunity and matching obligation to invest in ZEVs to create a federal fleet that does not emit any GHGs. By immediately prioritizing the transition to ZEVs, along with strategies to optimize fleet composition and replace larger vehicles with smaller ones, the Department has built the platform to achieve 100 percent light duty ZEV acquisitions by 2027 and 100 percent ZEV acquisitions by 2035. Priority actions include:

- Procure 242 EVSE charging ports to install by end of 2022 and ready field locations for Electric Vehicles (EVs).
- Convert 31 percent of new light duty vehicle acquisitions to ZEVs in FY 2023 with a goal to convert 40 percent of new light duty vehicles in FY 2024.

[1] The U.S. Department of Transportation consists of the following internal organizations:

- Federal Aviation Administration (FAA)
- Federal Highway Administration (FHWA)
- Federal Motor Carrier Safety Administration (FMCSA)
- Federal Railroad Administration (FRA)
- Federal Transit Administration (FTA)
- Maritime Administration (MARAD)
- National Highway Traffic Safety Administration (NHTSA)
- Pipeline and Hazardous Materials Safety Administration (PHMSA)
- Great Lakes St Lawrence Seaway Development Corporation (GLS)
- Office of the Secretary of Transportation (OST)
- Office of the Inspector General (OIG)

- Develop a strategic EV transformation plan using iterative multi-year planning to reflect the latest key information regarding mission requirements, vehicle model availability, and relevant costs.

C. Net-Zero Emissions Buildings, Campuses, and Installations

i. Design and Construct for Net-Zero Emissions

The Department will work across new building construction, major renovations, and existing real property to electrify systems, decrease energy use, reduce water consumption, and cut waste, using performance contracting (PC) where feasible. Priority actions include:

- Require that all new construction and major modernization projects larger than 25,000 gross square feet (GSF) entering the planning stage in 2022 be designed, constructed, and operated to be net-zero emissions by 2030, and where feasible, net-zero water and waste.
- Track all new construction and major modernization projects to ensure these facilities meet the Guiding Principles for Sustainable Federal Buildings and net-zero emissions (for facilities greater than 25,000 GSF), where practicable.
- Develop a net-zero action plan for at least one, energy intensive DOT campus over 25,000 GSF by the end of FY 2023.

ii. Increasing Energy Efficiency

DOT is committed to increasing energy efficiency at its facilities. DOT develops policy orders, measures energy management performance, and is taking other actions to reduce energy use at its facilities. In 2021, the Department reduced energy use intensity at its facilities by 42 percent from a 2003 baseline. DOT projects a 45 percent reduction in energy use intensity in FY 2022. Priority actions in FY 2022 and FY 2023 include:

- Expand and enhance energy monitoring systems at large campuses and across the National Airspace System, including installation of 41 sub-meters and the integration of a new software system for monitoring and analyzing data.
- Launch a Sustainable Air Traffic Control Tower Design competition to stimulate creativity and innovation while advancing energy efficiency and resiliency.
- Evaluate covered facilities to implement energy conservation measures using PCs .
- Develop framework for an ISO 50001-based Energy Management System.
- Identify operations and maintenance (O&M) best practices for operational efficiency and control of equipment.

iii. Increasing Water Efficiency

DOT is committed to increasing water efficiency at its facilities. By following a water balance methodology to guide conservation strategies, the agency will better understand its water use, refine and update its metering strategies and water conservation plans, and reduce its water footprint. In 2021, the Department reduced potable water use intensity at its facilities by 28 percent from a 2007 baseline. DOT projects a 30 percent reduction in water use intensity in FY 2022. Priority actions in FY 2022 and FY 2023 include:

- Complete final design of a project to install water meters and sub-meters to improve data availability at a major FHWA research center.
- Evaluate opportunities to be net-zero and/or water positive (replenishing water beyond the amount used in operations).
- Identify O&M best practices for operational efficiency and control of equipment.

D. Reducing Waste and Pollution

In FY 2021, the Department diverted 61 percent of non-hazardous municipal solid waste from landfills. By implementing management strategies that emphasize source reduction, reuse, recycling, and composting, the DOT is holistically reducing waste sent to landfills and is positioned to achieve 75 percent diversion across the Department by 2030. Additionally, the Department is advancing efforts to minimizing the acquisition and use of toxic chemicals and materials. Priority actions include:

- Divert waste from landfills by entering recycling contracts at some of the largest facilities and leverage telework opportunities to reduce waste generation at facilities.
- Reduce and/or divert construction and demolition waste material and reuse existing building materials, to decrease need for carbon-intensive manufacturing and transport of new building materials.
- Increase diversion of organic waste through composting, when cost effective.

E. Sustainable Procurement

In FY 2021, the Department purchased over $1.2 billion in environmentally friendly goods and services; DOT is planning to do even more. By launching key policies and pilot programs, DOT will continue to leverage the power of procurement to reduce climate-related risk and promote environmental stewardship. Priority actions include:

- Initiate a Low Carbon Procurement Pilot program to increase the acquisition of goods with environmental product declarations (EPDs) to support GHG reduction goals.
- Update acquisition management system and guidance documents in FY 2023 to include the latest resiliency clauses, as well as sustainability and environmental justice requirements and provide training to relevant personnel.
- Complete a per- and polyfluoroalkyl substance (PFAS) product inventory in 2022 to establish a baseline and develop strategies to phase out the purchase of PFAS-containing products and identify replacements.
- Increase acquisition of products and services that meet all federal requirements and designations, including Environmental Protection Agency (EPA) Energy Star-certified, Department of Energy (DOE) Federal Energy Management Program (FEMP)-designated, WaterSense-certified, Safer Choice labeled, Significant New Alternative Policy (SNAP) substances, and products made with post-consumer waste products.

F. Climate- and Sustainability-Focused Federal Workforce

Transportation is intrinsically linked to the environment and climate. DOT has initiated several efforts to address climate literacy and create a sustainability-focused workforce throughout the Department. The newly re-instituted and expanded DOT Climate Change Center provides an opportunity for staff to foster a culture of knowledge and practice on climate change—through information sharing and bi-weekly meetings that include guest speakers from other federal agencies, the academic community, non-profits, and others. Priority actions include:

- Integrate standard language for use in performance plans for staff engaged in climate change activities across the Department.
- Work with the National Oceanic and Atmospheric Administration (NOAA) to develop climate education materials and training for all DOT employees and for DOT stakeholders.

- Update four sustainability-focused and three environmental management-focused training courses on the Federal Aviation Administration (FAA) electronic learning management system.
- Hire new staff members with subject matter expertise in in clean energy, ZEVs, zero emission frontline workforce needs, environmental policy, and climate resiliency and sustainability, and provide related training opportunities for current staff.

G. Incorporating Environmental Justice

By advancing equity, DOT is working to ensure that all can benefit from climate solutions while diminishing the climate burden that some communities endure. For example, when making new building investments, the Department considers the potential impacts of siting decisions on disadvantaged communities and the environment. Where applicable, DOT prioritizes sites that offer robust transportation options, including walking, biking, and transit, while minimizing GHG emissions and impacts on disadvantaged communities. Consistent with the release of the Department's Equity Action Plan, priority actions include:

- The DOT Equity Task Force has established a workstream dedicated to delivering 40 percent of the overall benefits of Department-wide investments to disadvantaged communities in alignment with the Justice40 initiative.
- The Federal Transit Administration is currently developing an Environmental Justice Standard Operating Procedure (SOP) for staff who manage the environmental review process. The SOP is expected to be completed in FY 2023.
- The Pipeline and Hazardous Materials Safety Administration (PHMSA) is updating its existing Environmental Justice policy from 2012 to align with current goals and priorities, with target completion in FY 2023.

H. Accelerating Progress through Partnerships

The Department actively participates in inter- and intra-agency and public-private working groups and partnerships to accelerate progress and catalyze greater action towards federal sustainability goals. DOT will build on a strong track record of partnering with private energy service companies to implement energy conservation measures and foster additional partnerships to catalyze progress towards sustainability goals. Priority actions include:

- Partner with utility companies to complete multiple audits in 2022 and pursue UESC projects that include onsite renewable energy where feasible.
- Complete implementation of awarded UESC contracts to improve energy and water efficiency across DOT facilities.
- Launch and complete climate challenges across all DOT modes to develop public-private partnerships that accelerate progress towards net-zero transportation emissions.

3. Progress Examples

DOT Volpe Center

Through a unique public-private partnership, the DOT Volpe Center will move to a new state-of-the-art, green facility on four acres within the current Volpe site parcel in Fall 2023. The new Volpe facility is projected to achieve Leadership in Energy and Environmental Design (LEED) Gold v.4 certification. Oriented to maximize energy and water efficiency, the new federal building will include sustainable features such as: a building envelope designed for solar performance (i.e., exterior solar shade devices and triple-paned glass), an advanced building automation system to optimize the building's energy use, roof-mounted solar panels and heat

recovery chillers, electric vehicle charging stations, a rainwater reclamation and reuse system, and a stormwater management system. DOT is also evaluating operational aspects such as cafeteria operations and waste management to maximize opportunities to enhance sustainability and reduce Volpe's climate footprint.

Climate Vulnerability Assessments of Mission-critical Facilities and Assets
DOT is developing a Climate Hazard Exposure and Risk tool to support vulnerability assessments for mission-critical facilities and assets across the Department. The tool calculates overall risk scores by combining site-specific historical climate exposure data, projected future climate exposure based on downscaled global climate models, and user vulnerability ratings for critical systems. In 2022, DOT will complete assessments for top priority mission-critical facilities using this new Climate Hazard Exposure and Risk tool. The resulting risk scores will inform prioritization of adaptation projects in 2023-2025 to strengthen climate resilience and reduce risk across DOT operations and infrastructure.

Sustainable Procurement
DOT has launched a Low Carbon Procurement Pilot program to increase awareness and accelerate acquisition of climate-ready materials and services. The pilot targets four GSA product service codes covering construction materials and furniture, providing guidance to acquisition workforce members for incorporating embodied carbon criteria into standard procurement actions. The pilot began in June 2022 and will establish the foundation for a permanent Buy Clean Program that will support the reduction of operational GHG emissions and potentially incentivize a shift in the broader building materials and products market.

FAA Onsite Carbon Pollution Free Electricity Generation
The FAA is leading by example to generate significant quantities of onsite CFE which supports the Department's transition to 100 percent CFE. For example, in FY 2022, FAA installed photovoltaic panels, commonly called solar panels, (totaling 706 kW) at multiple facilities in Hawaii and Guam using an energy savings performance contract (ESPC) and began to plan and design for a 760 kW solar panel farm in the Boston area, using a UESC. The FAA will complete construction of a 1.5 MW solar panel farm at the Mike Monroney Aeronautical Center (MMAC) in Oklahoma City in FY 2023, with a second 1.5 MW farm scheduled for completion in FY 2024.

Zero Emissions Vehicle Fleet – Charging Infrastructure
DOT is aggressively working to build out EV charging infrastructure to support the Department's goal to transition to ZEVs ahead of the 2027 acquisitions requirement for light-duty vehicles, and the 2035 requirement for all vehicles. Across the Department, Operating Administrations (OAs) are initiating projects to install at least 800 EV charging ports for fleet vehicles over the next 1-2 years. These efforts will also support reductions of scope 3 DOT emissions from employee commuting by permitting use of the vehicle chargers for privately owned vehicles (POVs), in accordance with federal regulations. For example, the Maritime Administration has established a POV charging policy with standard methods for cost recovery and a quick start guide with clear guidelines for employee use.