

Transportation and the Three Es

Energy, the Economy and the Environment

For more than 50 years the U.S. has followed a motor vehicle centric transportation policy which supported dramatic U.S. economic and population growth. Alternate forms of transportation including walking, biking, rail transit and public transit have been overlooked, even neglected in the auto era during which the overriding transportation planning philosophy has been to improve the speed of moving goods, services and people by expanding roads, highways and parking facilities. Transportation planning has proceeded without regard to health or the environment or the integrity and vitality of our communities.

Early in the 21st century, the threat to national security and the implications of global climate change plus the rising cost of a fossil fuel dependent transportation system and ever increasing traffic congestion began to suggest reevaluation and reform of our national transportation policy. There's good reason to restructure transportation priorities to support a sustainable transportation system which provides access to people, places, goods, and services in an environmentally responsible, socially acceptable, and economically viable manner.

The Environment

Transportation accounts for approximately 40% of U.S. greenhouse gas emissions. Motor vehicles generate more than 2/3rds of the carbon monoxide, 1/3rd of the nitrogen oxides and 1/4 of the hydrocarbons released into the atmosphere.

- Runoff of road salt, dirt and dust, fertilizers, pesticides, antifreeze, engine oil, debris and litter from roads, bridges and parking lots find their way into aquifers, lakes, rivers, streams and oceans.
- Road construction alters and destroys wildlife habitat.
- More than 1 million animals are killed on the nation's highways every day.

The Economy

To be competitive globally and to support a vibrant national economy, U.S. transportation systems must provide fast, reliable and flexible access that improves productivity and profitability and reduces costs.

- Business prosperity is at risk when goods and services are not available in a timely manner and when worker productivity is impacted by delays and stress resulting from congestion.
- Each year, U.S. businesses indirectly pay billions of dollars in employee "congestion tolls" comprised of absenteeism, parking expenses, medical care, employee benefits, turnover, and lowered productivity. Employer real estate costs are elevated in order to provide employee parking facilities.
- Ten years ago the average American spent 443 hours behind the wheel of a car, or 55 eight-hour workdays. The Texas Transportation Institute (TTI) estimated that in 1999 the total congestion "bill" came to \$78 billion, the value of 4.5 billion hours of delay and 6.8 billion gallons of excess fuel consumed.
- Paving open space and converting farmland to commercial and residential development reduces our capacity to produce food products, decreasing food availability and increasing food prices throughout the world.

- Highly skilled employees seek workplaces located in areas with a high quality of life, with several transportation options and affordable housing nearby. Businesses that can't offer this high quality have greater difficulty in recruiting workers than those that do.
- Reliability and speed of delivery of goods and services is essential to business success. Businesses are hurt by disinvestment in existing metropolitan areas. Public funds are often dedicated to create infrastructure in the next "new" suburb, benefiting businesses that relocate but not those who stay in place. Businesses located "downtown" or in "old" suburban areas often experience streets and roads in disrepair and congestion- impediments to access by suppliers and customers alike.
- According to the Texas Transportation Institute, Americans are experiencing longer delays, longer periods of congestion, and the spread of congestion across more and more of the nation's roadways. They suggest that traffic congestion will continue to worsen as the number of vehicle miles traveled continues to grow.
- Cars and trucks accounted for 43 percent of all petroleum products consumed in the U.S. in 2000 (EIA. Energy Outlook 2002).
- Oil consumption is an important contributor to the U.S. trade deficit. In 2007 the U.S. spent \$330 billion on imported oil and petroleum products. Dependence on imported oil affects U.S. foreign policy.

Health, Safety and Security

Vehicle centric transportation systems take an increasing toll on health each year, affecting drivers and non-drivers alike. Children, seniors and individuals with respiratory problems are particularly affected.

- U.S. transportation systems maximize exposure to vehicle traffic, air and water pollution while discouraging the exercise which results from walking and biking.
- Other health hazards attributable in part to transportation include obesity and asthma. Remove the personal vehicle and rates of obesity and asthma decline.
- Over 70,000 fatalities each year are attributed to pollution.
- Over 40,000 Americans are killed every year in highway accidents, the leading cause of death among people under 35.
- Transportation funding is typically spent to increase traffic capacity and speed, not to improve safety.
- Although less than 6% of all trips are made on foot or bicycle, approximately 13% of traffic fatalities are pedestrians or cyclists.
- Less than 1% of federal transportation funds are used for walking or biking.
- Transportation accounts for 2/3 of U.S. oil consumption with nearly 50% attributed to motor vehicles. Oil imports represent approximately 60% of U.S. oil consumption; much of it from volatile sources.

Equity and Livability

The average family spends 18% of income on transportation, 94% of which is for buying, maintaining and operating cars. Vehicle centric transportation systems discriminate against youths, seniors, the handicapped, low income individuals and those who don't drive, together comprising 1/3rd of U.S. population.

- Scarcity of affordable housing near employment centers causes vehicle dependability and long commutes for low income individuals
- Freeways dissect and divide many medium and large American cities, overwhelmingly at the expense of low income and minority neighborhoods.

- Often, low income communities are underfunded for street maintenance and public transit while investments often find their way to affluent suburban communities
- Communities located adjacent to highways, typically lower income and minorities, have high rates of air pollution and consequentially lung cancer and asthma
- Women typically compensate for inadequate public transit, making two-thirds of all “family taxi” trips.
- More than 1/3rd of all rural residents are dependent on public transit while 25 percent of rural communities have infrequent public transit service.
- Two-thirds of all new jobs are in the suburbs while three-quarters of welfare recipients live in central cities or rural areas.

Energy

Transportation uses more than 20% of the world's energy, a rate which continues to rise.

- Motor vehicles in the U.S. account for 43% of petroleum product use.
- Within 20 years, the number of cars in the world will double to more than one billion. Corresponding energy use will double.
- Crude oil and natural gas account for 60% of the world's energy supply
- The U.S reached maximum crude oil production in 1970. Many experts have suggested that world crude oil production has already peaked.
- New oil discoveries will not significantly affect world energy supply. Experts estimate that a new Prudhoe Bay sized discovery would represent a six month supply; a new North Sea find would represent a three years supply.
- Crude oil prices have increased significantly, increasing costs for industry, government and consumers alike.

Transportation Policy for the New Century

The objective of a new transportation policy is to reduce the need for travel while increasing transportation capacity and options. Congestion must be considered within the context of economic, environmental and social goals. Programs must support the broad range of transportation issues and work towards encouraging economic growth and competitiveness, cleaner air and water, access to jobs and services for non-drivers including seniors, the poor, the disabled and minorities, reducing traffic-related fatalities and injuries, promoting health, safety and security, reducing fossil fuel use and reducing greenhouse gas emissions.

Conclusion

Business and industry, residents and tourists, the economy and the environment, all pay an increasingly higher price each year for congestion and a motor vehicle centric transportation policy. Long commutes, delays, lost opportunities, increased costs, increased illness, accidents and fatalities, reduced competitiveness, air and water pollution, stress and frustration, inadequate transportation options and much more all result from following this policy. 21st century transportation systems must serve the needs of the entire U.S. population for centuries to come while supporting our competitive position in world markets.