A COMPREHENSIVE TRANSPORTATION POLICY FOR THE 21ST CENTURY: A CASE STUDY OF CONGESTION PRICING IN NEW YORK CITY

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INTRODUCTION

A recent ExxonMobil advertisement starts with, "Cars and trucks are essential to our way of life. Without them, our economy would come to a standstill."[1] This statement, for better or worse, is certainly accurate. But what if our way of life could be adjusted so that our reliance on cars and trucks could be lessened? A more sustainable future might be the result. This paper discusses how the federal government and other jurisdictions, both public and private, could change how we travel to improve our environment now and for the generations ahead.

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[1] Advertisement, *Reinventing Your Wheels, Clean Technologies: Part 1, ExxonMobil*, N.Y. TIMES, July 12, 2007, at A23.

This paper provides background information on the complex structure of the agencies, at the federal, state and local levels, and their role in shaping transportation policy. A brief discussion of recent federal transportation bills is provided. From the authorization of the Intermodal Surface Transportation Efficiency Act in 1991 to the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, transportation policy and funding have created enormous opportunities to affect the way people travel, as well as potentially alter (in a negative or positive direction) the environment, particularly in the context of climate change.

The bills mentioned above demonstrated a concerted attempt to localize transportation policy and spending. New York City's recently-defeated congestion pricing initiative will be described and assessed as an example of an ambitious federally-funded local initiative to reduce vehicle congestion that failed due to political complications. The paper will provide an overview of the price of congestion and how New York City's "experiment" was an aggressive and creative way of addressing this issue.

The importance of this is underscored by the fact that the transportation sector accounts for nearly one-third of the greenhouse gases emitted in the United States. In New York City, transportation accounts for 23 percent of total emissions.[2] The paper also examines the true cost of transportation to include externalities. Congestion charging assesses a more accurate cost of driving. If pricing has a direct affect on consumer behavior, then increased fees levied on driving will reduce auto use and total vehicle miles traveled. Similarly, the paper expands this proposal to regional travel by addressing the cost of flying.

As Congress prepares to reauthorize the federal transportation bill in 2009, it is in a position to consider new transportation policies and incentives that explicitly address global climate change and reduce transportation-related emissions.

I. OVERVIEW OF GOVERNMENT STRUCTURE

Established in 1966 under the authority of President Lyndon B. Johnson, the United States Department of Transportation

[2] CITY OF NEW YORK, PLANYC, A GREENER, GREATER NEW YORK 135 (2007) [hereinafter PLANYC], *available at* http://www.nyc.gov/html/planyc2030/downloads/pdf/full_report.pdf.

(USDOT) is a cabinet-level executive department of the United States government. USDOT is charged with developing and coordinating policies for the nation's transportation system, with a focus on need, the environment and national defense. USDOT consists of eleven individual Operating Administrations, including the Federal Aviation Administration, the Federal Highway Administration (FHWA) and the Federal Transit Administration.

Subsequent to USDOT's establishment, states formed individual departments of transportation. New York State created its transportation department in 1967, one year after the establishment of USDOT. The New York City charter authorized the creation of the New York City Department of Transportation (NYCDOT). City-level DOTs were somewhat unusual at first, but based on the complexity and scale of New York City, NYCDOT was created in 1977 to oversee the day-to-day maintenance of the City's streets, highways, bridges, and sidewalks. NYCDOT is also heavily involved in the planning of transportation policies and solutions. (It was effectively created in 1967 as a super-agency—the Transportation Administration.)

In addition to DOTs, planning agencies were then formed to develop short- and long-range transportation plans for municipalities and regions. The Federal Aid Highway Act of 1962 mandated that transportation projects in areas with a population of 50,000 or more had to be undertaken cooperatively by state and local governments. The Bureau of Public Roads, which preceded FHWA, required the creation of planning agencies that would be capable of carrying out these plans. With more recent legislation, states must also have long and short-term transportation plans for all areas within a state and the U.S. Secretary of Transportation must approve these plans every two years.

Congress promulgated the creation of these planning agencies, Metropolitan Planning Organizations (MPO), to satisfy these area-wide planning requirements. In addition to developing a more comprehensive, shared future vision, these plans were intended to facilitate coordination between governments, interested local parties and residents. As described in the pages that follow, federal funding programs in the last 15 years have placed a focus on local coordination and input, as well as community-level involvement. There are currently 339 MPOs nationwide.

In the New York and New Jersey metropolitan regions, the New York Metropolitan Transportation Council (NYMTC) and the

North Jersey Transportation Planning Authority (NJTPA) serve as the local MPOs. NYMTC's region is one of the largest in the country and includes New York City, Long Island, and the lower Hudson Valley. This region encompasses 2,440 square miles and over 11.3 million people—approximately two-thirds of the state's population. NYMTC also coordinates federally-required programs like the Congestion Management Process, which provides performance measures, a database for measuring changes in traffic conditions, and an ongoing assessment of the region's congestion.[3]

NJTPA is considered one of the most influential and well-coordinated MPOs in the country. The NJTPA oversees more than $2.5 billion of investments in transportation improvement projects authorized for 6.5 million people in the 13 counties of northern New Jersey. It sponsors and conducts studies, assists county planning agencies, and monitors compliance with national air quality goals. NJTPA has a key role in developing and updating the region's Regional Transportation Plan (RTP). The RTP provides a 25-year transportation investment plan; all federally funded transportation projects in the region must originate from the plan.[4]

Although the structure and composition of MPOs can vary, some MPOs are headed by a Policy Committee, which serves as the top-level decision making body. This body typically consists of elected and/or appointed officials from local municipalities, representatives of transportation modes (such as public transit, bicycle/pedestrians, freight, etc.), and state agency officials. Policy Committee members are not generally citizen-elected; rather they are elected from one of the MPOs constituent local jurisdictions.

Although State DOTs still play the primary role in distributing federal funds, the advancement of contemporary transportation funding bills have strengthened the role of local governments and MPOs in this function. Despite the fact that MPOs are rarely permitted to levy taxes or raise their own funds, these agencies have been granted formal authority over state funds. For example, in California, three-fourths of federal and state highway and transit funds are designated by the state to be spent in accordance with the

[3] NEW YORK METROPOLITAN TRANSPORTATION COUNCIL, CONGESTION MANAGEMENT SYSTEM 2005 STATUS REPORT (2005).

[4] NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY, INC., REGIONAL TRANSPORTATION PLAN ACCESS & MOBILITY 2030 (2005).

priorities set by MPOs.[5] Nonetheless, in New York, NYMTC is sometimes viewed as merely a "rubber stamp," acquiescing to member agency demands.

II. OVERVIEW OF THE FEDERAL TRANSPORTATION BILL

Federal transportation funding directly shapes the direction of the American transportation policy and priorities. Historically, the nation's transportation policies, shaped by President Eisenhower's 1956 Interstate Highways and Defense Act, were auto-driven and had their basis in connecting cities and regions by car, truck and military equipment through interstate highways, streets and roads. The transportation infrastructure also included, to a much lesser extent, intercity and urban rail, as well as bus systems. The goal of the interstate system was to enhance commerce and serve national defense by connecting principal metropolitan areas, cities, and industrial centers, including connections to Canada and Mexico.

With the growth of the nation's transportation system and infrastructure, American vehicular travel has also dramatically increased in the last quarter century. The rate of increase in cars, vans, and SUVs for personal travel is six times the rate of population increase. And as the rate of vehicle ownership has increased, vehicle miles traveled has continued to creep up. In 1969, approximately 12,400 vehicle miles were traveled per household; by 2001 the number of miles nearly doubled, growing to 21,200 miles traveled per household (see Table 1). In addition, this growth has been dominated by households with multiple vehicles: the number of households with one car has remained about the same during this period (30.3 million in 1969 and 33.8 million in 2001), but the number of households with three or more vehicles increased nearly nine times (from 2.9 million in 1969 to 25 million in 2001).[6]

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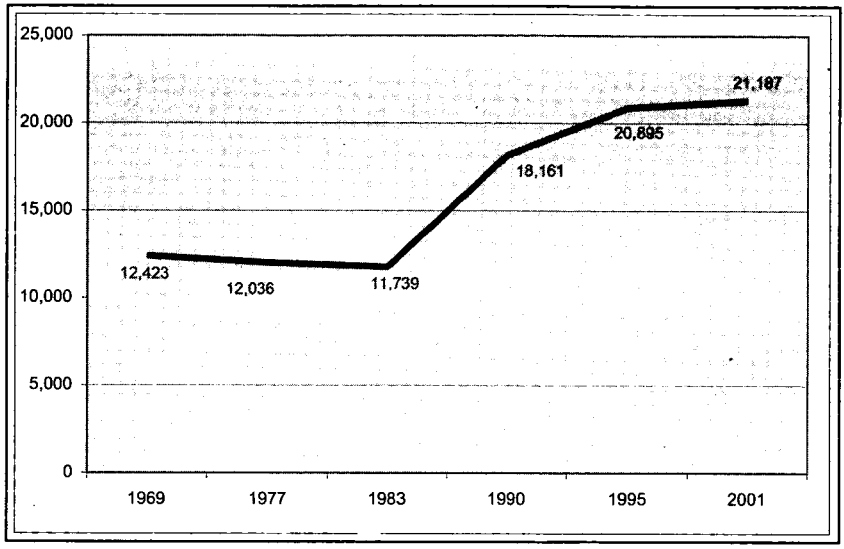
[5] MARTIN WACHS, BROOKINGS INSTITUTION, IMPROVING EFFICIENCY AND EQUITY IN TRANSPORTATION FINANCE 4 (2003), *available at* http://www.brookings.edu/~/media/Files/rc/reports/2003/04transportation_wachs/wachstransportation.pdf.

[6] PAT S. HU & TIMOTHY R. REUSCHER, U.S. DEPT. OF TRANSPORTATION, SUMMARY OF TRAVEL TRENDS, 2001 NATIONAL HOUSEHOLD TRAVEL SURVEY 16, 32 (2004), *available at* http://nhts.ornl.gov/2001/pub/STT.pdf (conducted since 1969 by FHWA, the National Household Travel Survey (NHTS) is the nation's inventory of daily and long-distance travel).

Table 1. Annual Vehicle Miles of Travel by Households, 1969–2001



Source: NPTS/NHTS Data Series

Note: Two fuel crises in the 1970s dampened growth during that period.

Highway user fees, paid primarily through federal and state motor fuel taxes, have provided the mechanism for funding transportation projects over the last fifty years. In 1956, the Federal Aid Highway Act created the Highway Trust Fund to provide a consistent funding stream for national and interstate highways. Tax revenues directed to the HTF are derived from excise taxes on highway motor fuel and truck-related taxes on truck tires, sales of trucks and trailers, and heavy vehicle use. Although the Fund was originally designated to fund solely highways, Congress later allocated some funds to support transit needs. Through this initiative, the Mass Transit Account was created in 1983.[7]

In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which provided a six-year, $155 billion reauthorization to restructure USDOT's highway, highway safety, and transit programs. ISTEA is a complex piece of legislation, comparable to a medium-length book with eight different titles. ISTEA allowed for toll roads (previously tolls were

[7] NORTHEAST MIDWEST INSTITUTE, HIGHWAY TRUST FUND (2008), *available at* http://www.nemw.org/HWtrustfund.htm.

not allowed for federally funded highways) and allowed up to five experiments with congestion pricing. Approximately $1 billion per year was allocated on congestion mitigation and air quality funds geared towards cities to fight air pollution and congestion.[8] ISTEA also strengthened the role of regional planning agencies by mandating planning processes in which each state and urban area is required to prepare transportation plans with significant public involvement.

In 1998, ISTEA was reauthorized in the form of the six-year, $203 billion act called the Transportation Equity Act for the 21st Century (TEA-21). TEA-21 retained much of ISTEA's basic features and continued to decentralize decision making to the local level. ISTEA and TEA-21 provided state and local governments the flexibility to transfer funds from one program to another. As described previously, these bills shifted more power to MPOs in project selection and placed more emphasis on intermodal transportation solutions to reduce traffic congestion and air pollution.[9]

However, some critics contend that despite the claim that ISTEA empowered MPOs with more power in planning and policymaking, many of these MPOs play an advisory role in project selection. In fact, states can produce partial plans that bypass their MPOs, which allows state officials to dominate transportation decision-making. Some critics argue that the historical preference of state officials in highway construction and repair has remained unchanged and that ISTEA has had minimal impact in altering traditional funding patterns.[10]

Further, critics contend that these bills have promoted pork barrel spending. Even USDOT produced a recent brochure that complains that "the number of earmarks has grown from 10 in 1982 to 5,756 in 2005, and the proliferation of special interest programs has increased to the point [sic] there are now well over 50 separate Federal highway and transit programs."[11] Perhaps this

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[8] Randal O'Toole, *ISTEA: A Poisonous Brew for American Cities*, 1997 CATO POLICY ANALYSIS 287, 317 (1997).

[9] Robert Jay Dilger, *TEA-21: Transportation Policy, Pork Barrel Politics and American Federalism*, 28 PUBLIUS 49, 49–50 (1998).

[10] *Id.* at 55.

[11] U.S. DEPT. OF TRANSPORTATION, A FORK IN THE ROAD (2007), *available at* http://www.fightgridlocknow.gov/docs/forkintheroadbrochure.htm [hereinafter A FORK IN THE ROAD].

should not come as a big surprise when ISTEA was initially heralded by former President George H. W. Bush as a source of "jobs, jobs, jobs." These massive transportation bills also gave members of Congress opportunities to secure highway and other transportation construction projects for their local districts and supplement their re-election prospects.[12]

In 2005, President George W. Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which guaranteed $244 billion in funding for highways, highway safety, and public transportation projects. SAFETEA-LU provides over $201 billion in funding for highway and safety programs and about a quarter of that sum ($46 billion) in funding for public transportation programs from 2004 (retroactively) to 2009. Further the information provided on the FHWA website stresses transportation safety as a key priority of SAFETEA-LU:

> Integral to improving the quality of our lives and to enhancing the productivity of our economy is a greater focus on transportation safety. Although we have made improvements in the rates of fatalities and injuries on our highways, the total numbers remain intolerable, and they are rising. Every year, nearly 43,000 people lose their lives on our highways and roads. Families are destroyed and promise is lost.[13]

It is certainly unclear what the true focus of American transportation policy is or should be.

III. "BI-POLAR" FEDERAL PROGRAMS

Looking at the big picture, it appears that federal energy, environmental, and transportation policies are in conflict with each other. For example, there is a national, bi-partisan consensus on reducing gasoline use and creating a cleaner environment. However, the system for funding transportation is still based on a charge per gallon of fuel purchased, which relies on drivers using more gasoline. If the environmental and energy goals are achieved our transport infrastructure will be starved unless we replace its source of funding.

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[12] Dilger, *supra* note 9, at 50.

[13] U.S. DEPT. OF TRANSPORTATION, FHWA REAUTHORIZATION OF TEA-21 – SAFETEA BILL (2003), *available at* http://www.fhwa.dot.gov/reauthorization/safetkeyinfo.htm.

Further, it is questionable as to whether federal transportation funding has improved transportation mobility and access. In fact, USDOT publicly contends that the nation's surface transportation policies have been headed in the wrong direction and that a new approach is needed. According to USDOT, congestion has nearly tripled in US metropolitan areas despite a 239 percent increase in highway spending over the last twenty-five years.[14] Forecasts from the Office of Management and Budget also predict wider 2009 deficits in the Highway Trust Fund, which would result in huge cuts in federal road spending.[15] The lack of focus in national transportation priorities is also exhibited in the dramatic increase in earmarks. The combination of pork spending and the vast number of highway and transit programs prohibit states from exercising flexibility and prevent focus on national priorities.[16]

Transportation policy is intrinsically connected to the nation's economic and environmental health. Clearly cognizant of this nexus, the British government, in a joint effort between the Treasury and Transport departments, commissioned a comprehensive study, the Eddington Transport Study, to analyze the links between transportation and economic productivity within the context of the government's focus on sustainable development and the environment. The Eddington Study placed an emphasis on transportation and economics: it stated that a 5 percent reduction in travel time for businesses and freight travel could generate £2.5 billion (~$5 billion) of cost savings. The Study recommended investing to improve the performance of existing infrastructure and ensuring that returns on investments account for external costs, such as the environmental and social costs.[17]

Although a similar comprehensive examination has not yet been conducted in the United States, USDOT has made it clear that growing congestion is tied to economic productivity and environmental degradation. In 2003, American cities lost 3.7 billion hours of time and wasted 2.3 billion gallons of fuel.[18] To

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[14] *See* A FORK IN THE ROAD, *supra* note 11.

[15] *See* Tom Ichniowski, *Trust Fund Outlook Worsens, Sparking a Hunt for Revenue*, ENGINEERING NEWS RECORD, July 23 2007.

[16] *See* A FORK IN THE ROAD, *supra* note 11.

[17] SIR ROD EDDINGTON, THE EDDINGTON TRANSPORT STUDY: THE CASE FOR ACTION 5, 7 (2006), *available at* http://www.dft.gov.uk/162259/187604/206711/executivesummary.

[18] DAVID SCHRANK & TIM LOMAX, TEXAS TRANSPORTATION INSTITUTE, THE

address this increasing problem, major funding initiatives are underway to ease congestion without adding new infrastructure. Already in place in cities like Singapore, London, and Stockholm, U.S. urban initiatives are just emerging.

IV. FEDERAL CONGESTION PRICING INITIATIVE

The ideal transport policy should reduce congestion, lower energy consumption, and decrease air pollution while improving transit. Congestion pricing is the 'holy grail' for transportation engineers. An added reason for congestion pricing is the vast reduction in costs and ease of implementation. In fact, USDOT states that there is consensus among economists that congestion pricing *is the single most viable approach to reducing* congestion and creates a financial relationship between the cost of highway travel and the cost of congestion. Although vehicle trip reduction is the primary element of the program, transit must be added to capture the non-drivers. In fact, USDOT has acknowledged that transit plays a critical role in congestion reduction efforts.

Federal funding has been made available for urban centers through USDOT's Congestion Initiative, which sponsored the 2007 Urban Partnership Agreement to help fund select cities implement congestion pricing. Through the Urban Partnership Agreement, urban areas in the United States, such as New York City, had the opportunity to explore more aggressive and comprehensive congestion management strategies. When these funds and resources are also tied into additional funding for transit improvements, such as bus rapid transit (BRT), the results can be even more dramatic. USDOT emphasizes BRT as a key aspect of the congestion pricing. BRT allows for fast, rail-type service without the associated costs of design, approvals and construction.

There is one very limited congestion pricing policy today and that is for vehicles entering New York City from New Jersey. The Port Authority of New York and New Jersey charges more in tolls to enter during peak morning hours than during the rest of the day. Most other American examples are limited to highways, in which express lanes have been implemented along highways in Minneapolis, Anaheim / Riverside and San Diego. As discussed in following sections, several European cities and one Asian city

2005 URBAN MOBILITY REPORT 1 (2005), *available at* http://tti.tamu.edu/documents/mobility_report_2007.pdf.

provide the best models for urban congestion pricing.

V. A HISTORY OF CONGESTION PRICING IN NEW YORK CITY

The American driving public has historically been more accepting of tolls on bridges and tunnels than on other types of roadways. With its many waterways spanned by dozens of bridges and tunnels, the geography of the New York City metropolitan area lends itself well to tolling. In fact, tolling in New York City goes back over a century. In 1883 when the Brooklyn Bridge opened, drivers of horse carriages were charged a penny to cross. Upon opening the Holland Tunnel in 1927, a joint commission between New York and New Jersey charged drivers a 50 cent toll to cross the Hudson River; in today's currency, this would amount to a $5.80 toll. The Lincoln Tunnel followed suit in 1937. Today, tolls are collected on the Triborough Bridge, the Verrazano-Narrows Bridge, the George Washington Bridge, and a host of other bridges and tunnels into and throughout New York City.

But while the Brooklyn Bridge was one of the first to charge a toll, the toll was rescinded in 1911 by Mayor William Jay Gaynor. Tolls which had previously been charged on the Manhattan and Williamsburg Bridges were also rescinded at around the same time. The Queensboro Bridge opened in 1909 with no toll at all.[19] Thus, the four city-owned bridges spanning the East River were toll-free in 1911 and have remained that way to date.

Manhattan, particularly the portion south of 60th Street, is undisputedly New York City's heart of commerce and activity. The high volume of vehicles currently traveling into and around this vital center is producing negative externalities on the city streets at the expense of air quality, public safety, commerce, and normal traffic flow. By placing tolls in strategic locations around this central business district, particularly on the un-tolled East River Bridges, New York City could better control congestion, thus making Manhattan a more pleasant place in which to live and work.

Throughout the years, many New Yorkers have proposed congestion pricing schemes by recommending the placement of

[19] *See* JEFFREY M. ZUPAN & ALEXIS F. PERROTTA, REGIONAL PLAN ASSOCIATION, AN EXPLORATION OF MOTOR VEHICLE CONGESTION PRICING IN NEW YORK 3 (2003), *available at* http://www.rpa.org/pdf/RPA_Congestion_Pricing_NY.pdf.

tolls on the East River Bridges and elsewhere in order to control vehicle congestion and its negative externalities. In 1952 William Vickrey of Columbia University was the first to speak of congestion pricing. Under his first proposal he recommended that fares for the New York City subway system be increased in congested areas during peak travel times and decreased where and when the subways were relatively empty. Then, several years later, he proposed road pricing with similar principles. His theory was that traffic jams occur when drivers are not charged the full costs they impose on others. Neither of these models was adopted at the time as the technology was not yet up to par and politically they were considered too risky. To date, no congestion pricing plan has been implemented in New York City. Mayor Bloomberg's congestion pricing plan, defeated in the State Legislature, was the latest and most ambitious in the list of attempts to follow.

A. *Clean Air Act*

In 1955, the United States Congress passed the Air Pollution Control Act. This was the first bill to recognize air pollution as a problem in the U.S. It allocated $5 million per year for five years towards research on air pollution. However, the bill did not identify motor vehicle emissions as a cause of air pollution. In fact, it did little to actually curb air pollution.[20]

In 1963, Congress once again acted, this time passing the first Clean Air Act. This was the first bill to recognize motor vehicle emissions as a danger to the environment. Standards for motor vehicle emissions were established and research continued.

However, it was not until shortly after the passing of the Clean Air Act Amendments of 1970 that tolling and other transportation control measures were proposed as a way of controlling air pollution. The Act required that each state create its own State Implementation Plan (SIP) in order to provide for the attainment of the National Ambient Air Quality Standards (NAAQS).

New York's SIP, known as the Transportation Control Plan (TCP), included thirty-two Transportation Control Strategies which became binding in 1973 with Environmental Protection

[20] *See* Penny Mintz, Student Article, *Transportation Alternatives Within the Clean Air Act: A History of Congressional Failure to Effectuate and Recommendations for the Future*, 3 N.Y.U. ENVTL. L.J. 156, 161 (1994).

Agency (EPA) approval. One of these strategies, announced in 1973 by New York City Mayor John Lindsay, was an incredibly ambitious and forward thinking plan. The plan, directed by Ed Ferrand and Brian Ketchum at the City's Bureau of Air Resources, called for 50 cent tolls on the East and Harlem River bridges. Not surprisingly, the plan drew fire from the community, bringing threats from the taxi and trucking industries and general anger from Manhattan businesses.

A year after announcing his plan, Mayor Lindsay backed down on account of a looming fiscal crisis and a failing bid for the White House. City government put pressure on Congressmember Liz Holtzman and Senator Daniel Patrick Moynihan to eliminate bridge tolls in favor of improvements to public transportation.[21] The 1977 Clean Air Act Amendments included the Moynihan-Holtzman Amendment, which removed from New York's SIP tolling on bridges existing within a city (i.e., the East and Harlem River Bridges in New York City). However, the amendment stipulated that such tolls could only be eliminated with improved or expanded public transportation measures to satisfy regional transportation requirements. So while congestion pricing was off the table, the New York City transit system received a generous sum of money, which was responsible for its ultimate revival. Furthermore, as Brian Ketchum concedes, technology was not quite ready to support tolls on all bridges into Manhattan without causing serious back-ups into the outer boroughs.

B. *The Schwartz/Koch Proposals*

In 1980, under the advice of Sam Schwartz, then Assistant Commissioner for the Department of Transportation, Mayor Ed Koch proposed tolls for all single-occupant vehicles entering Manhattan. This time, the parking garage industry and the Automobile Club of New York were the biggest opponents of this plan, bringing a new lawsuit, *Automobile Club v. Koch*.[22] The City lost the suit on the argument that only the State has the authority to place tolls on bridges.

In 1987, Commissioner Ross Sandler recommended a

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[21] *See* Carolyn Konheim, *Whither Congestion Pricing?*, THE BROOKLYN RAIL, Sept. 2007, *available at* http://brooklynrail.org/2007/09/local/whiter-congestion-pricing.

[22] 1981 N.Y. Misc. LEXIS 3518 (N.Y. Sup. Ct. 1981).

congestion pricing plan, this time a much bolder plan with the clear goal of reducing air pollution. At the time, New York City was failing national standards for carbon monoxide and ozone and was nearing a federal ban on new construction projects which would have worsened the City's air quality. The bold plan would have charged all drivers $10 per day to enter Manhattan anywhere south of 59th Street.[23] The backlash was unprecedented. The parking garage workers banded with the Teamsters, the tourism, hotel, and entertainment industries, as well as hospitals and the Borough Presidents. Mayor Koch backed down and congestion pricing was once again dead.[24]

C. *Urban Partnership Agreement Proposals*

In May of 2006, USDOT announced its National Strategy to Reduce Congestion on America's Transportation Network program which emphasizes reducing congestion and improving public transportation in US cities. Under the program, cities could enter into an Urban Partnership Agreement (UPA) which would provide funding for congestion solutions with a focus on rush hour pricing. In competition for federal funds, cities around the country submitted proposals for the creation of congestion pricing programs in their areas.

In 2007, USDOT set aside generous aid and resources for allocation to up to five major cities or "urban partners" with the strongest submittals. The federal funds would take the form of grants, loans, and credit assistance, along with technological support. In return, USDOT expects cities to perform ongoing research, development, and implementation of their proposed congestion-reducing strategies. There were nine cities in the running for UPA support. On August 14, 2007, USDOT announced that New York, San Francisco, Seattle, Miami, and Minneapolis would all receive portions of the aid to fund their proposals.

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[23] David Dunlap, *Koch Backs $10-a-Day Fees on Vehicles to Reduce Pollution*, N.Y. TIMES, Aug. 4, 1987 at B1.

[24] Aaron Naparstek, *Congestion Charging in New York City: The Political Bloodbath*, Dec. 4, 2006, *available at* http://www.streetsblog.org/2006/12/04/congestion-charging-in-new-york-city-the-political-bloodbath/.

D. *PlaNYC*

After nearly half a century of attempting pricing in New York City, the most recent effort has been, once again, squelched. On April 22, 2007 (Earth Day), Mayor Bloomberg unveiled his PlaNYC which, among other greenhouse gas-reducing initiatives, spotlighted a three year pilot congestion pricing program to cover all of Manhattan south of 86th Street. The system would have been in effect between 6am and 6pm Monday through Friday and would have charged cars $8 to enter the zone while trucks would have paid $21. Taxis, transit vehicles, emergency vehicles, and vehicles with handicapped plates would have been exempt. The New York City congestion pricing system would have used a combination of radio frequency identification technology and cameras to capture the license plates of vehicles without electronic tolling tags.[25]

Criticism of Mayor Bloomberg's plan, like that of the plans before it, was vociferous. Many called it inequitable, targeting the poor that commute by car into Manhattan, although very few lower-income people travel by car into Manhattan thanks to New York City's extensive transit system.[26] Others expressed concern that the border areas, for example, 86th Street and above or the Brooklyn side of the Brooklyn Bridge, would become parking lots for those that would have driven into Manhattan but wished to avoid paying the charge. However, it had been suggested that parking in these neighborhoods be restricted to residents only in order to avoid this problem.[27] Further, plans to improve transit had been factored into New York City's UPA request, although critics maintained that many of the projects will take years or even a decade to implement.

From the time of his announcement, the Mayor was given three months to garner enough political support for state approval. Without State approval, New York City could not receive UPA support. In the three month time span, the plan did gain considerable support, but political will was not strong enough for

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[25] *See* PLANYC, *supra* note 2.

[26] ASSEMBLYMAN RICHARD L. BRODSKY, INTERIM REPORT: AN INQUIRY INTO CONGESTION PRICING AS PROPOSED IN PLANYC 2030 AND S.6068 (2007), *available at* http://www.streetsblog.org/wp-content/pdf/BrodskyCongestionReportFINAL.pdf.

[27] Annie Karni, *Residential Parking Permits May Accompany Congestion Tax*, THE NEW YORK SUN, May 7, 2007, *available at* http://www.nysun.com/new-york/residential-parking-permits-may-accompany/53932/.

full approval. As a compromise, in the summer of 2007, the State Legislature formed a Commission to weigh congestion pricing versus other strategies. On January 31, 2008 the Commission released its final recommendation for a Congestion Pricing plan similar to the one proposed by Mayor Bloomberg but slightly scaled back with a northern border at 60th Street, the elimination of intra-zonal charges, and several other provisions. It was then the job of the State Legislature and the City Council to carry the plan to its next steps. This was a giant step in New York City planning and many were hopeful that New York City would be the first American city to move forward with a full scale cordon pricing scheme.

In fact, on March 31, 2008, the City Council approved the congestion pricing bill. However, despite overwhelming public support for the plan (final polls showed New York City voter support at 67 percent and statewide support at 60 percent if the revenue was funneled to transit[28]), the Assembly defeated the measure with a non-vote. As a result, the UPA money was redirected to Chicago and Los Angeles (with the addition of Fiscal Year (FY) 2008 funds) to fund plans less ambitious than New York's.

But New York has not abandoned hope. On June 10th, 2008 Governor David Paterson created a Commission chaired by former Chairman of the Metropolitan Transportation Authority (MTA), Richard Ravitch, to recommend strategies for funding MTA capital projects.[29] As the Commission includes many supporters of congestion pricing, this measure will likely be among the strategies to emerge from the Commission's final report. Additionally, while cordon pricing is off the table at the moment, NYCDOT has initiated a pilot program for variable-rate parking.[30] Under this program vehicles would be charged to park in the most congested areas, with a rate that varies by time of day. In fact, such a program could be viewed as congestion pricing, but as people are

[28] QUINNIPIAC UNIVERSITY POLLING INSTITUTE, STATE VOTERS BACK NYC TRAFFIC FEE 2-1, IF FUNDS GO TO TRANSIT (2008), *available at* http://www.quinnipiac.edu/x1318.xml?ReleaseID=1162.

[29] Press Release, N.Y. Office of the Governor, Governor Paterson Announces Appointments to Ravitch Commission on MTA Financing (Jun. 10, 2008), *available at* http://www.state.ny.us/governor/press/press_0610083.html.

[30] NEW YORK CITY DEP'T OF TRANSP., PARK SMART NYC PILOT PROGRAM, http://www.nyc.gov/html/dot/html/motorist/parksmart.shtml (last visited Sept. 30, 2008).

already accustomed to paying for parking, the program is far less likely to suffer political repercussions.

While FY 2008 funds were distributed in a follow-up to the UPA program (called the Congestion-Reduction Demonstration), it is likely that USDOT will release a solicitation for FY 2009 proposals, giving New York City another opportunity to apply for federal funds. Otherwise, New York will have to hedge its bets that FY 2010 will bring a new federal transportation bill and that it will include a provision for congestion pricing.

E. *Lessons from Around the World*

While the United States continues its political struggle for congestion pricing, cities around the world are proposing, passing, and implementing congestion pricing systems with repeated success. London and Stockholm are among the most well-known.

1. *The London Example*

In February of 2002, the Mayor of London, Ken Livingstone, announced plans to move forward with a congestion pricing plan that would cordon off the central, and most heavily trafficked, portion of London. But this announcement was not without a history of its own.[31]

Cordon congestion charging was first proposed by the Ministry of Transport in the Smeed Report of 1964, which concluded: "Given the immense growth in the number of vehicles, the present taxation methods do not effectively restrain the use of the roads in the right places at the right times and new methods may have much to contribute in limiting the losses due to traffic congestion."[32] A study in 1973 concluded that, in fact, congestion pricing would improve traffic flow and air quality within the center of London. However, like in New York City, the plan was rejected in favor of a greater investment in public transportation.

It was not until the mid-1990's that the possibility of congestion pricing resurfaced. In 1999 the Greater London

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[31] TRANSPORT FOR LONDON, CENTRAL LONDON CONGESTION CHARGING IMPACTS MONITORING (2008), *available at* http://www.tfl.gov.uk/assets/downloads/sixth-annual-impacts-monitoring-report-2008-07.pdf.

[32] Michael Evans & Ben Webster, *Radical Dreams for the Future of Transport Haunted by Past Failures*, TIMES ONLINE, June 6, 2005, http://www.timesonline.co.uk/tol/news/uk/article530470.ece.

Authority Act provided any future mayor with the power to enact some form of congestion pricing. In 2000, Mayor Livingstone chose to exercise these powers and by February of 2002, the scheme was laid out.

The program commenced one year later in February of 2003. Under the plan's original conception, drivers were charged £5 to enter the cordon zone anytime between 7am and 6:30pm, Monday through Friday. Initial results on congestion reduction were impressive. However, the results from an ongoing monitoring program showed a creeping escalation in congestion. Transport for London (TfL) raised the charge to £8 three years after inception.

The system has proven to reduce congestion by about 30 percent during peak periods. In fact, due to the overwhelming success of the program, TfL recently expanded the charging zone with considerable public support.

2. *The Stockholm Example*

A more recent congestion pricing scheme comes out of Stockholm, Sweden. In 2006, Stockholm ran a six-month trial of congestion pricing. Within the first month, improvements in traffic flow were noticeable. By the end of the six months, the trial had reduced traffic by about 22 percent, improved mobility and accessibility, reduced carbon emissions, increased public transportation usage, and increased drivers' approval of the program once the benefits of the implementation were evident. In a voter referendum in September of 2006, Stockholm residents approved the plan for a full-blown congestion pricing program, 52 to 48 percent. The program went into effect on August 1, 2007.[33]

Like London, Stockholm has set up a cordon around its densest downtown area. However, the Stockholm system is more predicated on fluctuations in congestion throughout the day, as the price to enter the cordon varies based on time of entry. The charge is in effect on weekdays between 6:30am and 6:30pm with the highest charge set at 20 kronor (about $3) during the AM and PM peak hours and the lowest charge set at 10 kronor (about $1) during the least congested hours.

[33] *Congestion Charge Returns to Stockholm,* THE LOCAL, Aug. 1, 2007, *available at* http://www.thelocal.se/8059/20070801/.

VI. INTERCITY TRAVEL AND PRICING

Pricing has proven to be an effective means of altering consumer behavior. But intracity travel is not the only place where pricing is appropriate. In intercity travel, the relationship between air, road, and rail needs to be modified to reduce congestion, oil dependence, and pollution. In air travel, budget airlines have increased demand and have also contributed to congestion in the skies. Whether it is through charging congestion fees for driving through the central city or offering bargain fares for air travel, travel modes shift based on the cost of the product.

Despite the wide public recognition that climate change is a serious threat, consumer travel choices are less influenced by environmental reasons than by economics. A recent survey conducted by the British holiday camp operator, Butlins, asked travelers why they chose to vacation at home rather than abroad. Of the 1,500 respondents, only one percent selected "to save the planet" as their main reason. Most respondents attributed airport delays (39 percent), luggage restrictions (27 percent), driving on the wrong side of the road (11 percent), foreign food (9 percent), and fear of flying (7 percent).[34]

Aviation is a significant contributor to greenhouse gases. Indeed, the industry's projected rapid growth rate coupled with the proportionally slower rate of technological improvement results in the airline industry being the fastest growing contributor to global warming. Further, aircraft emissions at high altitudes are particularly damaging: pollutants including nitrous oxide and water vapor contain approximately three times the radiative forcing effect on climate change than are expected to result from aircraft carbon dioxide (CO_2) emissions alone. Scientists have suggested that a 60 percent reduction in flights is necessary to stabilize CO_2 levels, even taking into account improvements to aircraft fuel efficiency.[35]

Air and auto travel generate about one and a half times the energy consumed per passenger than rail. As shown in Table 1,

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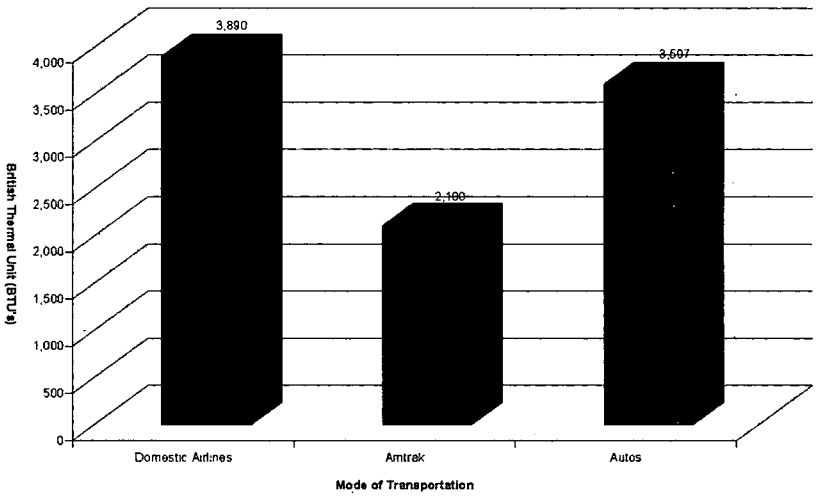
[34] *See* Leo Hickman, *Green Taxes Are the Only Way to Stop Us Flying*, GUARDIAN, Sept. 18, 2007, http://blogs.guardian.co.uk/travelog/2007/09/green_taxes_are_the_way_to_sto.html.

[35] *See* BRENDAN SEWILL, THE HIDDEN COST OF FLYING 15 (Aviation Environment Federation 2003), *available at* http://www.aef.org.uk/uploads/HiddenCost.pdf.

energy consumption for domestic airlines per passenger mile is about 3,890 British Thermal Units (BTU's). Autos expend a similar unit amount, or 3,597 BTU's per passenger mile. BTU's expended for rail is lowest at 2,100 BTU's for Amtrak. According to USDOT, Amtrak is over 40 percent more energy efficient than either commercial airlines or automobiles on a per-passenger-mile basis.[36]

Thus, to achieve a national goal of reducing greenhouse emissions, improving infrastructure and service, mitigating congestion, and improving health, one clear solution is the reduction in vehicle miles traveled (VMT). A straightforward method of reaching this goal is through pricing—a pricing strategy that absorbs externalities and limits outright subsidies to special interests.

Table 2. Energy Consumption per Passenger Mile



Source: Bureau of Transportation Statistics

However, a cost- and time-conscious traveler weighing options between the three modes would, in most cases, opt for air or auto, particularly for travel between mid-distance cities (between 100 to 400 miles). Among the cities examined, direct train service is not even available between San Francisco and Los

[36] Figures are from 2001. RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION, BUREAU OF TRANSP. STATISTICS, tbl.4-20, http://www.bts.gov/publications/national_transportation_statistics/html/table_04_20.html (last visited Oct. 3, 2008).

Angeles, a well-traveled corridor. Table 3 provides a comparison of cost and time for mid-distance travel between three well-traveled major urban centers.

Table 3. Comparison of Travel Cost and Time by Mode

			Auto		Amtrak Train[37]		Acela Train[38]		Plane[39]	
To:	*From:*	*Miles*	*Time*[40]	*Cost*[41]	*Time*	*Cost*	*Time*	*Cost*	*Time*	*Cost*
New York City	Philadelphia	94.2	1:53	$19.14	1:22	$43.00 - $61.00	1:11	$81.00 - $95.00	0:58	$287.49
New York City	Washington, DC	229	4:06	$57.07	3:35	$69.00 - $98.00	2:50	$125.00 - $146.00	1:15	$74.49
Chicago	Detroit	283	4:28	$47.04	5:30	$27.00			1:15	$59.50
Los Angeles	San Francisco	382	5:48	$63.44	8:50*	$58.00 - $60.00			1:23	$63.49

*Not a direct trip.

In the busy northeast corridor, planes are the fastest mode of travel, while cars are the cheapest mode. Rail will not be able to remain competitive unless rail becomes cheaper and faster.

Although Amtrak provides the fastest travel time for the shortest route on this list, New York to Philadelphia, a cost-conscious traveler would be tempted to drive as the direct pocket cost is much less then taking a train. In some cases, the cost of taking Amtrak between these cities could cost up to five times more than driving.

Counter intuitively, the cost of Amtrak is higher than flying between New York City and Washington, D.C. Similarly, the price of flying between the other cities on this list is affordable given the time savings. For example, direct train service is not even available between Los Angeles and San Francisco and driving takes too long. For drivers who are time sensitive, the automobile is not a viable option. In response, the California High Speed Rail Authority was established in 1996 to plan, design and construct high-speed rail service between San Francisco and Los Angeles/San Diego. This service, if implemented, would create a two and a half hour ride between San Francisco and Los Angeles. However, the funding for this project is still tenuous. As of this writing, the fate of the $9.9 billion rail bond is still uncertain.

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[37] AMTRAK, www.amtrak.com (last visited Feb. 1, 2008).

[38] *Id.*

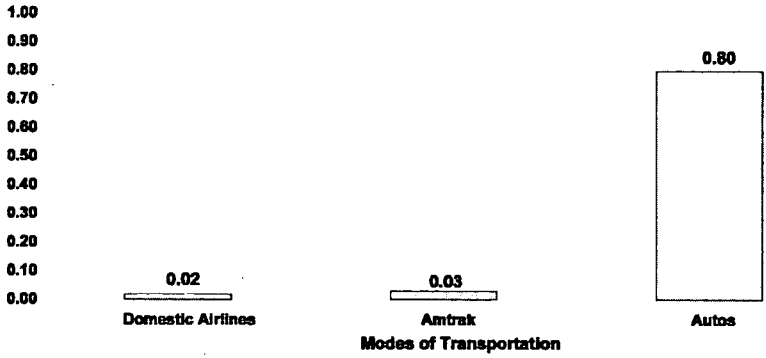
[39] EXPEDIA.COM, www.expedia.com (last visited Feb. 1, 2008).

[40] GOOGLE MAPS, www.google.com/maps (last visited Feb. 1, 2008).

[41] Average includes toll and gas cost for a car with 20 hwy/miles per gallon.

Travelers also choose auto over rail despite the fact that rail (and, in fact, flying) is notably safer than driving. (Driver's perceptions and the sense of being in control likely outweigh the statistical reality). According to the National Safety Council, the most dangerous mode of transportation is private auto. Traveling by plane or train is thirty to forty times safer then driving. As shown in Table 4, the death rate in 2000 for auto travel was 0.80 while traveling by plane and Amtrak was 0.02 to 0.03 per 100 million passenger miles, respectively.

Table 4. Safety-Death Rate per 100 Million Passenger Miles



Source: National Safety Council

The recommendations outlined below describe measures to reduce VMT within urban areas, geographies where cordons can be established around specific areas, as well as measures on reducing plane and auto VMT for travel between nearby metropolitan areas.

CONCLUSION

Pricing and funding strategies to decrease motorized VMT for travel within cities and between cities at distances less than 500 miles need to consider the true user costs of the travel mode. Reducing vehicle usage within cities through congestion pricing strategies should be pursued more aggressively and expansively in the United States. To reduce auto and air VMT between cities, increased Federal funding for rail should be authorized to speed up rail travel and reduce fares. Finally, the price of air travel should be re-evaluated to consider the "true costs," which would include negative externalities, such as greenhouse gas emissions, noise

pollution and air congestion.

A. *Reducing Intracity VMT*

The most innovative and powerful means for reducing VMT throughout the country is to implement a comprehensive system of value pricing. The congestion pricing initiatives described in this paper prove an excellent start for gaining public acceptance and understanding towards this progressive change. However, the benefits from congestion pricing don't stop at an initial reduction of VMT. Revenue garnered from a congestion pricing system can and should be used towards funding alternatives to driving, such as transit, bicycle, and pedestrian facilities.

To more aggressively tackle traffic congestion and its negative externalities, the following list of specific pricing strategies are suggested, to be implemented nationwide, both within and outside of our cities.

1. *Street- and Time-Based Congestion Pricing*

Different streets attract different levels of congestion. A pricing scheme that reflects these varying levels of congestion can serve to manage congestion on a microscopic level. For example, one street may tend to draw more congestion than other parallel streets in the vicinity. With advances in modern technology, it is now possible to place a higher price on streets with greater traffic congestion and a lower price on the lesser used alternate routes. This could have the dual outcome of reducing overall traffic and creating a transportation network with a more balanced flow of traffic. However, this policy would need to be studied in detail to examine impacts on local and area-wide travel patterns before it is implemented. It is worthy of further consideration but in all likelihood would only be implemented in situations that meet specific criteria.

In addition to varying by geographic location, traffic congestion also varies by time of day, month, or year. It is possible to adjust prices based on time. This could be done according to Stockholm's example, in which the price to enter the cordon varies by time of day. Alternatively, Singapore re-evaluates its pricing scheme every three months as traffic patterns change over time, especially with the introduction of a new charge.

2. *High Occupancy Toll (HOT) Lanes*

Many highways throughout the United States include a lane reserved for vehicles with multiple occupants. These are called High Occupancy Vehicle (HOV) lanes. HOV lanes manage freeway demand by providing a faster ride for those who carpool, thus reducing the number of single-occupant vehicles on the road. However, HOV use has declined in recent years. Thus, on many roadways, there is available capacity in the HOV lane, while the general traffic lanes often suffer from excessive congestion. The increasingly popular solution to this dilemma has been to add a toll to existing HOV lanes, providing a faster trip to drivers who are willing to pay. These are referred to as High Occupancy Toll lanes, or simply, HOT lanes. Prices for HOT lanes are usually set high enough to keep traffic moving faster (preferably at free-flow speeds) than the parallel general traffic lanes, yet low enough to attract users. In most cases, HOT lanes are priced at higher levels during peak commuter periods. By creating HOT lanes, highway operators provide the benefit of freeing some existing capacity in the General Purpose lanes and creating a faster trip for vehicles in all lanes. The result is fewer overall hours of vehicle travel and reduced overall emissions as well as a new source of revenue to be used for funding alternative, less polluting modes of transportation.

3. *Parking Pricing*

In 1935, Oklahoma City introduced the country's first parking meters much to the dismay of its citizens. Many complained that parking meters were un-American, illegal, or just another tax. These are the same criticisms claimed by many of today's congestion pricing opponents. In the case of the parking meter, time bred acceptance. Today, while parking meters, and now muni-meters, are widely used, their prices rarely reflect the true cost of occupying the valuable space where they are located. Further, there are many locations, particularly in city centers, where the surrounding land is expensive, and where parking is in high demand, yet on-street parking is free. According to UCLA Urban Planning Professor Donald Shoup in his book, *The High Cost of Free Parking*, there are already too many parking spaces in the country. Shoup argues that abundant free parking contributes to the high demand in auto ownership by reducing the cost of owning a car.

By under-pricing parking, municipalities encourage drivers to

"cruise" the neighborhood in search of a space, resulting in increased vehicle miles traveled and traffic congestion in already congested areas. Parking should be priced in accordance with demand for parking spaces, where the cost of parking could vary by time and location. Recently, New York City initiated a pilot program for variable-rate parking pricing as its latest measure for reducing vehicle miles traveled in the most congested parts of the city.

4. *Revenue Use*

Successful pricing systems must provide citizens with alternatives to paying the charge. Otherwise, congestion will persist and those who cannot afford the tolls will be in danger of losing their jobs if alternate transportation modes are not readily available. The revenue gained from congestion pricing should be used to increase the attractiveness of these alternatives, creating a more balanced transportation network with a decreased focus on moving vehicles and an increased focus on moving people.

5. *Transit*

A well-developed transit system can act as the ideal supplement to a congestion pricing program, allowing those who do not wish to, or cannot, pay the tolls to switch to a cleaner, more energy-efficient mode.

While rail-bound transit is effective at moving large volumes of people, it is costly and often requires heavy construction.[42] Nowadays, transportation practitioners look to buses to carry the majority of the modal shift to transit after a congestion pricing implementation. However, city buses in regular operation, running in mixed traffic, are not popular amongst a driving public. Therefore, to encourage a shift to transit (and general support for congestion pricing), buses must be comfortable, easy to use, and, most importantly, fast and reliable. BRT systems incorporate all of these components and can be seen in cities worldwide.[43] A well-implemented BRT system claims exclusive right-of-way for its buses and fewer stops than a local city bus, thus providing a quick

[42] London, Stockholm, and Singapore have, in fact, made improvements to their rail systems.

[43] TRANSPORTATION RESEARCH BOARD, TCRP REPORT 90: BUS RAPID TRANSIT, VOLUME 1: CASE STUDIES IN BUS RAPID TRANSIT (2003).

trip for its passengers, often faster than if they had driven.

6. *Non-Motorized Transportation*

While transit is an excellent alternative to driving, measures also need to be taken to increase the attractiveness of other environmentally-friendly modes, such as walking and biking. A city with walkers and bikers is a healthier, more vibrant city than one in which people travel in enclosed capsules. A portion of the revenue generated by congestion pricing systems should be set aside to fund non-motorized transportation facilities, as well as to expand Transit Oriented Development (TOD) initiatives, which encourage development to occur near transit centers. Further, with the reduction in vehicles on streets, new space will be available for the construction of bike lanes and the widening of sidewalks.

B. *Reducing Intracity VMT*

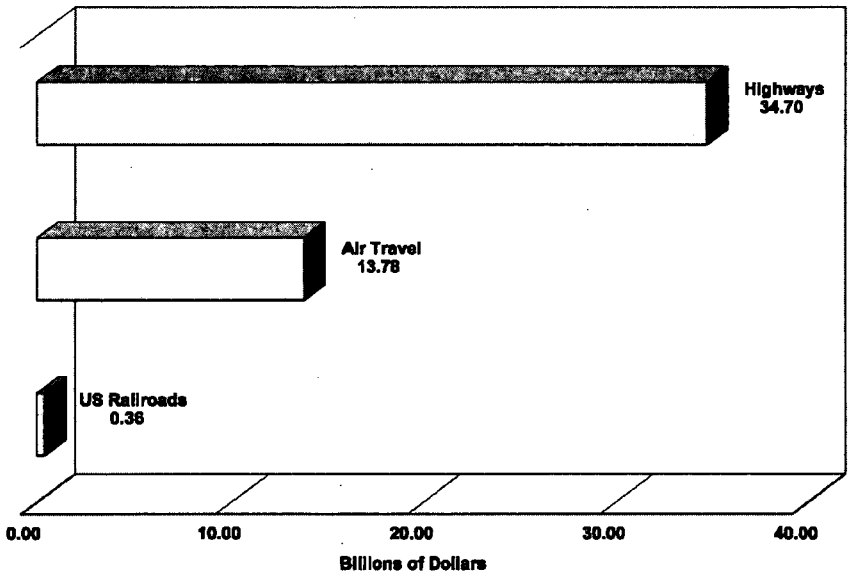
Transportation funding at the Federal level plays a direct role in environmental protection as cars and other vehicles contribute significantly to urban air pollution by producing CO_2, the primary pollutant attributed to global climate change. Pricing strategies that consider the true costs of travel, such as congestion pricing measures in urban areas, as well as increased aviation fees and rail investment, particularly between well-traveled metropolitan areas, are direct measures that could reduce VMT while funding transit and rail.

To achieve reductions in VMT between metropolitan areas less than 500 miles apart, rail needs to become a more affordable and convenient alternative to flying. This is a significant challenge as the cost of flying has become cheaper and more affordable in recent years due to the rise of bargain airlines and shrinking rail subsidies. Despite the Federal trend steering some funding away from traditional highway projects, the table below shows that the annual lion's share of Federal funding is directed at highways ($34 billion), with air travel receiving a little less than half that amount ($13.8 billion) (see Table 5). Meanwhile, rail funding is just a meager $360 million, or 1 percent of highway allocation and 3 percent of air funding. Of the $13.8 billion in air travel funding, $2.4 billion was allocated towards infrastructure development, capital improvements and efficiency. In fact, there are more than

one hundred locales in the U.S. that receive federally subsidized airline service.[44]

In contrast, funding for passenger rail in 2001 was at its lowest level in over ten years. Adjusted for inflation, passenger rail in 2003 received less than two-thirds of what it was getting twenty years ago, while funding for highways and aviation have doubled.[45]

Table 5. President G. W. Bush's FY06 Funding Requests



Source: U.S. Department of Transportation

Air travelers contribute little to the cost of providing public services. Some critics have proposed imposing an aviation tax to offset some of these externalities. In fact, Britain's Department for Transport suggested in December 2000 that if these hidden costs were included, air travel demand would decrease by 3 to 5 percent, equal to a tax of about £1 billion. Further, the European Environment Agency has suggested that total external cost of

[44] Jeff Bailey, *Subsidies Keep Airlines Flying to Small Towns*, N.Y. TIMES, Oct. 6, 2006, at A6.

[45] NATIONAL ASSOCIATION OF RAILROAD PASSENGERS, DEC 28, 2007 HOTLINE # 533, http://www.narprail.org/cms/index.php/hotline/more/2007/12/ (last visited Sept. 30, 2008).

British aviation alone is about £6 billion per year.

Advisor to the British government on the economics of climate change, Sir Nicholas Stern, has argued that if, for example, the environmental cost of each ton of CO_2 emitted were priced at $85, one London-Miami return flight emitting approximately two tons of CO_2 per passenger would need to add $170 to the current price.[46] Similar pricing strategies have been proposed (beyond congestion pricing) to account for the true cost of driving. Although it is impossible to calculate the precise cost of these externalities, some conservative estimates show them adding up to 22 cents for every mile Americans drive. At 22 cents per mile, a gas tax of $6.60 a gallon would be necessary to make drivers fully pay for the cost that car travel imposes on the economy.[47]

To increase public usage of rail, Federal subsidies must increase, including investments to infrastructure, as well as the development of new high speed rail service. To further institute a system where travel is more accurately priced to reflect its true cost, the cost of flying must increase.

In recent years, Americans have become increasingly enlightened to the problems facing the environment and are likely to be more open than ever to changes in the functioning of their transportation system. In facing the lead-up to the 2009 reauthorization of the federal transportation bill, Congress now has the opportunity to provide leadership on a host of transportation reforms. Measures such as congestion pricing and an increased investment in regional rail could be instrumental in reducing overall VMT and, as a result, in decreasing emissions. Such steps are imperative in addressing global climate change and the long-term impacts of man on the environment.

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[46] *See* Hickman, *supra* note 34.

[47] Philip Longman, *Who Pays for Sprawl?* US NEWS, Apr. 27, 1998, at 22.