



DRAFT

Vision for Sustainable Greater Boston 2050

Transportation

In the year 2050 the Boston metropolitan region has become a leading cultural and economic capital, famous for its environmental leadership. New land-use and transport practices are the great hallmarks of this new beacon of sustainability. Coupled with new attitudes about quality of life, the work/leisure balance, and greater involvement in local cultural and social activities, personal travel has been reduced by 20%. Consistent with the MA Climate Action Plan and the Regional Greenhouse Gas Initiative (RGGI), GHG emissions from transportation in the region have been reduced by 75% since 2000. The coalition of local governments established in the early part of the century developed and implemented a mix of policies aimed at rebuilding infrastructure, decreasing car use, increasing public transit and other alternative modes of transportation, and stimulating citizens to live close to work, school, and recreation. As a result, the share of passenger miles traveled in private vehicles has dropped from over 90% to less than 60%.

Citizens are predominantly living and working near public transportation hubs. Public transportation is attractive because of its high speed, frequency, comfort, and affordability. This has reversed the decline in transit use the region experienced in the latter years of the 20th century. Public transportation use is now routinely encouraged: many employers offer free or reduced cost transit passes as a benefit, and a high fraction of offices and workplaces are situated near transportation hubs. Easy access to transit stations is provided by an extensive MBTA car-sharing program, as well as pick-up shuttle services using electric vehicles, underground parking spaces near stations, and high quality provisions for bicycle storage.

Transit includes a number of modes: “bus rapid transit,” rail, light rail, car-sharing, taxis, and ferry services. People drive less as walking, cycling, shared taxis, and high-speed transit have become easy, attractive, quick, comfortable, and less expensive than driving and parking, especially in Boston proper and the inner core communities. All public fleets and most private cars are two to three times as efficient as in 2000 (e.g., hybrids or hydrogen powered from renewables or natural gas). Significant investments have been made in carbon sequestration projects within the region and outside it to considerably reduce net greenhouse gas emissions. Electric and fuel cell bicycles are common to help overcome adverse cycling conditions; bicycle lanes are common on most major roads. New technologies for personal rapid transit (e.g., on fixed guideways) provide transportation for individual users.

Major highways (93, 95, 90, 1) are redesigned to accommodate bus-rapid transit (BRT), high-occupancy vehicles, and (electric) bicycles and scooters. One lane on either side is dedicated to BRT and high-occupancy cars only. Their use is stimulated by time-and place dependant

congestion pricing. Some transit nodal points are attractively situated close to highways in order to facilitate easy access.

A large part of downtown Boston is closed for individual cars except certain categories (high-occupancy, all-electric or hydrogen vehicles, as well as electric multi-occupancy taxis). In this area public transit is free; bicycle facilities are readily available (lanes, storage facilities, and an internet-based short-term renting system); and the long-needed rail link between North and South Stations is in place. The traffic light system has been modernized to promote pedestrian and bicycle use and safety. In a significant part of the city private cars pay a congestion fee (similar to that in London) according to size and type of propulsion, thus discouraging use of large vehicles (SUVs) and non-zero-emission cars.

The quality of schools near public transportation hubs is very high due to new financing schemes (de-linking from local property tax), including vehicle insurance programs based on fuel type, size of vehicle, and efficiency. High-quality recreation and sports facilities are situated close to schools, thus reducing transportation requirements. Transportation needs are further reduced by extensive tele-commuting and increased tele-shopping (or “e-shopping”) with alternative fueled vehicle fleets for goods delivery.

From an institutional perspective, public-private partnerships have realized innovative solutions by experimenting with new technologies. By including universities and technical institutes in research and development, new private high-tech enterprises developing innovative mobility solutions are thriving. Advanced information and communications technology (ICT) is widely used for road pricing, congestion pricing, fare payment, trip reservation, information and communication services, tele-working and tele-shopping, combining trips, and vehicles sharing. These organizations and businesses are an important component of a thriving regional economy.

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