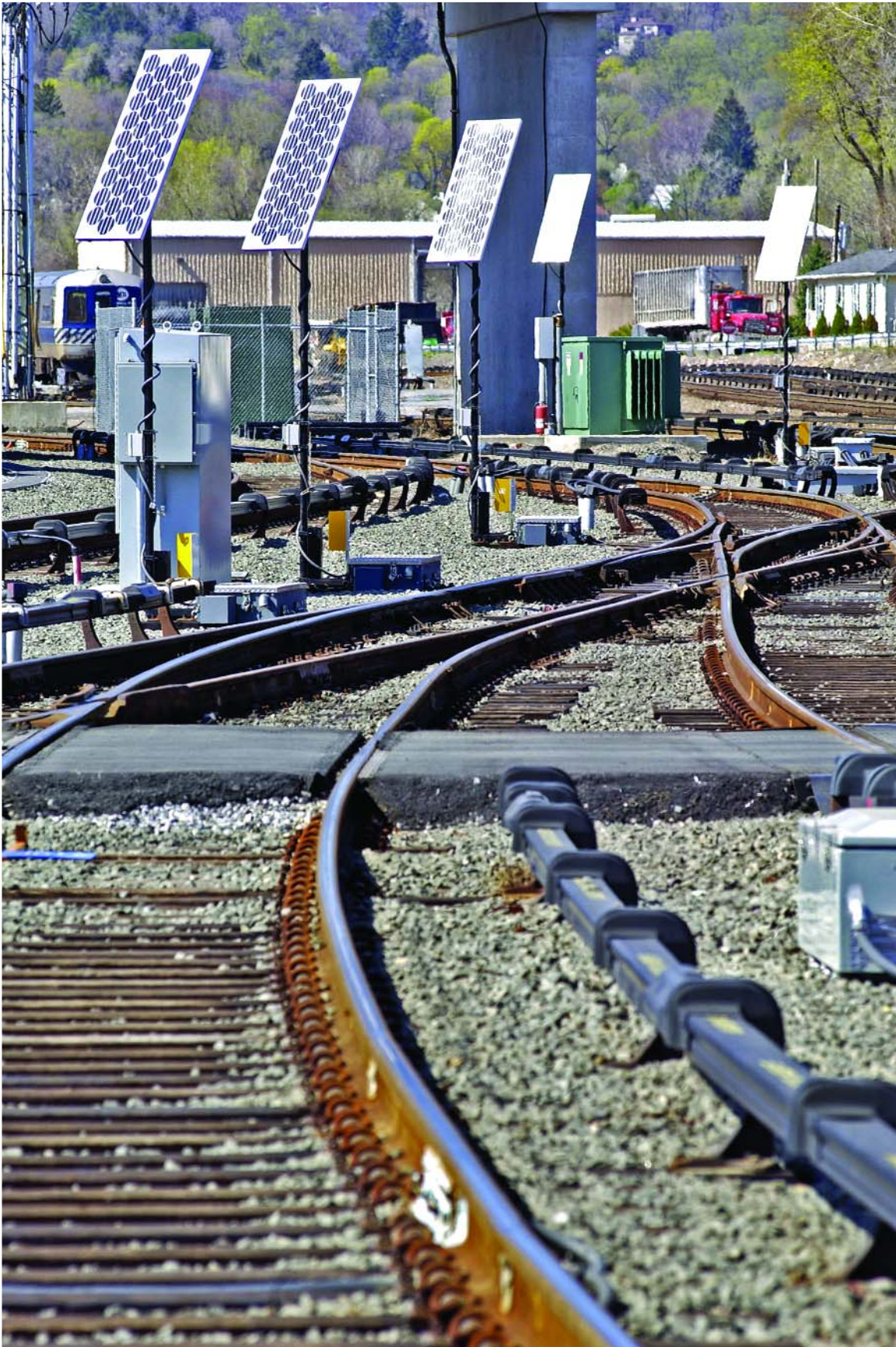
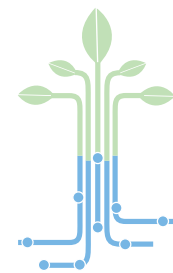




Greening Mass Transit & Metro Regions:

A Synopsis of the Final Report
of the Blue Ribbon Commission
on Sustainability and the MTA



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The draft of the report, due for publication in February 2009, is available at www.mta.info/environment



Solar Roof, Roosevelt Avenue Station, MTA New York City Transit

The Blue Ribbon Commission on Sustainability and the MTA

Appointed in September 2007 by MTA Executive Director and CEO Elliot G. Sander, the Commission is charged with developing sustainability-related recommendations for the MTA and its operating agencies. The recommendations aim to expand the “greening power of transit” to more riders and communities, while managing and reducing the MTA’s per-rider energy consumption and environmental footprint. To develop the plan, the 22 commissioners divided into Working Groups covering key areas of sustainability planning: Energy/Carbon; Facilities; Smart-growth/TOD; Materials Flow; and Water Management. In addition to the commissioners, each group worked with designated MTA staff, research consultants, and pro bono experts. The report also examines cost-savings through green initiatives, adaptation strategies for climate change, and legislative priorities. The report contains nearly 100 recommendations in all, with about 20 that are transformational, 40 near-term, and about 30 that require legislative and/or policy action by decision makers at the federal, state, and local levels.

Commission Chair

Jonathan F.P. Rose, president, Jonathan Rose Companies. Jonathan F.P. Rose’s business, not-for-profit and public policy work focuses on integrating transportation, housing, environmental, and open space policies to create healthy, equitable metropolitan regions. Mr. Rose’s firm currently manages over \$1.5 billion of projects creating models of green urban solutions. Mr. Rose serves on a number of boards, including the Enterprise Foundation, the Urban Land Institute, and the Natural Resources Defense Council.

Commissioners

Rohit T. Aggarwala, director, New York City Office of Long-Term Planning and Sustainability

Julie Belaga, co-chair, Connecticut League of Conservation Voters

Marcia Bystryn, president, New York League of Conservation Voters

Peter A. Cannito, former president, MTA Metro-North Railroad

Cecil Corbin-Mark, director of programs, WE ACT for Environmental Justice

Robert F. Fox, Jr., partner, Cook+Fox Architects

Anna-Marie Francello, executive director and CPA, Union Bank of Switzerland (UBS)

Emil H. Frankel, director of transportation policy, Bipartisan Policy Center

Ashok Gupta, air and energy program director, Natural Resources Defense Council

Sarah Lansdale, executive director, Sustainable Long Island

Kevin Law, chairman, The Long Island Power Authority

Emily Lloyd, former commissioner, New York City Department of Environmental Protection

Thomas Maher, director of environmental coordination, Nassau County

Alex Matthiessen, Hudson Riverkeeper and president, Riverkeeper

Susan Metzger, board of directors, The Metropolitan Transportation Authority

Janette Sadik-Khan, commissioner, New York City Department of Transportation

Nancy Shevell, board of directors, The Metropolitan Transportation Authority

Joseph J. Smith, senior vice president, New York City Transit Department of Buses and president, MTA Bus Company and Long Island Bus

Ned Sullivan, president, Scenic Hudson

Michael E. White, executive director, Long Island Regional Planning Board

Robert D. Yaro, president, The Regional Plan Association

The MTA staff assigned to support the Commission included: Ernest Tollerson, MTA Director, Policy and Media Relations; Projjal Dutta, Director, Sustainability Initiatives; Peter Bass Director, Agency-Wide Environmental Policy and Compliance; and other members of the Policy Group. A complete list of the MTA staff and agency staff, and pro bono experts can be found on the acknowledgements page at the end of this report.

Why We Must Accelerate the Greening of the MTA

Robert D. Yaro, President, The Regional Plan Association

This report calls for a green transformation and expansion of the MTA system, North America's largest mass transit network. The recommendations in this report represent the most ambitious "greening" of a regional transit system ever undertaken and the most significant enhancement of the MTA system in half a century. Among its many transformational initiatives, the report calls for the MTA to draw 80 percent of its total operating energy from clean, renewable energy sources by 2050. At the same time, it urges a significant expansion of regional transit access. It argues, in no uncertain terms, that the MTA transit system must reach and absorb two-thirds of the New York metropolitan area's projected growth of 4 million people between now and 2030 if we are to achieve sustainability, create more livable communities, and maintain our global economic dominance¹.

The report contains scores of recommendations in a number of key areas of sustainability planning. In preparing these initiatives, every effort was made to address the economic realities described in the Ravitch Commission Report² and to demonstrate how greening the MTA system can generate long-term savings and spur economic growth. The Blue Ribbon Commission strongly believes that these initiatives will be necessary to carry our unique, highly productive metropolitan area into the next half century. The proposed policies and strategies will enhance regional mobility, spur productivity, and promote greener, more attractive living environments. They will reduce oil dependency, cut family fuel bills, and limit the CO₂ emissions that contribute to global warming. These recommendations, if adopted, will prepare the MTA and its service area to thrive in the 21st century while dealing with the challenges posed by intense economic competition, severe climate change, and worldwide demand for sustainable energy.

This green transformation heralds the third major era of public transportation's development in the MTA service area. The first era, from 1904 to 1940, saw the initial construction of the urban transportation systems that enabled the New York region to triple its population from 6 million to 18 million residents and to rise to the pinnacle of world economic power. It is well to recall that much of this vital investment followed the Panic of 1908 and continued during the Great Depression of the 1930s, as New Yorkers sustained their confidence in the region's future.

In the second era, from 1980 to the present day, another generation of New Yorkers invested \$76 billion to bring the MTA system back to a state of good repair, after a generation of disinvestment and decay dating back to the 1950s. This renewal and modernization of the MTA system enabled the region's remarkable return from

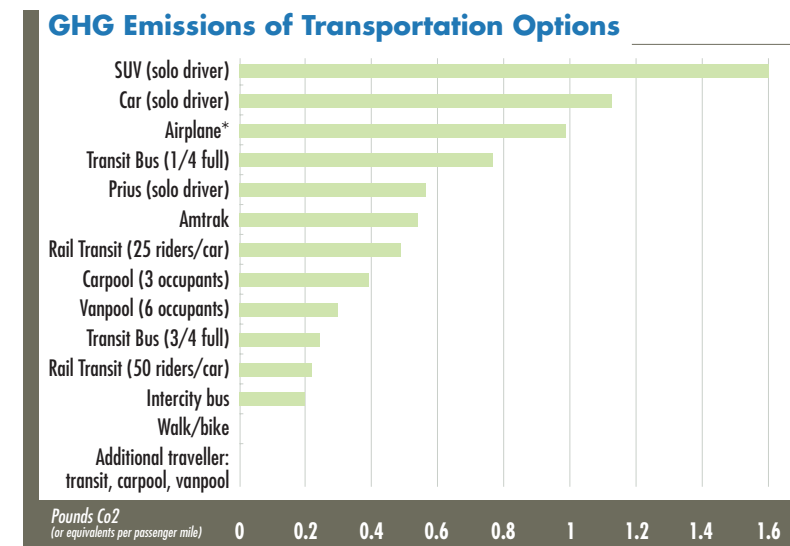
¹MTA projects a growth of 4 million people in its service area by 2030. The Commission recommends that the MTA system capture two-thirds of all new vehicle miles (VMT) added in its service area and that two-thirds of all new development be clustered within a quarter-mile to a half-mile of MTA transit access.

²Governor Paterson appointed the Metropolitan Transportation Authority Financing Commission in June of 2008 and the Final Report was released on December 4, 2008.

the fiscal crisis of the 1970s to a second period of global preeminence. Once again, this public investment in a world-class transit system was sustained despite recessions in the early 1980s and 1990s and the downturn following the terrorist attacks of 2001.

Assuming this report's proposals are carried out, the third era of development in the MTA region will equip the system for a low-carbon future, while expanding capacity to meet the region's growth and mobility needs through 2030. According to current projections, that growth will include some 4 million additional residents, three million new jobs, 1.3 million more daily trips, and a 30 percent increase in the regional economy. By ensuring that an increased share of this growth develops as transit-oriented clusters rather than sprawl, the MTA's expansion will have a significant impact not only on regional productivity, but on our national energy and climate-stabilization goals.

This is an important point. As the Commission has emphasized throughout, the role of a transit system like the MTA in reducing greenhouse gasses is not always fully appreciated. This role takes three forms. First, the mode shift from automobiles to transit ridership dramatically lowers CO₂ emissions on a per-passenger-mile basis. Second, the resulting reduction in road congestion means that the remaining vehicle traffic runs more efficiently, further lowering emissions. Third and most significantly, by enabling clustered development, a transit network shrinks the average mileage between destinations. This reduces vehicle miles traveled overall, while encouraging biking, walking, and greener lifestyles.



Sightline Institute (<http://www.sightline.org/maps/charts/climate-CO2byMode>)

The recommended system enhancements will reduce regional CO₂ emissions throughout the metropolitan region, while expanding the mobility we need to maintain our global leadership in commerce, finance, culture, media, and higher education. The green transformations will mean a major step toward the urgent energy and sustainability priorities recently identified by New York State, New York City, Long Island, the Hudson Valley, and Connecticut, as well as the incoming administration of President-elect Barack Obama. Achieving these transformations will also produce a valuable blueprint for greening transit agencies and other major public entities nationwide. But we must be absolutely clear about the stakes. If the recommendations are not implemented, the MTA system will not have the capacity to sustain the region's projected economic and population growth.

Carbon Avoidance as a 21st Century Revenue Source

By removing some 3 million drivers from the roads each day, the MTA erases more carbon emissions from the atmosphere than 648,000 acres of forest. This "carbon avoidance" benefit of MTA operations is increasingly viewed as a measurable commodity with societal benefits and a market value. In effect, the MTA provides unreimbursed carbon reduction services for which many industries now claim financial and funding credits.

Should we fail to act now, there is little doubt that much of the projected economic growth will be diverted to those global cities capable of sustaining it, placing New York's leadership at serious risk and undermining the economic potential for future generations. As we issue this report, London, Tokyo, Shanghai, Hong Kong, and other global competitors are launching similar efforts to expand and green their transit systems, in part as a conscious effort to help stimulate economic activity and capital investment during the global recession. The Commission's recommendations are crucial steps towards slowing the potentially dire impacts of climate change. They are also the investments New Yorkers must make now, following the can-do ethic of the city's previous generations, to safeguard and expand an irreplaceable component of our economy and infrastructure during a period of financial adversity.



Clean Air Hybrid Electric Bus, MTA New York City Transit

Why Greening the MTA Makes Economic Sense

David Lewis, Senior VP, National Director, Economics and Financial Services, HDR

The policies and strategies proposed in this report will do more than achieve transit and climate-stabilization targets. They will also have far-reaching implications for the New York metropolitan region's short-term and long-term economic performance. Whether implemented singly or collectively, these recommendations have the potential to generate significant returns on investment, with benefits far outweighing costs.

Equally important, these initiatives augur a new investment and operating philosophy for the MTA, one that will serve as a forward-looking model for other organizations. The reality is that all enterprises today, public and private alike, must begin to account for the real costs of carbon-based technologies and the resulting CO₂ emissions. This is no longer a matter of choice. Governments around the world are ramping up carbon taxes, cap-and-trade systems, and other policies designed to generate market signals that compel enterprises to account for climate and pollution costs as they would for any other investment and operating decision. The initiatives in this report will align the MTA's decision-making and business practices with this rapidly emerging market reality.

The current financial crisis gives these recommendations an even more immediate economic relevance. The crisis is widely viewed as a unique opportunity to frame stimulus actions in a way that will redirect public investment over the long term. Such redirection focuses on three long-standing concerns: climate change; energy security; and infrastructure renewal and expansion. All three of these priorities argue for expanded investment in transit. In other words, a transit system such as the MTA stands dead center at the stimulus sweet spot (see, Deutsche Bank Group, Economic Stimulus: The Case for "Green" Infrastructure, Energy Security and "Green" Jobs, November 2008).

Moreover, the MTA system stands as a model for other metropolitan regions as they adapt to a changing economy—an economy that will pay higher dividends for energy efficiency and dense concentrations of intellectual capital. With a third of all U.S. transit ridership, the MTA region is by far the most transit-oriented area in the country and—not coincidentally—one of the most energy-efficient and economically productive. Of the nation's 100 largest metro regions, it has the lowest transportation carbon emissions per capita. Compared to the average American, residents of the MTA region produce 43 percent less CO₂ emissions and, thanks to the density of high-value services, enjoy a per capita GDP that is 30 percent higher than the average for U.S. metro areas. Similarly, in other U.S. cities, high levels of productivity tend to correlate with high levels of transit service³.

³David Lewis and Fred Lawrence Williams, Policy and Planning as Public Choice: Mass Transit in the United States, Ashgate, 1999.

Rising energy costs and the pricing of CO₂ emissions will only elevate the value of the MTA transit network as a model for other metropolitan areas. To sustain this value and the New York area's leadership role, the MTA must keep pace with the other major global transit systems that are now rapidly modernizing and expanding for economic advantage. The importance of making this investment sooner rather than later should be a common concern of all commuters, businesses, citizens, and local governments that rely on MTA services and shape the context in which the MTA system operates.

A Transit-Based Economy Produces More with Less Energy

The MTA sells some 8.5 million passenger trips daily at twice the energy efficiency of the most advanced hybrid cars. Thanks largely to the MTA's efficiency, New Yorkers are among the world's most productive workers and thriftiest energy users—with a per capita BTU consumption of one quarter of the national average.



Dual-Mode Diesel Train (center), West Side Yard, MTA Long Island Rail Road

Transit's Four Green Economic Impacts

According to the recently published Stern Review⁴, failure to enact deep reductions in greenhouse gasses (GHGs) will result in overall costs from climate change equal to the loss of between 5 percent and 20 percent of global GDP, now and forever. This provides a dramatic example of the deeper connection between environmental sustainability and economic viability. As this Commission's report makes clear, transit helps gains in productivity and sustainability to rise in tandem. An expanding transit system not only lowers carbon emissions, it raises property values. It not only reduces oil consumption, it concentrates high-value services and so forth. Here briefly are four key factors through which transit leverages environmental and economic gains:

1. Avoiding Carbon Emissions: A regional "mode shift" from automobiles to transit yields economic and environmental benefits at many levels. For example, the CO₂ emissions from transit ridership are about one-fifth of those produced by single occupancy automobiles, as measured on a per-passenger-mile basis. Thus, in addition to overall fuel efficiency, the shift from automobiles to transit means an 80 percent rate of "carbon avoidance." Since transportation accounts for nearly 40 percent of GHG emissions in the U.S., the greening of the nation's largest transit system has significant value, both directly and as an infrastructure model for other urban areas. As it continues to quantify its carbon avoidance rates, the MTA will also be well positioned for emerging carbon trade markets and carbon-based funding criteria.

2. Managing Regional Congestion: Transit reduces traffic congestion, which cost the regional economy some \$13 billion in 2007 alone, according to the Partnership for New York City⁵. By improving traffic flow, transit optimizes regional mobility for both passenger and freight sectors. This in turn reduces fuel costs, vehicle operating costs, and the costs associated with traffic accidents. By easing congestion, transit also reduces CO₂ emissions from the remaining auto traffic, resulting in yet another level of "carbon avoidance." Moreover, studies show that in periods of rapid land development and population growth, transit rail systems in highway corridors will absorb and stabilize any related rise in traffic congestion.

3. Optimizing Land Use: Transit enables more clustered residential and commercial development, which brings dramatic economic and sustainability gains. According to a major study by the National Research Council, more compact settlement patterns could save the nation \$540 billion in building and infrastructure costs⁶. Moreover, compact, transit-based development not only reduces automobile travel, it reduces the average miles between destinations for all modes of travel, including automobiles. Thus the land-use patterns generated by transit produce a "virtuous spiral" with an ongoing decline in energy consumption and corresponding rise in carbon avoidance. This is clearly evident in high-density, transit-rich New York City, where per capita energy consumption is now about one quarter the national average.

⁴Nicholas Stern, *The Economics of Climate Change: The Stern Review*, Cambridge University Press, 2006

⁵Partnership for New York City, *Growth or Gridlock*, 2006 (HDR|Decision Economics)

⁶Burchell, Robert, with George Lowenstein, William Dolphin, Catherine Galley, Anthony Down, Samuel Seskin, Katherine Gray Still and Terry Moore, *Costs of Sprawl-2000*,

Transportation Cooperative Research Program, TCRP Report 74, National Academy Press, 2002

4. Generating Higher Values: The value of transit to regional economies will be felt through higher worker mobility, lower energy costs, reduced pressure on public services, and other effects. Significantly, those benefits will also extend beyond direct transit system users to the economy at large. One example is the impact on property values, as demonstrated in numerous studies. A study for the Federal Transit Administration, for example, indicates an increase in residential equity value of about \$160 for every 100 additional feet of transit station proximity⁷. Another study in Washington, D.C. shows that for each 1,000 foot decrease in the distance to a transit rail station, commercial property values increased by \$2.30 per square foot, while the total value for properties averaging 30,500 square feet rose by over \$70,000.

These examples indicate some of the ways in which the Blue Ribbon Commission's recommended enhancements of the MTA system will achieve not only critical environmental goals but economic gains that will help to offset recessionary effects across the region. The report will also begin the important process of quantifying carbon avoidance, implementing lifecycle accounting and other internal steps to prepare the MTA for an emerging low-carbon economy. These include a Sustainability Return on Investment (SROI) model outlined within the chapter on the Transit's Triple Bottom Line later in this report. Such models are already in use at some major organizations and will further prepare the MTA for markets in carbon trading and carbon-based program funding.

From an economist's perspective, the Commission's recommendations could not be more timely. State governments, federal legislators, and the incoming Obama administration all agree that faced with a daunting global recession, a large economic stimulus must be directed toward infrastructure projects with demonstrable economic returns. In addition to the benefits described above, economic data from the MTA's previous capital programs provide a clear record of the stimulatory effects on regional employment and industrial contracts. Initial assessment of the current recommendations indicates a possible yield of 105,500 net new jobs per year, employment income of \$5.1 billion a year, and regional economic output of fully \$17 billion per year for the period from 2010 to 2019. This urgent stimulus priority at the federal level intersects with the equally urgent international commitment to contain global warming, reduce GHGs, and reach a goal of 80 percent renewable energy by 2050. As the Commission's work has made amply clear, the MTA system is one of the few public assets in the United States capable of generating significant, measurable returns on investment in all of these crucial areas.

Green Ideas from the Shop Floor and Frontlines of MTA Agencies

One initiative launched by the Commission was a "Green Ideas" survey sent to the MTA's workforce, which is more than 68,000. A number of these green ideas from employees are highlighted in special boxes within this report.

Top Recommendations for Greening the MTA and the MTA Region

The 22 commissioners divided into Working Groups focusing on key areas of sustainability. Each group consulted MTA staff and pro bono experts, commissioned research studies and produced long-term transformational recommendations and near-term recommendations. The complete set of recommendations are found in each chapter.

Energy/Carbon Working Group: Top Recommendations

- The MTA should draw 80 percent of its energy from renewable sources by 2050. To achieve this, the MTA should join a consortium of public entities to pursue offshore wind farms capable of generating up to 1,500 megawatts of clean energy.
- The MTA should identify Carbon Avoidance as a revenue source to underscore the MTA's role as a provider of climate stabilization services in its region and to establish the value of MTA services under any decarbonization policy (carbon tax, cap-and-trade, post-Kyoto/Copenhagen rules, etc.).
- The MTA should reduce operational energy use and GHG emissions by 25 percent by 2019 (on a per-passenger-mile basis) through energy retrofits, smart fleet technologies, and more.
- The MTA should establish a "green" MetroCard contribution program, through which customers could make voluntary, tax-deductible donations to fund green aspects of sustainable capital and operating projects at the MTA.
- The MTA should field test and implement weight reduction and regenerative braking technologies, as recommended by the Commission's Smart Fleets task force.

Sustainability Contribution Fund Green MetroCard, Ticket and E-ZPass

The MTA is committed to lowering its carbon emissions and reducing its impact on the regional environment. To help expand this public commitment, the MTA is investigating the concept of a "green" MetroCard contribution program. The program would allow the riding public to make voluntary, tax-deductible donations to fund innovative, green aspects of sustainable capital and operating projects at the MTA.



⁷U.S. Department of Transportation, Federal Transit Administration, The Value of Mobility Improvements In Fixed Guideway Transit, May, 2002

Facilities Working Group: Top Recommendations

- The MTA should adopt Leadership in Energy and Environment Design (LEED™) Silver as its standard for all building projects, new construction, and major renovations wherever applicable and either recommission existing buildings or pursue LEED-Existing Buildings: Operations and Maintenance (LEED-EB) where possible.
- For all other transit facilities not covered by LEED Silver standards, the MTA should develop MTA Green Design Guidelines, based on the LEED system.
- The MTA should develop a green Lifecycle Analysis (LCA) system for facilities to track the upfront costs and long-term savings from high-performance and regenerative design features.
- The MTA should increase the number of LEED-accredited employees.
- The MTA should seek LEED-EB Rating for Grand Central Terminal.

Smart Growth/TOD Working Group: Top Recommendations

- The MTA should capture two-thirds of all new vehicle miles traveled (VMT) generated within its region through 2030. To achieve this, the MTA should advise communities and collaborate with them on how to create and expand feeder and distributor lines and eliminate gaps in the regional transit network.
- The MTA should promote clustered development throughout its region, seeking to draw two-thirds of all new development to within a quarter-mile to a half-mile of transit access within the MTA network.
- The MTA should take the lead in closing the “last mile” transportation gap by improving access to transit through robust, flexible feeder and distributor services, as well as pedestrian and bike improvements.
- The MTA should develop a systemwide TOD program that articulates principles and guidelines for TOD project development and should assist communities, developers and stakeholders throughout the region in planning these community-based initiatives.

Materials Flow Working Group: Top Recommendations

- The MTA should institute a green Lifecycle Analysis (LCA) system to manage its procurements and waste flow, including purchasing guidelines for green products and services.
- The MTA should expand its recycling programs, with added waste recovery, pilot programs for site-separation bins at stations, and more.
- The MTA should enhance its efforts to find practical uses and market opportunities for its waste flow.
- The MTA should use its market power to spur the creation of green goods and services in the mid-Atlantic region.
- The MTA should encourage the use of low-carbon, local materials at all agencies, and by local vendors.

- The MTA should expand the procurement of sustainable railroad ties at all rail agencies.

Water Management Working Group: Top Recommendations

- The MTA should identify beneficial uses for the millions of gallons of groundwater pumped out of subway system tunnels.
- The MTA should reduce its use of potable water by 25 percent or more by 2020 by substituting rainwater, recycling greywater, and/or other conservation practices.
- The MTA should install systemwide metering and submetering to reduce its water consumption.
- The MTA should improve water fixtures and conservation at MTA facilities through water-efficient designs, water-saving fixtures, and employee programs. As the Commission stated in the interim report, the MTA should encourage the use of local drinking water by its 68,000 employees to minimize bottled-water consumption.
- The MTA should improve the efficiency of its vehicle washes systemwide.

Climate Adaptation Working Group: Top Recommendations

- The MTA should develop a climate-adaptation decision matrix to identify options for protecting transit infrastructure from storm surge, extreme heat, and other manifestations of climate change.
- The MTA should implement a Climate Adaptation Resiliency Evaluation Procedure (CARE Trigger Elevation), which would be activated when any new projects or major alterations are undertaken where critical structural components are located in present or potential coastal surge flood zones.

The Need for Sustainable Capital Spending at the MTA

On December 4, 2008, the Commission on Metropolitan Transportation Authority Financing, appointed by Governor David Paterson and chaired by Richard Ravitch, concluded that the MTA's 2010-2014 capital program would require around \$30 billion. That Ravitch Commission finding was consistent with the MTA's own forecasts of its capital needs for the 2010-2014 program, which will enable the MTA to keep its core infrastructure in a state of good repair, continue work on its mega-projects and adjust the capital program to take account of inflation.

The Blue Ribbon Commission on Sustainability and the MTA believes that the vitality of the region and its economy cannot be maintained without a robust, resilient MTA infrastructure. The Sustainability Commission has considered the impact of critical sustainability issues on MTA capital planning. The Commission believes that the MTA should have \$75 billion to \$100 billion over the course of the next two MTA capital plans (2010-2014 and 2015-2019) to prepare the MTA and its service region for a sustainable future. Investments at these higher levels will help the MTA region and the nation weather the current recession as well as accelerate the region's transition from fossil-fuel dependency to a low-carbon economy.

Strategy for the 21st Century: Legislative and Policy Recommendations at a Glance

FEDERAL

PASS A \$1 TRILLION GREEN STIMULUS BILL

- Focusing on 21st century transit and renewable energy

AUTHORIZE AND REFORM 2010-15 TRANSPORTATION BILL AT \$1 TRILLION

- Emphasize state of good repair
- Reform funds distribution process and prioritize funding for metropolitan areas
- Develop performance measures that recognize existing densities/transit use
- Incentivize regional, intermodal, and pricing projects
- Streamline federal processes/procedures
- Require minimum green standards for receipt of federal funds

REQUIRE GREENHOUSE GAS (GHG) REDUCTIONS

Link land use and infrastructure investment to reduce GHG emissions by adapting California's SB 375 to work on a national scale through regional reduction targets and plans

PROVIDE LEADERSHIP/FUNDING FOR CLIMATE ADAPTATION

Establish a lead federal agency to coordinate federal, state, and local efforts and funding for climate-adaptation plans, programs, and strategies

RAISE FEDERAL GAS TAX 40 CENTS OVER 5 YEARS AND FUND SHIFT TO MILEAGE-BASED USER FEES

ESTABLISH CARBON EMISSIONS AVOIDANCE MARKET AND DEDICATE 25 PERCENT OF REVENUES TO TRANSIT

INCREASE MONTHLY COMMUTER TAX BENEFIT TO \$220/MONTH FOR TRANSIT COMMUTERS

PROVIDE INCENTIVES TO LENDERS THAT OFFER LOCATION EFFICIENT MORTGAGES (LEMS)

PROVIDE INCENTIVES TO DEVELOPERS WHO DESIGN AND CONSTRUCT TO LEED-NEIGHBORHOOD DEVELOPMENT STANDARDS AND ACHIEVE GOLD RATING

NEW YORK STATE

NEW FUNDING FOR THE MTA

- Enact a Regional Mobility Tax of 1/3 of 1 percent of wages as recommended by the Ravitch Commission
- Authorize tolling, as recommended by the Ravitch Commission, and variable pricing to pay for transit operations and expansion
- Allocate revenue from the auctions conducted by Regional Greenhouse Gas Initiative (RGGI) to VMT reduction strategies, including transit
- Create clean-air surcharge for vehicles

ENCOURAGE USE OF PENSION FUNDS AND ENDOWMENTS FOR INVESTMENTS IN TRANSIT PROJECTS

GREENHOUSE GAS (GHG) REDUCTIONS

- Set an enforceable statewide limit on GHG emissions with measures to reduce 80 percent by 2050
- Link land use and infrastructure investment to reduce GHG emissions by adapting California's SB 375 to NY State through regional reduction targets and plans

CREATE MTA REGIONAL BUS AUTHORITY (RBA)

RBA, as envisioned by the Ravitch Commission, would integrate and expand bus service and accelerate the development of Bus Rapid Transit (BRT) routes throughout the region

EXPAND LAST-MILE SERVICES

Improve access to transit through robust and flexible feeder and distributor services and pedestrian and bike improvements

REFORM TAX INCREMENT FINANCING (TIF)

ESTABLISH TRANSIT-ORIENTED DEVELOPMENT DISTRICTS

- Smart Growth Cabinet and the MTA should establish Transit Development Districts to prioritize and coordinate funding and efforts
- Provide assistance to local communities

INSTITUTE AUTOMATED CAMERAS FOR BUS LANE ENFORCEMENT

NEW YORK CITY

CREATE AN ALL-AGENCIES TOD TASK FORCE TO WORK WITH THE MTA TO ACCELERATE IN-CITY TOD

IMPLEMENT ON-STREET PARKING-PRICING STRATEGIES TO MANAGE PARKING DEMAND AND KEEP LANES CLEAR FOR BUSES

Charge higher rates at peak hours for city parking spaces to increase turnover and reduce the blocking of lanes by decreasing the amount of time motorists spend “cruising” for parking

SCALE-UP STREET MANAGEMENT PROGRAMS

Expand street-management programs city-wide to reduce congestion, improve safety and allow buses to travel faster and more reliably

SUBURBAN COUNTIES AND CITIES

TRANSIT-ORIENTED DEVELOPMENT (TOD)

- Institute zoning ordinances to encourage development at transit supportive densities
- Develop station-area plans to prepare TOD sites and ensure adequate station access

IMPLEMENT BUS RAPID TRANSIT (BRT) ROUTES

- Dedicate right-of-way or existing lanes to BRT
- Provide signal prioritization and physical street improvements

EXPAND LAST-MILE SERVICES

Improve access to transit through robust and flexible feeder and distributor services and pedestrian and bike improvements

IMPLEMENT PARKING-PRICING STRATEGIES TO MANAGE PARKING DEMAND ON STREETS AND AT STATIONS

IMPLEMENT STREET-MANAGEMENT PROGRAMS TO KEEP LANES CLEAR FOR BUSES

REGIONAL

ESTABLISH A REGIONAL GAS TAX WITH THE 10 REGIONAL GREENHOUSE GAS INITIATIVE (RGGI) STATES AND DEDICATE REVENUES TO VMT REDUCTION STRATEGIES, INCLUDING TRANSIT

CONNECTICUT

COMMUTER RAIL PARKING

- Increase parking capacity at commuter rail stations by establishing ConnDOT enforceable goals for towns
- Implement all forms of parking and station access strategies including pricing, satellite parking, ped/bike improvements, bike parking, car-share/carpooling and feeder services

TRANSIT-ORIENTED DEVELOPMENT (TOD)

- Use principles developed by the Responsible Growth Task Force to guide decision-making around land use and transportation
- Provide funding and assistance to local communities to encourage TOD

HOUSING NEAR TRANSIT

- Prioritize allocation of tax credits for multi-family and mixed-income housing development near transit
- Promote and monitor the progress of the HOMEConnecticut program, which provides incentives to municipalities for higher density housing near transit

IMPLEMENT BUS RAPID TRANSIT (BRT) ROUTES

EXPAND LAST MILE SERVICES

Improve access to transit through robust and flexible feeder and distributor services and pedestrian and bike improvements

Green and Going Greener – Current MTA Sustainability Initiatives

■ **LED Train Signals** – New York City Transit has replaced nearly 100 percent of its incandescent train signals with high efficiency LED signals, resulting in energy savings of approximately 6,000 megawatt hours of electricity per year, in addition to the substantial maintenance savings associated with less frequent signal light replacement.

■ **LED Bridge Aviation and Navigation Lights** – MTA Bridges and Tunnels has completed the replacement of aviation lights at its seven bridges with LED fixtures and is now in the process of replacing its necklace lighting with LEDs.

■ **Nitrogen-Tire Inflation** – The NYCT Department of Buses is testing nitrogen-tire inflation equipment in a number of its depots. Nitrogen-filled tires maintain their pressure better and last longer than air filled tires, resulting in better fuel economy and less frequent replacement.

■ **High-Efficiency Lighting** – MTA Bus Company has replaced outdated 200-watt metal-halide lamps at several depots with state-of-the-art T5 high-output fluorescent lighting. These new fixtures offer longer life, greater efficiency, and cost savings. The T5 system produces 20 percent more light output in mean lumens, while consuming about 20 percent less energy than a metal halide lamp.

■ **Battery Energy Storage** – Long Island Bus has completed the installation of a high-efficiency sodium sulfur battery energy storage system at their Mitchell Field facility. The battery system, which can store and discharge up to one megawatt of electricity, is charged at night when electricity demand and utility rates are down and then used during the day to power compressors for fueling the Long Island Bus fleet of compressed natural gas buses.

■ **Insulation** – Long Island Rail Road's new Atlantic Terminal Project incorporates a wide variety of energy-saving and environmentally friendly technologies, including exterior "curtain wall" insulation utilizing low-e coated glass, skylights, and an atrium with natural lighting.

■ **Ultra-Low Sulfur Diesel Fuel in Locomotives** – Metro-North Railroad adopted the use of ultra-low sulfur diesel fuel in its locomotive fleet 3 years ahead of the EPA mandated compliance date.

■ **Aluminum 3rd Rail** – Long Island Rail Road, Metro-North Railroad, and New York City Transit are all actively testing, modeling and, where appropriate, installing aluminum 3rd rail, which reduces electrical losses to resistance and helps maintain voltage support.

■ **3rd Rail Heater Controls** – New York City Transit has completed a successful pilot of remote-controlled 3rd rail heaters, which will allow them to activate essential 3rd rail heaters only when the weather indicates icing conditions are likely. The project will result in savings from both the decrease in electrical energy used to unnecessarily heat exposed 3rd rail and the maintenance costs associated with turning on and off conventional heater switches.

■ **Peak Load Management** – Each summer the MTA participates in Peak Load Management reduction programs, reducing summer peak electrical demand at MTA facilities by approximately 13 megawatts and routinely responds to urgent requests from Con Edison and the Independent System Operators to shed load, by shutting overlapping substations during energy emergencies and reducing train speeds, helping to maintain the reliability of the electricity distribution grid.

■ **Clean Diesel Buses** – New York City Transit has completed the conversion of its entire conventional diesel fleet of greater than 3,000 buses from 2-stroke to cleaner running 4-stroke engines. Combined with the installation of diesel particulate filters, catalytic traps and the use of ultra-low sulfur diesel fuel (all currently in place) the emissions profile of a clean diesel bus is nearly equivalent to a CNG bus.

■ **Rapid Roll-Up Doors** – The MTA Bus Company has replaced steel roll-up doors with high-speed rapid roll-up doors. The high-speed roll-up doors are well insulated and open and close up to three times faster than conventional steel roll-up doors, minimizing the air exchange between the Depot and the outside environment and resulting in decreased heating and cooling demand throughout the year.

■ **Compressors** – Metro-North Railroad is replacing the compressed air system and fan motors at its largest maintenance facility, the Harmon Yard Overhaul and Maintenance Shop, with new high efficiency equipment. Compressed air is used extensively at the Harmon facility to power a variety of tools and operations and energy savings of approximately 384,000 kilowatt hours per year are anticipated once the project is completed.

■ **Energy Saver Transformers** – MTA Bridges and Tunnels has installed energy-saver transformers, designed to reduce electric voltage without affecting visible light levels, in its central vehicle maintenance facility.

■ **Demand Control Ventilation** – NYCT is installing demand control ventilation at several of its bus depots, allowing ventilation rates to match exact occupancy requirements while saving on operating costs.

■ **Solar Thermal Hot Water Heating** – NYCT is installing a solar thermal hot water heater in its largest train maintenance facility, the Coney Island Yard, which will result in electricity savings of approximately 165,000 kilowatt hours per year.

What's Inside the Final Report

This is the Table of Contents of the Final Report of the Blue Ribbon Commission on Sustainability and the MTA. The draft of the report, due for publication in February 2009, is available at www.mta.info/environment.

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Sustainability Working Groups

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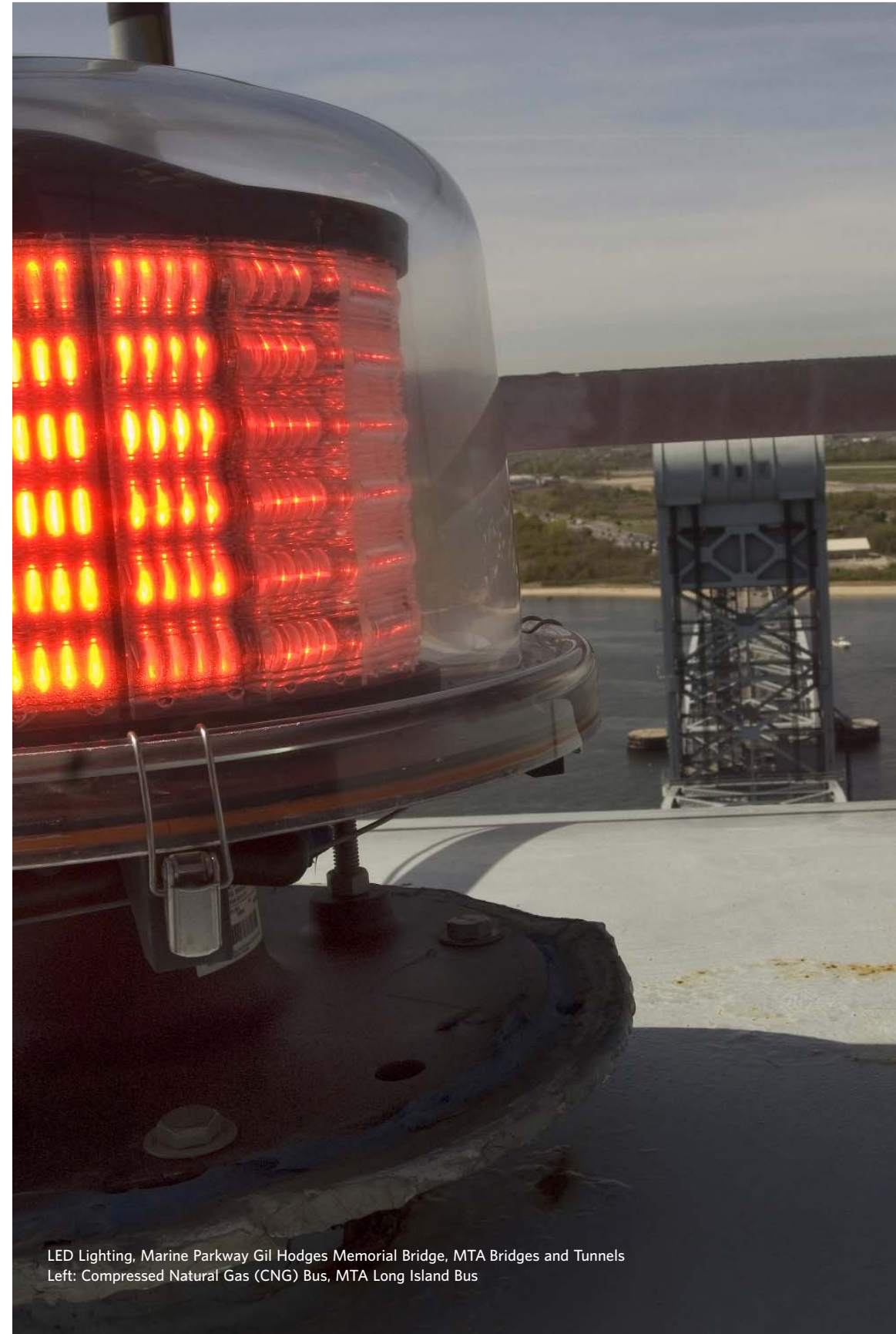
Smart Growth/TOD: Metro-North Case Studies - Yonkers

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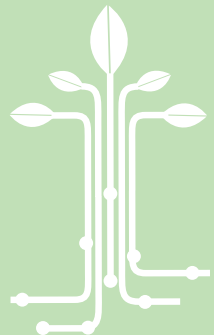
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LED Lighting, Marine Parkway Gil Hodges Memorial Bridge, MTA Bridges and Tunnels
Left: Compressed Natural Gas (CNG) Bus, MTA Long Island Bus

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