

## **GREENDOT**

**Policy summary:** GreenDOT is the Massachusetts Department of Transportation’s sustainability initiative, announced through a Policy Directive in June 2010 by the Secretary of Transportation. The Commonwealth’s consultants, Cambridge Systematics, Inc., estimated that, if fully implemented, GreenDOT could achieve 2.1 million tons of GHG reductions in 2020 and the Secretary’s Directive adopts this level as its target.

GreenDOT is intended to fulfill the requirements of several state laws, regulations, Executive Orders, and MassDOT policies, including the Global Warming Solutions Act, the Green Communities Act, the Healthy Transportation Compact, and the “Leading by Example” Executive Order Number 484 by Governor Patrick. MassDOT will work closely with DEP and the Advisory Group in determining the best regulatory and guidance framework for achieving the goals set forth in the Policy. GreenDOT is focused on three related goals: reduce GHG emissions; promote the healthy transportation modes of walking, bicycling, and public transit; and support for smart growth development.

GreenDOT encompasses a number of different program areas, which are described briefly below: statewide and regional long-range transportation planning, transportation project prioritization and selection, “complete streets” design guidelines, rail transportation, bicycle and pedestrian transportation, promotion of eco-driving, sustainable design and construction, system operations, facilities management, and travel demand management.

**Transportation long-range planning and project prioritization and selection:** Long-range planning documents, including statewide planning documents (e.g. the Strategic Plan, State Freight Plan, and MassDOT Capital Investment Plan), as well as the long-range Regional Transportation Plans from the Metropolitan Planning Organizations (MPO), must address MassDOT’s three sustainability goals and plan for reducing GHG emissions over time. Similarly, the shorter-range regional and state Transportation Improvement Programs (TIPs and STIP), under which particular projects are chosen for funding in the coming four years, must be consistent with the Commonwealth’s GHG reduction target. This will require that the MPOs and MassDOT balance highway system expansion projects with other projects that support smart growth development and promote public transit, walking and bicycling. In addition, the project programming mix included in the RTPs, TIPs and STIP can contribute to GHG reduction through prioritizing roadway projects that enable improved system operational efficiency, without expanding overall roadway system capacity.

Over the long term, both long-range planning and project selection will affect where new development in the Commonwealth is located and how that development is spatially configured. These choices affect the degree to which future development represents “smart growth,” or clustered development patterns that facilitate walking, bicycling, riding public transit and driving shorter distances, which would minimize the number of motor vehicle miles that people must travel in order to go about their lives.

**Project design and construction:** The MassDOT Highway Division Project Development and Design Guide requires that all projects must adhere to a “complete streets” design approach, meaning that new and redesigned roads must provide appropriate accommodation for all users,

including pedestrians, bicyclists, and public transit riders. These modes of transportation will also be promoted by several other means. These include taking steps to see that more projects move forward through the Transportation Enhancements Program, extending the Bay State Greenway, improving accommodations for bicycles and pedestrians on bridges, and improving bicycle parking facilities at MBTA stations.

Several efforts will continue to improve rail transportation in the state. The MBTA is striving to both improve service on existing subway and commuter rail lines and to develop new service, such as the Green Line Extension and the South Coast Rail Project. Other projects will improve long-distance rail service for both passengers and freight.

MassDOT project design and construction will also reduce GHG impacts through such measures as the use of recycled content in paving materials, use of warm mix asphalt paving, implementation of stormwater remediation and use of best management practices, requirements for diesel engine retrofits for construction contractor vehicles, and other measures.

**Travel demand management and travel information:** MassDOT will continue to promote and deliver travel demand management (TDM) information and services, including ride-matching, traveler information, real-time bus tracking, and other measures for the general public and among MassDOT employees. MassDOT is currently working to implement a new ride-matching/trip planning system to facilitate carpooling, vanpooling, and mode shifting from automobile travel.

**Eco-driving:** Fuel efficiency can be improved greatly by maintaining vehicles properly, driving within the speed limit, and accelerating more gently. The EPA estimates that “smart driving” can improve fuel efficiency by up to 33 percent, and EcoDriving USA estimates that Massachusetts’ drivers, with 5.4 million registered autos, could save about 4 million tons of CO<sub>2</sub> emissions annually if eco-driving practices were followed. MassDOT will promote eco-driving through: internal education for staff and contractors; external education of all Commonwealth drivers through website content, RMV manual and testing content, signage, and brochures; and development of a plan to improve tire inflation infrastructure.

**System Operations:** MassDOT, along with the MBTA and other regional transit authorities, will take a variety of steps to minimize fuel use and GHG emissions from vehicles and facilities. This includes retrofitting diesel buses with emission control devices, truck stop electrification, using solar and wind power at MassDOT facilities and rights-of-way, improving energy efficiency in MassDOT facilities, and increasing the share of low-emission transit vehicles in the MBTA fleet.

MassDOT will also facilitate more efficient roadway system operations; improvements that can reduce GHG emissions by reducing congestion and time spent idling in traffic. MassDOT will do this through the effective management of roadway capacity, using intelligent transportation systems - which may include such measures as real-time traveler information and management of traffic flow through improved traffic signal operations - ramp metering, and variable speed limits. MassDOT will also continue to address roadway system “bottlenecks,” or points of localized capacity constraints, improvements that can reduce GHG emissions when traffic flow is improved without expanding overall system capacity.