

Such investment is badly needed. Demand for New Starts funding is so great that most cities offer far more than the required local match to secure federal funds. Roughly 300 transit projects are authorized in the current federal transportation bill, yet funding is far below demand, producing only about a dozen projects every six years. The process to secure federal funding is also notoriously burdensome and time-consuming. Bicycle and pedestrian travel has also increased in the last decade, and is anticipated to rise. Currently, dedicated federal funding for these “non-motorized” choices stands at about 1.4 percent, even though bike and walking trips account for between 8 and 9 percent of all trips taken.

More Funding for Repair and Reconstruction. Making repair and reconstruction of existing infrastructure the top priority is consistent with climate change goals. Less money should be allocated to new or expanded highways, until deficiencies in critical facilities (e.g., those that threaten public health and safety) are eliminated and even then, only if highway projects can be shown to reduce greenhouse gas emissions and VMT.

“Fix-it-first” policies would establish powerful incentives for reinvestment in existing neighborhoods.⁴⁰ New infrastructure investment would stimulate infill development and opportunities for more transportation choices, shorter trips, and reduced GHG emissions. Investment in repairs will help ensure that our bridges, tunnels, and other facilities are safe to use. Such investments can be justified on cost-effectiveness grounds. For example, a recent report from the Sacramento Area Council of Governments found that providing infrastructure for sprawl developments costs an average of \$20,000 more per unit than for smart growth developments. With regard to repair, deferred maintenance may reduce expenditures in the short term, but years of neglect create poorly performing infrastructure with much larger long-term repair and reconstruction costs. Deteriorating infrastructure in a community can also discourage private investment.

Increased investment would make up for the federal government’s flagging contribution to infrastructure maintenance over the past several decades. The graphs below show that although both capital and operations & maintenance (O & M) spending have grown dramatically since 1980, the federal share of O & M has not risen at the same rate. This has increased pressure on state and local governments to make up the gap in funding needed to maintain aging infrastructure. The problem is particularly evident in older suburban neighborhoods where developers are seeking to build compact mixed-use projects but are facing resistance from residents concerned about their capacity to accommodate growth.

A fix-it-first policy can be implemented through several mechanisms. One option is to apply strict performance-based criteria to core funding programs (National Highway System, Interstate Maintenance, Surface Transportation Program, and Bridge Program) so that no funds can be spent on new roadway capacity until all critical facilities are brought up to minimum safety standards. Another alternative is to create minimum set-aside requirements for repair and reconstruction. For existing programs, like the Bridge and Interstate Maintenance programs, funding could be also increased to ensure that such set-aside requirements are practical.

⁴⁰ The declaration of findings in the 1991 ISTEA legislation includes an emphasis on maintaining and enhancing system components before investing in new ones; similar State legislation enacted in New Jersey could provide a model to follow in other States.

To ensure that locales follow through with plans for redevelopment, a share of federal funds could be held back and rewarded only after infill-enabling policies are implemented successfully. Such a strategy has been used for infrastructure investment under Massachusetts' smart growth program.

The private sector can also be enlisted in the effort. Specifically, tax credits and low-interest revolving fund loans should be offered to privately financed projects that revitalize and retrofit public infrastructure. Such investments would not only benefit those projects, but would also catalyze investment in adjacent areas.

7.1.4 Replace Funding Formulas with Funding Based on Progress Toward National Goals

We recommend that transportation agencies develop a system of performance measures to meet specific national, state, and local goals pertaining to climate stabilization, energy security, accessibility for low-income and disabled persons, and safety. We believe that a mode-neutral plan to achieve such goals will result in several-fold increases in funding for public transportation, bicycling and pedestrian facilities, and reinforcing land-use changes. The kinds of programs that might see major increases include federal New Starts and Small Starts, federal Safe Routes to School, Transportation Enhancements, the Non-Motorized Pilot Program (which should be converted from a pilot to a regular program), and the Jobs Access and Reverse Commute Program.

Applying performance criteria to roadway infrastructure will likely result in a decrease of unnecessary and traffic inducing highway projects, because most projects have never been scored against any rigorous performance criteria. Many are among the 6,371 new earmarks from the 2005 SAFETEA-LU Act or are otherwise justified based on criteria that are much looser than those faced by transit proposals. Also, they are less likely to be able to compete as well with regard to the urgent national priorities of energy security and climate change discussed in this book.

To achieve a performance-oriented approach, our nation will have to fundamentally transform its transportation policies. Current funding formulas are based on VMT, fuel use and lane miles – thus rewarding increased GHG emissions. Moreover, gasoline tax revenues are dependent on the steady or increasing VMT levels and more funding is allocated to areas with more VMT. As long as our transportation industry is dependent on VMT levels being high, the task of reducing VMT will be extremely difficult. The current crisis in the federal transportation trust fund is actually an excellent opportunity to rethink how revenues are raised in light of national priorities for energy and climate.

States could require metropolitan transportation improvement programs (TIPs) to demonstrate their compliance with statewide measures, creating pots of money to use as rewards for meeting desired targets, and tracking the effectiveness of various VMT-reduction strategies. Potential measures to be achieved by 2030 might include:

- Reduce per capita VMT in a metropolitan region by 25 percent;
- Reduce statewide per capita VMT by 20 percent;
- Reach a state of good repair for roads and bridges to address safety and maintenance issues; and
- Double access to transportation alternatives and increased mode shares for transit, bicycling, walking, carpooling, or telecommuting to expand the transportation choices available to all Americans.

The original ISTEA legislation, as passed by the Senate in 1991 (and way ahead of its time), provides a model of how federal funding could be transformed to a performance-based system. This legislation would have created an Energy Conservation, Congestion Mitigation, and Clean Air Act Bonus program. The original language was as follows:

This paragraph shall apply beginning in fiscal year 1993 and shall apply only to those States with one or more metropolitan statistical areas with a population of two hundred fifty thousand or more. The amount of each such State's Surface Transportation Program funds determined pursuant to section 133(b)(1)(A)(i) shall be reduced by multiplying such amount by a factor of 0.9 if the State's vehicle miles of travel per capita is more than 110 per centum of its vehicle miles of travel in the base year. Reductions in apportionments made pursuant to the preceding sentence shall be placed in a Surface Transportation Bonus Fund and shall be used, to the extent such funds are available, to increase the amount of Surface Transportation Program funds determined pursuant to section 133(b)(1)(A)(i) by a factor of 1.1 for each State affected by this paragraph, if such State's vehicle miles of travel per capita is less than 90 per centum of its vehicle miles of travel per capita in the base year. Funds remaining thereafter in the Surface Transportation Bonus Fund, if any, shall be apportioned to the States affected by this paragraph in proportion to each State's share of Surface Transportation Program funds determined pursuant to section 133(b)(1)(A)(i) among all such States prior to any adjustments made pursuant to this paragraph. Funds so apportioned shall be treated as funds pursuant to section 133(b)(1)(A)(i) area treated. For the purposes of this paragraph, the term "base year" shall mean the year 1990 for fiscal years 1993, 1994, and 1995, and shall mean the year 1995 for fiscal years 1996 and all subsequent fiscal years."

Such a bonus program could be administered either through state allocations and metropolitan suballocations, or better still, through direct allocations to MPOs (as described in the next section).

7.1.5 Provide Funding Directly to Metropolitan Planning Organizations

When MPOs were first established and formally recognized, a number of federal programs requiring regional planning came within their purview (Lewis and Sprague 1997). With the “new federalism” of the Reagan administration, MPOs lost most of the programs they briefly controlled (McDowell 1984). The one program remaining was transportation planning, but new regulations gave states full sway in determining the functions for MPOs. This meant that many MPOs were in the role of merely “rubber-stamping” decisions already made by state highway departments (Solof 1997).

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 reversed this trend, somewhat. ISTEA gave MPOs new authority and responsibilities. MPOs were to craft 20-year long-range transportation plans that were fiscally constrained to meet realistic revenue projections. They also had to adopt short-range transportation improvement programs to formally allocate federal transportation dollars to specific projects. They also now had some additional money to allocate. Before ISTEA, federal law mandated that states siphon off a tiny percentage (less than 1%) of their allocation of federal transportation dollars for MPOs. This money did not fund projects; it was to be used for MPO basic operations (staff, facilities, etc.). The funds for projects had to come through the state DOT, and hence was subject to the state’s discretion and priorities.

ISTEA changed this by providing a minimum suballocation to MPOs (with 200,000+ population): in addition to providing some operating funds, states had to guarantee a minimal amount of project funding to their MPOs. Under the current transportation law, SAFETEA-LU, that amount is 5% of a state’s federal highway allocation (Wolf, Puentes, Sanchez and Bryan 2007).

As important as these changes were, they have hardly made a dent in what is an increasingly inequitable distribution of transportation dollars. Metropolitan areas contain more than 80% of the nation’s population and 85% of our economic output (Puentes and Bailey 2005). Investment by state DOTs in metropolitan areas lags far behind these percentages (Hill, Geyer, Puentes, et al 2005).

The issue is not just the *amount* of funding; it is also the authority to decide *how* the money is spent. More than one-third of the states that receive Congestion Management Air Quality funds—funds that by definition are to be used in MPO areas—do not suballocate those funds to their respective MPOs. Only 12 states suballocate federal Transportation Enhancement program dollars to MPOs. The state decides how these funds are to be spent. Even with the 5% of funds that are required to be suballocated to MPOs, many MPO staff report that the state DOT still wields substantial influence (Puentes and Bailey 2005).

What is necessary to remedy the long history of structural and institutional causes behind these inequities is a new system of allocating federal transportation funds directly to metropolitan areas. Instead of sending federal allocations to the states and expecting the states to “do the right thing” for metropolitan areas, future federal legislation should provide for the direct allocation funds to MPOs, without filtering funds through state DOTs.

Moreover, the amount of allocation should be closer to the proportion of an MPO's population and economic activity compared to other MPOs and non-MPO areas in the same state. A starting basis for making these calculations is the point-of-sale gas tax collection. Because different states have different relative demands for rural and interstate facilities, this formula could be adjusted on a state-by-state basis to reflect those variations.

7.1.6 Develop a National Blueprint Planning Process that Encourages Transportation Choices and Better System Management

Good planning is critical to the viability of alternative transportation modes and land use reforms at a regional scale. The State and Metropolitan Planning sections of the transportation reauthorization bill (Green-TEA) could require Land Use and Transportation Scenario Analyses for all regional transportation plans. Near-term Transportation Improvement Programs and Long Range Transportation Plans currently require alternatives analyses for specific large projects, but not for the full program or land use plans. It is difficult to discern the benefits from coordinated transportation land use policies on a project-by-project basis. Therefore, under the current system, innovative land use-based policies are more difficult to justify.

The next federal transportation bill should fix this problem by examining both the project scale and cumulative benefits of projects. It should also increase funding for coordinating regional transportation and land use planning to facilitate maximizing opportunities for transit-oriented development, intermodal transportation centers, and more compact, walkable neighborhoods. Scenario and visioning initiatives should also include robust public participation components. Efforts such as the California Blueprint Planning Grants and Blueprint Learning Network provide useful models for other states and regions.⁴¹ Regions whose plans help attain performance goals should be able to access additional funding for implementation and other uses. A "Green-TEA" could establish a National Blueprint Learning Network and National Blueprint Planning Grants.

7.1.7 Place More Housing Within Reach

Many homebuyers "drive til they qualify," that is, they purchase a less expensive home further away from where they would ideally like to live.⁴² With rising gasoline costs, the financial trade-off between a longer commute and cheaper housing is changing.⁴³ The potential savings from living in a convenient location with transportation choices is becoming a more important aspect of affordability.⁴⁴

⁴¹ California Department of Transportation (2007), "Blueprint Learning Network." <http://www.dot.ca.gov/hq/tpp/offices/orip/BLN.htm>. Also see California Department of Transportation (2007), "California Regional Blueprint Planning Program." <http://calblueprint.dot.ca.gov/>

⁴² Carrie Makarewicz, Tom Sanchez et. al. , Housing and Transportation Financial Tradeoffs and Burdens for Working Households in 28 Metropolitan Regions, Center for Neighborhood Technology and Virginia Tech, 2006, at [H-T-Tradeoffs-for-Working-Families-n-28-Metros-FULL.pdf](#).

⁴³ Barbara Lipman (ed), A Heavy Load: The Combined Housing and Transportation Burdens of Working Families, Center for Housing Policy, National Housing Conference 2006 at www.nhc.org.

⁴⁴ Scott Bernstein, Carrie Makarewicz, Kevin McCarty; *Driven to Spend*, Center for Neighborhood Technology and Surface Transportation Policy Partnership, 2005, at www.transact.org. Center for Neighborhood Technology and Center for Transit Oriented Development, The Affordability Index: A New Tool for Measuring the True

The Congressionally chartered Millennial Housing Commission has called for a dramatic increase in investment for housing that is affordable to a wide range of individuals and working families of modest means, including teachers, firefighters, nurses, and older Americans. Contrary to widespread beliefs, transit oriented development serves an extremely diverse population and will continue to do so.⁴⁵ Greatly expanding the supply of housing in walkable neighborhoods with high-quality transit is a way to satisfy this unmet demand and offer living arrangements that more people can afford. Recent studies for the Federal Transit Administration, the Dept. of Housing and Urban Development, and the Ford Foundation show that much of the need for housing over the next 30 years can be met within walking distance of the nation's 4,000 existing and development transit stations, with significant reduction of VMT.⁴⁶ Transportation investments, land development practices, and coordinated planning can also help achieve affordability and access goals while also reducing greenhouse gas emissions. Tax credits can provide a powerful incentive for investment in projects with coordinated land use and affordable housing.

Smart Location Tax Credit. The federal government and some state governments currently provide tax credits for hybrid vehicles, solar technology installation, and other technologies that reduce energy use. The same can be done for smart locations that inherently save energy from vehicle trips. The federal government should direct states to identify smart locations based on the "4D" performance criteria discussed in this book: density, diversity, design, and destination accessibility. Developers of new for-sale or rental units within the most efficient location tiers could qualify for a federal Smart Location Tax Credit. A portion of the incentive can be used to finance affordable units. The transportation choices available in these locations would reduce household transportation costs, an important cost saving to the people living in these homes.

Housing Rehabilitation Tax Credit: For existing housing, federal tax credits for rehabilitation should be provided to revitalize all existing housing units in neighborhoods that generate lower VMT per household than the regional average. As discussed above, federal guidelines would require each state to identify smart location zones that would benefit from the rehabilitation tax credit.

These tax credits serve multiple and critical national needs, from affordable housing to neighborhood reinvestment. They could be funded by reducing subsidies that are incompatible with a national focus on climate change, such as capping the tax-free parking benefit at its current level (\$215 per month) or a reduced level (that is, capping it at \$200 per month). Also, they could complement existing federal tax incentives that support affordable housing, reinvestment, and historic preservation. The value of tax credits could be increased when the Low Income Housing Tax Credit is also used to benefit smartly located and/or rehabilitation projects, which would help create housing choices for households of different income levels.

Affordability of a Housing Choice, Brookings Institution, 2006 at www.brookings.edu/metro/umi/pubs/20060127_affindex.htm.

⁴⁵ Preserving and Promoting Diverse Transit-Oriented Neighborhoods, Center for Neighborhood Technology and Center for Transit Oriented Development, 2006 at http://www.cnt.org/repository/diverseTOD_FullReport.pdf.

⁴⁶ Hidden in Plain Sight: Meeting the Coming Demand for Housing Near Transit, Center for Transit Oriented Development 2005 at www.reconnectingamerica.org.

The federal Historic Preservation Tax Credit has been one of the most effective tools for revitalizing neighborhoods and repopulating older cities, suburbs, and towns. It should be strengthened and expanded to benefit a wider range of historic properties and to be combinable with other tax credits to facilitate more revitalization and affordable housing production.⁴⁷

7.1.8 Create a New Program to Provide Funding to “Rewrite the Rules”

Builders, developers, and industry analysts have conducted market research studies that show a strong and growing demand for walkable, mixed-use neighborhoods with good transit access (see Chapter 1). However, outdated local development regulations (such as subdivision regulations, zoning, parking standards) often make this type of development the hardest thing for a developer to build. Ironically, creating neighborhoods that resemble some of our nation’s most appealing places, such as the Georgetown neighborhood in Washington, D.C., or Charleston, South Carolina, is technically illegal in many places because such construction would violate current codes.

The problem is not lack of desire from cities, counties, or towns. In fact, many localities want to modernize their obsolete codes. However, limited planning funds make it hard to both run the development process and redesign it. The federal government provides vast technical assistance resources for everything from agricultural practices to homeland security. Congress should establish a new program to help communities update development rules to support more walkable, town-style, environmentally friendly development.

At the very least, such changes should allow smart growth and compact development a chance to compete by facing the same development process that conventional development must follow. Leveling the playing field would benefit consumers as they shop around for housing and development choices. Most communities already have a surplus of large-lot, single-family homes, and those that wish to change increasingly want to rewrite the rules to encourage compact development, much in the same way that conventional suburban development was subsidized and facilitated through federally discounted mortgages, infrastructure, planning and zoning rules, and other incentives. Changing the rules in just the 50 largest American metropolitan areas would quickly bring more housing, neighborhood, and transportation choices to about 168 million people, or more than half of all Americans.

7.2. State Policy Recommendations

In the absence of major federal action, many states are already moving ahead with plans to reduce CO₂ emissions. Some states have banded together in compacts like the Regional Greenhouse Gas Initiative and the Western Regional Climate Change Initiative to create cap-and-trade programs. In addition, twenty-nine individual states have created climate action plans; California and New York have some of the best defined plans.

⁴⁷ Working with the Internal Revenue Service and State Historic Preservation Offices, the National Park Service in 2006 approved 1,253 rehabilitation projects that attracted a record-breaking \$4.08 billion in private investment, which is equivalent to a more than 5 to 1 return on federal tax credits invested.

State climate plans in New York, Connecticut and Massachusetts include comprehensive VMT-reduction recommendations, though implementation has been mixed.⁴⁸ New York state requires its Metropolitan Planning Organizations to report GHG impacts of Transportation Improvement Programs and Long Range Transportation Plans (both are required to receive federal transportation funds).⁴⁹ Connecticut created an Office of Responsible Growth to promote transit-oriented development, provide transit alternatives, encourage walkable communities and target state funding to support development in designated Responsible Growth areas.⁵⁰ The California Energy Commission runs a working group tasked with developing recommendations on achieving GHG reductions from smart growth policies. In August 2007, the Commission released a set of policy recommendations on land use and climate change based on a comprehensive review of state and local efforts.⁵¹

Our recommendations for state policies incorporate development and land use as VMT and CO₂ reduction strategies and will work with or without the federal policies described above. They include:

- 1) Set state targets for VMT as part of a CO₂ reduction plan;
- 2) Adopt state transportation and land use policies that supports climate goals;
- 3) Improve transportation planning models to reflect the latest research on how the built environment affects travel behavior (regional travel forecasting, trip generation, etc.);
- 4) Align state spending with climate and smart growth goals;
- 5) Eliminate perverse local growth incentives; and
- 6) Create economic development incentives.

⁴⁸ CCAP (2003) on Collaboration with the New York Greenhouse Gas Task Force, "Recommendations to Governor Pataki for Reducing New York State Greenhouse Gas Emissions." http://www.ccap.org/pdf/04-2003_NYGHG_Recommendations.pdf. See also CCAP(2004), "Connecticut Climate Change Stakeholder Dialogue: Recommendations to the Governor's Steering Committee." <http://www.ccap.org/Connecticut.htm>.

⁴⁹ ICF Consulting (2005), "Estimating Transportation-Related Greenhouse Gas Emissions and Energy Use in New York State." <http://climate.dot.gov/docs/nys.pdf>.

⁵⁰ Reil (2006), Executive Order 15. <http://www.ct.gov/governorrell/cwp/view.asp?A=1719&Q=320908>.

⁵¹ California Energy Commission, "The Role of Land Use in Meeting California's Energy and Climate Change Goals," August 2007.

<http://www.energy.ca.gov/2007publications/CEC-600-2007-008/CEC-600-2007-008-SF.PDF>.

7.2.1. Set State Targets for Vehicle-Miles of Travel

Establish a GHG Reduction Plan That Includes a Target for VMT Reductions

If the federal government does not act to reduce GHG emissions and VMT, states can take the lead and establish their own goals. Whether federally or state driven, the state target should be allocated among local governments within the state, or, where localities are highly fragmented, to regional governments.

To achieve the targets, local and regional governments would submit plans to the state using the strategies that best fit their communities. States would then rate those plans and provide greater financial support and regulatory relief to those places with better implementation plans. Meeting VMT targets provides the opportunity to achieve significant co-benefits (e.g. greater housing and transportation choice, fiscal savings, providing services in underserved neighborhoods), so the state may also rate local plans according to their achievement of these benefits. To help communities meet these targets, the state can provide grants and technical assistance to help localities develop realistic plans that score better and become eligible for greater state aid. New federal transportation policy (Green-TEA) could help by providing supportive policies and incentives.

As explained in Section 7.1.1., this system is similar to the one currently employed to meet air quality standards under the Clean Air Act (CAA). Under the CAA, metropolitan regions must inventory their emissions sources and develop plans to bring those emissions in line with clean air standards. For example, most metro regions already inventory their VMT and associated emissions. They also project future VMT and develop strategies to reduce emissions from both current and future auto trips.

Washington State's Commute Trip Reduction program employs a similar strategy and is focused explicitly on reducing single-occupant vehicle commutes and greenhouse gases.⁵² To achieve these goals, the state has set targets for reductions in single occupant vehicle commutes and VMT per commuter. Local jurisdictions must then set goals that are at least equal to the state goals and create plans for achieving the target measures. This program is described on the web site as follows:

1) **Program goals.** This section establishes the goals and targets for the CTR program that every city and county shall seek to achieve at a minimum for the affected urban growth area within the boundaries of its official jurisdiction. Every two years, the state shall measure the progress of each jurisdiction and region toward their established targets for reducing drive-alone commute trips and commute trip vehicle miles traveled per CTR commuter. Local and regional goals and measurement methodologies shall be consistent with the measurement guidelines established by WSDOT and posted on the agency's web site.

⁵² See the Washington Department of Transportation Web site at <http://apps.leg.wa.gov/WAC/default.aspx?cite=468-63-030>

2) **Statewide minimum program goals and targets.** The goals and targets of local jurisdictions for their urban growth areas shall meet or exceed the minimum targets established in this section.

a) The first state goal is to reduce drive-alone travel by CTR commuters in each affected urban growth area. This will help urban areas to add employment and population without adding drive-alone commute traffic. The first state target based on this goal is a ten percent reduction from the jurisdiction's base year measurement in the proportion of single-occupant vehicle commute trips (also known as drive-alone commute trips) by CTR commuters by 2011.

b) The second state goal is to reduce emissions of greenhouse gases and other air pollutants by CTR commuters. The second state target based on this goal is a thirteen percent reduction from the jurisdiction's base year measurement in commute trip vehicle miles traveled (VMT) per CTR commuter by 2011.

3) **Local program goals and targets.** Local jurisdictions shall establish goals and targets that meet or exceed the minimum program targets established by the state. The goals and targets shall be set for the affected urban growth area in the city or county's official jurisdiction, and shall be targets for the year 2011 based on the base year measurement for the urban growth area.

a) Each local jurisdiction shall implement a plan designed to meet the urban growth area targets. Progress will be determined every two years based on the jurisdiction's performance in meeting its established drive-alone commute trips and VMT targets. Local jurisdictions shall establish base year values and targets for each major employer worksite in the jurisdiction. However, the targets may vary from major employer worksite to major employer worksite, based on the goals and measurement system implemented by the jurisdiction. Variability may be based on the following considerations:

7.2.2. Adopt State Transportation and Land Use Policies That Supports Climate Goals

Guide Transportation Investments to Projects That Support the Creation of Walkable Communities, More Transportation Choices, and the Achievement of Climate Goals

The prevailing method of transportation planning—trying to keep up with demand by simply “projecting and providing”—has proved to be both more expensive and less successful than many would wish. In spite of large transportation investments, congestion nationally continues to worsen year after year. Further, future projected needs far outstrip any reasonable estimates of available funds. Finally, beyond fiscal constraints, climate change, an aging population, changing market demand, and other macro-trends suggest that a continuation of strategies that rely nearly exclusively on automobile transportation is untenable.

Instead, states can work with localities and the public to identify future land use and transportation scenarios that provide a wide and suitable array of transportation choices, manage the growth of VMT and emissions, reduce household and government transportation expenses, and support greater access and mobility for all citizens. The California Department of Transportation is currently supporting this approach through its BluePrint project where localities proactively examine future growth scenarios and make investments to achieve the desired scenario. Similar processes have worked in Utah (Envision Utah) and Oregon (The LUTRAQ project). In these latter cases, the preferred future growth scenarios reduced vehicle miles of travel, created better traffic outcomes and saved infrastructure costs. Both studies are included in the literature reviewed above.

Once a future land use/transportation scenario is identified, states can then direct every new investment toward building that scenario. This is substantially different from the current process, because rather than simply responding to land use changes transportation investments now help to shape those changes in a way that leads to better outcomes. Investing in a specific vision for a region's or community's future will ensure that the future is more than just the sum of individual projects, and that development decisions and policies help meet economic, environmental, community, and fiscal goals. State policy changes that implement this approach include:

- A shared state and local vision of the future transportation system;
- Evaluating the full range of options and outcomes in a mode-neutral way, including system and demand management, land use, and alternative modes;
- A State transit village program to coordinate state policy for growing transit locations and identify future transit-oriented development (TOD) opportunities (e.g., New Jersey);
- State standards to allow roads to adapt to the surrounding land use and the adoption of context-sensitive design more broadly (many states, including Montana, Ohio, Massachusetts, Texas, and Washington);
- State access management policies that are consistent with the future transportation system (e.g., managing highway access for new developments to better manage traffic loads; leading examples include policies in Colorado, Maryland, Florida, Oregon, and Delaware);
- State connectivity policies that rely more on a larger number of smaller, interconnected road facilities, with accompanying state funding for smaller-scale roads;
- A Fix-it-First infrastructure policy (e.g., New Jersey's Fix-it-First program for transportation);
- Adoption of a "complete streets" policy and an emphasis on providing a variety of attractive transportation options to the maximum number of people (e.g., St. Louis and San Diego);
- Elimination of state restrictions that prohibit gasoline tax revenues from being spent on public transportation and other modes (most states do not have such prohibitions); and
- Requirements for developers to assess and mitigate climate impacts of large projects (e.g., Massachusetts⁵³; King County, Washington⁵⁴).

⁵³ Massachusetts Executive Office of Energy and Environmental Affairs (2007), "MEPA Greenhouse Gas Emissions Policy and Protocol." <http://www.mass.gov/envir/mepa/pdf/misc/ghgemissionspolicy.pdf>.

⁵⁴ King County (2007), "Executive Order on the Evaluation of Climate Change Impacts through the State Environmental Policy Act." <http://www.metrokc.gov/exec/news/2007/pdf/climateimpacts.pdf>.

Also, with successful trials around the globe, roadway pricing strategies will likely become a key tool in managing traffic congestion and raising revenue in the U.S. States will play a key role in approving metropolitan pricing schemes, as will the federal and local governments. Such efforts can have a major impact on VMT reduction and funding alternatives, such as infill development, cycling and walking infrastructure, transit operations and capital, and other priorities.

7.2.3. Align State Spending With Climate and Smart Growth Goals

Set Performance Standards for Discretionary and Formula-Allocated Spending, and Target Spending to Areas that Rank Better for Smart Growth

States should ensure that funding programs support climate and VMT reduction goals and should adopt policies to reward local governments that help to meet such goals. States should begin by inventorying all available discretionary funds in such areas as housing, economic development, infrastructure, water and sewer, schools, transportation, state facilities, and recreation. These funds can then be allocated to localities according to their performance in meeting state goals. This inventory should include not only state funds, but also federal funds passed through the state over which the state has discretionary control. These discretionary funds, if thoroughly identified and pooled, can amount to a significant incentive for counties and municipalities. When Massachusetts employed this approach, discretionary funds totaled roughly \$500 million within an annual state budget of \$27 billion.

After completing its inventory of discretionary funds, the state should develop a coordinated investment approach that would tie funding to local performance on the state's priorities for transportation, housing, tax reduction, and climate. One mechanism for judging performance is a scorecard modeled on the Commonwealth Capital Fund in Massachusetts. This scorecard system awards points when local governments change their development rules and funding to promote more compact, mixed-use, walkable neighborhoods. Communities that score well receive access to some funding when the rule changes are made, and receive access to the larger, remaining portion of funding when new development projects are permitted—tightly linking spending with results.⁵⁵ These incentives have led directly to hundreds of changes to local zoning in Massachusetts cities and towns. These changes contributed to increased production of multi-family housing units from 3,800 to more than 7,000 units annually.

Another state scorecard system is used by the California Infrastructure and Economic Development Bank's Infrastructure State Revolving Fund Program. It rates applications on a 200-point scale that gives substantial preference to projects that:

- 1) are located in or adjacent to already developed areas and in a jurisdiction with an approved General Plan Housing Element;
- 2) are located in or adjacent to and directly benefit areas with high unemployment rates, low median family income, declining or slow growth in labor force employment, and/or high poverty rates; and
- 3) improve the quality of life by contributing to public safety, health care, education, day care, greater use of public transit, or downtown revitalization.

⁵⁵ For more information on Massachusetts' Commonwealth Capital Fund and its scorecard, please see: www.mass.gov/?pageID=gov3topic&L=2&L0=Home&L1=Smart+Growth&sid=Agov3.

Unlike a state's discretionary funds, "formula funds" are distributed to localities on the basis of a formula that is applied annually to a given funding stream (e.g., gas tax revenues, housing funds). Thus, each locality is guaranteed a share of this money. Without changing the geographic allocation of these funds, states can ensure that these dollars are invested in projects that contribute to meeting state goals. The top priorities should be to minimize long-term costs of maintenance and maximize the safety and security of existing roads, bridges, transit, water systems, and other critical community infrastructure. In doing so, the state gets the additional and climate-friendly outcome of making infill and redevelopment more attractive. Therefore, states can designate that a certain percentage of "formula-funded" transportation, school, housing, or other funds to go to the operation and maintenance of existing transportation, water, and wastewater infrastructure.

The remaining funds can be made available to projects that perform best with respect to meeting state goals. Projects within a locality should compete for these funds based on performance, without a predetermined water treatment technology or transportation mode. With this "means neutrality" built in, more innovative projects will be able to successfully compete and become established in the market.

7.2.4. Create Economic Development Incentives

Modernize Incentives to Support Growth and Climate Goals

The average state enables and oversees more than 30 different kinds of company-specific economic development incentives. Most are effectively as-of-right (rather than competitive or discretionary), and many are granted by local or regional bodies. While a few (e.g., brownfield remediation credits) are *de facto* limited primarily to developed areas, they are not officially linked to state land use policy or to transportation planning through enabling legislation. Very few state incentives are harnessed to facilitate shorter commutes, transit-oriented development, or other efficient practices.

Maryland's Smart Growth Areas Act explicitly seeks to better coordinate economic development with planning. Enacted in 1997, the law designates Priority Funding Areas (PFAs), defined as those areas that are already served by water and sewer infrastructure or are planned to receive infrastructure (both urban and rural). The state will spend infrastructure and economic development money only within these PFAs. Areas outside the PFAs are ineligible for state assistance in the form of infrastructure spending or economic development incentives; if development happens there, it will happen without help from the state. The law is one of several Maryland initiatives to preserve rural lands and revitalize cities and towns.

Illinois' Business Location Efficiency Incentive Act, enacted in 2005, gives a small additional corporate income tax credit under one common state incentive (Economic Development in a Growing Economy) if the job site is accessible by public transportation and/or proximate to affordable workforce housing.⁵⁶ Companies seeking the additional credit at sites that do not initially qualify can later qualify with a site remediation plan that includes measures such as an employer-assisted housing plan, shuttle services, pre-tax transit cards, or carpooling assistance.

By virtue of their statutory control over both state tax credits and the most common kinds of local incentives, such as property tax abatements, tax increment financing districts, and enterprise zones, states have an enormous amount of unrealized power to recast economic development as a tool for efficient growth and reduced VMT.

7.2.5. Eliminate Perverse Local Growth Incentives

Reduce Competition Between Local Governments and Eliminate the "Fiscalization of Land Use" That Distorts Local Priorities

Local governments rely upon a variety of state-regulated revenue streams to fund local public services. But state policies sometimes depress one stream (e.g., property taxes) while enabling another (e.g., local sales tax increments), giving local governments a fiscal incentive to avoid, for example, residential land use and instead subsidize big-box retail projects. The result of these decisions can be the concentration of jobs far from workers, under-provision of affordable housing and housing for families, and attempts to export negative impacts of development to neighboring jurisdictions.

⁵⁶ SB2855, at

<http://www.ilga.gov/legislation/BillStatus.asp?DocNum=2885&GAID=8&DocTypeID=SB&LegID=23994&SessionID=50>, promoted by a coalition of public interest organizations including Good Jobs First, Center for Neighborhood Technology, Chicago Metropolis 2020 and other groups.

It is difficult for local governments to address these issues on their own. Those that are friendly to family housing or affordable housing can become overwhelmed if their neighbors seek to block these housing types. Localities that do not aggressively zone for commercial land use risk being out-competed by neighbors that do. While local governments in a few metro areas, such as Minneapolis/St. Paul and the City of Charlottesville and Albemarle County, Virginia, have developed pacts to deter intraregional competition, this is relatively rare.

States can eliminate the perverse incentives that local governments face in the development market. In Massachusetts, local governments were reluctant to permit housing for families, fearing that an influx of children would add to the cost of education. The state now provides towns with a hold-harmless guarantee: if education costs rise, the state makes up the difference. In Arizona, local government retail incentive packages became so large and so frequent that the state passed a law prohibiting them in the Phoenix metro area. For many New England states, property taxes are the dominant funding source, and property tax reform is seen as the potential solution. In parts of the West where property tax caps are more common, sales taxes can be a driver of land use decisions, and reform efforts must focus on this dynamic.

According to the National Association of Industrial and Office Properties' (NAIOP) web site, where localities have taken steps to reduce competition for tax base the following lessons can be drawn⁵⁷:

- In the Twin Cities Region in Minnesota, this technique has notably reduced disparities among the localities included in the pool concerning their assessed non-residential property values per capita. When this arrangement was put into effect in 1975, the greatest disparity was 50 to 1; today it is 12 to 1. It is not clear whether this technique has greatly reduced competition among adjacent or nearby localities for added non-residential development projects.³²
- In the Dayton, Ohio, region, this technique has made it possible for multiple municipalities to cooperate in promoting the economic development of the entire region, including the provision of affordable housing and cultural facilities serving the entire region.
- In the Hackensack Meadows District, in New Jersey, this technique has made it possible for a regional body to develop a land-use plan that is rational from the broader perspective of an entire region, even though that region encompasses parts of 14 municipalities and two counties, without causing fiscal disadvantages to any of the those 16 legal entities.
- In Rochester, New York, the city is able to collect more funds from the local option sales tax that flows through the county government than it could if it charged that tax only within its own boundaries.

⁵⁷ <http://www.naiop.org/governmentaffairs/growth/rtbrs.cfm>.

7.3. Regional and Local Policy Recommendations

Many local governments are committing to action to reduce greenhouse gas emissions; more than 650 mayors have signed on to the U.S. Conference of Mayors' Climate Protection Agreement,⁵⁸ and about 400 have signed on as "Cool Mayors" with ICLEI's Mayors for Climate Protection program.⁵⁹ The Sierra Club, in partnership with King County, Washington; Fairfax County, Virginia; and Nassau County, New York, recently launched the "Cool Counties" campaign. To achieve their greenhouse gas reduction goals, these localities will have to include policies that reduce VMT. The following policies can help local governments reach the CO₂ reductions they want, while also creating and supporting strong, healthy, diverse communities where people have more choices in where they live and how they get around:

- 1) Change the development rules to modernize zoning and allow mixed-use, compact development;
- 2) Favor location-efficient and compact projects in the approval process;
- 3) Prioritize and coordinate funding to support infill development;
- 4) Make transit, pedestrians, and bikes an integral part of community development; and
- 5) Invest in civic engagement and education.

7.3.1. Change the Development Rules

Examine the Rules and Regulations That Govern Development, and Determine if and how They Need to be Changed to Get Smart Growth That Reduces CO₂ Emissions

As discussed in the State Policy Recommendations section, many communities want to create mixed-use neighborhoods, integrate new development with transit stops, allow more density and more compact neighborhoods, offer more types of housing to allow people of different income levels to live in the same neighborhood, or require sidewalks, bike lanes, and other bicyclist and pedestrian amenities. But many find that their development rules do not allow them to get the type of development they want. Sometimes a community may even develop a vision of what its residents want from development, only to find that it simply is not possible to fulfill the vision under the existing regulations. Part of the strategy for reducing CO₂ emissions from vehicles is to make it easier to build more location efficient, compact developments that allow people to choose walking, bicycling, or public transit.

To achieve that goal, communities should examine their development rules and determine if and how they need to be changed to meet smart growth, CO₂ reduction, and other community goals. Several tools, such as scorecards and zoning code audits, are available to help communities figure out what they need to change to get the kind of development they want.⁶⁰ Some opportunities for reform include:

- zoning codes;
- subdivision regulations;

⁵⁸ As of August 2007; see <http://usmayors.org/climateprotection/listofcities.asp> for the list of signatories.

⁵⁹ See http://www.coolmayors.com/common/directory/browse_mayors.cfm?clientID=11061 for the list of mayors.

⁶⁰ See, for example, the policy and code audit tools from the Smart Growth Leadership Institute at <http://www.sgli.org/implementation.html> and samples of scorecards from around the country at <http://www.epa.gov/smartgrowth/scorecards/>.

- street design standards;
- parking standards;
- annexation rules;
- design guidelines; and
- any other regulation that affects the location and design of development.

Rarely do these regulations require a complete overhaul to make smart growth projects permissible “by right”; many times, it can be done with tools like area plans or overlay zones.

For example, Nashville/Davidson County, Tennessee, had subdivision regulations that applied to rural, suburban, and urban areas equally. Therefore, building more dense and compact development in the central city was not possible. With assistance from the Smart Growth Leadership Institute, the county revised its subdivision regulations so that different standards could be applied to different areas.⁶¹ Now the county can preserve the character of its rural areas while permitting the vibrant development it wants in more urban areas.

Such regulatory reform efforts are largely responding to market demand that is strong across the nation. A recent national survey of developers found that more than 60 percent agreed with the following statement about compact, walkable development: “In my region there is currently enough market interest to support significant expansion of these alternative developments,” with a high of 70 percent in the Midwest and a low of 40 percent in the South Central region.⁶²

State and local governments should also find ways to expedite and reward exemplary projects that meet the U.S. Green Building Council’s LEED for Neighborhood Development (LEED ND) certification standards, and consider adopting those standards as their own. Illinois, for example, just passed “The Green Neighborhood Grant Act,” which is the first state legislation to tie LEED ND standards to financial incentives. The Illinois program authorizes the Department of Commerce and Economic Opportunity to issue Requests for Proposals (RFPs) from model development projects that have received LEED ND certification, and award up to three grants to reimburse up to 1.5 percent of the total development costs.

7.3.2. Favor Good Projects in the Approval Process

Make It Easier, Faster, and More Cost Effective for Good Development Projects to Get Approved, and Offer Incentives and Flexibility to Get Better Development

Once communities have reformed their regulations to allow good development, they should make it easier for that good development to be approved. Predictability in the development process is valuable to everyone concerned: developers, local government, and community members. Laying out the guidelines and rules for what the local government considers a “good” development project makes the process more predictable and fair, as does defining the benefits developers will get from meeting or exceeding the community’s standards. Two main ways to favor good projects are to offer them flexibility and to speed the approval process.

⁶¹ See <http://www.nashville.gov/inpc/subdivregs/intro.htm> and <http://www.sgli.org/communities.htm#nashville>

⁶² Jonathan Levine and Aseem Inam, “The Market for Transportation-Land Use Integration: Do Developers Want Smarter Growth than Regulations Allow?” *Transportation*, Volume 31, Number 4, November 2004.

Flexibility in meeting requirements gives developers room for innovation and creativity, as well as cost savings. If a development project meets or exceeds the community's goals and vision, the developer should be rewarded with, for example, a density bonus that allows them to build more in exchange for providing an amenity the community wants, like affordable housing. Alternatively, local governments can calculate the traffic reduction benefits of a development and adjust accordingly how much parking, road improvements, or air-quality mitigation the developer needs to deliver.

Developers tend to favor an approval process in which projects that follow certain guidelines or are located in targeted areas get streamlined or fast-tracked approvals. Communities might guarantee review of the project within a certain amount of time, or they might coordinate the various departments that need to review development proposals so that review happens quickly and smoothly. Of course, the process must include several opportunities for meaningful public input and review and must ensure compliance with other environmental safeguards.

Some communities do this by setting out specific desirable criteria; any development that meets these criteria gets a fast track to approval. With the advent of the LEED-ND green development guidelines, communities have a good starting point for setting standards to define walkable, environmentally responsible neighborhoods.

In Austin, Texas, the city developed a matrix of smart growth criteria to help it analyze development proposals within areas where it wants to encourage development. The matrix measures how well the project meets the city's goals, including the location of the project, its mix of uses, its proximity to public transit, its pedestrian-friendly design, compliance with nearby neighborhoods' plans, and other policy priorities, including tax base increases. For projects that score above a certain level on the matrix, the city will waive some fees or invest public money in infrastructure for the development.⁶³

In other places, an outside organization plays a similar role, setting up a list of criteria and offering public support for projects that meet those criteria. For example, the Greenbelt Alliance in the San Francisco Bay Area will endorse developments that are "pedestrian-oriented and transit accessible, use land efficiently, and provide affordable housing."⁶⁴ The Greenbelt Alliance will send a letter of support to the appropriate officials and actively support a project at public hearings if requested. Similar programs, with varying degrees of endorsement, are run through alliances in many other regions.⁶⁵ While this outside support doesn't guarantee a faster process, the stamp of approval from a neutral entity can help some projects get approved.

⁶³ See <http://www.ci.austin.tx.us/smartgrowth/default.htm>.

⁶⁴ See http://www.greenbelt.org/whatwedo/prog_cdt_index.html.

⁶⁵ See, for instance, the Vermont Smart Growth Collaborative's Housing Endorsement Program (http://www.vtsprawl.org/Initiatives/sgcollaborative/VSGC_housingendorsement.htm) or the Urban Land Institute-supported Smart Growth Alliances Information Network (http://www.uli.org/Content/NavigationMenu/MyCommunity/SmartGrowth/SmartGrowthAllianceInformationNetwork/Smart_Growth_Allianc.htm).

7.3.3. Prioritize and Coordinate Funding to Support Infill Development

Find Funding Sources to Support Infill Development, Coordinate Funding to Get the Most Impact, and Prioritize Infrastructure Projects to Determine Where the Investment will Do the Most Good

Just as at the federal and state levels, local governments should prioritize funding, including infrastructure spending, to support development that helps reduce CO₂ emissions and meets other community, economic, and environmental goals. By directing infrastructure funds to infill projects, whether to repair existing infrastructure or build new facilities, the community is investing in the type of development that can help reduce CO₂ emissions by creating more options for residents. Just as importantly, it is not subsidizing development in far-flung areas that will generate more vehicle trips. This money is a public investment, and it should be spent wisely and with the goal of doing the most good for the most people. As the Metropolitan Council of the Twin Cities region of Minnesota puts it:

For the metropolitan transit and transportation system, putting growth where the infrastructure to support it already exists means roads that *don't have to be built*. Providing transportation options that include fast, convenient transit services means freeway lanes that *don't have to be added*. And, where new infrastructure is necessary, investments in more connected land-use patterns will be the most fiscally responsible use of limited public resources for transportation.⁶⁶ [emphasis theirs]

Scorecards are useful to set priorities for public spending. Similar to the scorecards mentioned previously in this chapter, communities can set up criteria based on location in an area designated for growth; proximity to transit, housing, workplaces, and other amenities; need for new infrastructure; and accommodation of automobiles, pedestrians, bicyclists, and transit. Infrastructure projects and other expenditures that score highly on the scorecard get priority, or get more public funding compared to projects that score poorly.

To get the most from their investments in infrastructure, transit, housing, and other expenditures, local governments should coordinate their land use policies with these investments. This means directing development to areas around transit stations, sharing parking among different uses, building new schools in places easily accessible to the neighborhoods they will be serving, and so forth.

7.3.4. Make Transit, Pedestrians, and Bikes an Integral Part of Community Development

Create a Comprehensive Vision and Plan for Creating Safe and Accessible Routes, Networks, Environments, and Linkages to Destinations. Rewrite Rules as Necessary, and Invest in Supportive Infrastructure.

If communities make it easier for people to walk, bike, or ride transit, they create new options for people besides driving. Making transit, bike, and pedestrian amenities part of planning guidelines creates predictability for developers and can help reduce traffic from new development, which is

⁶⁶ 2030 Regional Development Framework, Metropolitan Council, pp. 6-7, adopted January 14, 2004, amended December 14, 2006, <http://www.metrocouncil.org/planning/framework/Framework.pdf>.

a major concern of many of those who live in adjacent neighborhoods. Streets that are built with not only cars, but also bicycles, transit, and pedestrians in mind—often known as “complete streets”—are safer and make people feel more comfortable walking or biking. They are also often more attractive, with shade trees, benches, and other amenities. And they provide options for people who can’t or choose not to drive, including children, older people, and people with disabilities.

Localities should adopt complete streets policies and design guidelines to create safe and welcoming environments for pedestrians, cyclists, and transit users. These policies require the accommodation of all users of the right of way, and set out new procedures for ensuring that construction, reconstruction, and maintenance projects balance the needs of all users. Accommodating new, walkable development on land that once held dead shopping centers or factories, or creating transit-oriented developments at rail stations, is likely to require investments in building or retrofitting a street network for pedestrians and cyclists.⁶⁷

A great example of a place that has put all the elements together is Arlington County, Virginia, a suburb of Washington, D.C. Arlington County’s master transportation plan includes elements for transit, bicycling, and walking.⁶⁸ The county has two subway lines, part of Washington’s Metrorail system, and numerous bus routes. It has coordinated its land use with these transit investments, concentrating development along the subway lines and tailoring bus lines to key corridors. The county has emphasized safe and appealing walking and biking environments, putting in bike lanes, sidewalks, crosswalks (many with “countdown” pedestrian signals to let people know how much time they have left to cross the street), and bike and walking paths that connect to trails that go throughout the Washington metropolitan region. The county has also brought in car-sharing services to make it easier for residents to own one car instead of two, or to go without a car.

As a result of having all these transportation options, Arlington has some of the highest rates in the country of commuting by means other than personal automobile. Thirty-nine percent of Arlington residents commute by public transportation, twice the national average, and 6 percent walk to work, well above the national average of 1 percent.⁶⁹ The numbers are even higher in the subway corridors; in the Rosslyn-Ballston corridor, along Metrorail’s Orange Line, 38 percent of residents who live within half a mile of a station take transit to work, and 73 percent of riders using these Metrorail stations walk to the stations. The foot traffic has fostered a lively commercial, retail, and residential corridor that comprises only 7.6 percent of the county’s land area, yet produces about a third of its real estate tax revenue. Meanwhile, automobile traffic has been below projections as county population has grown, showing the benefits of these transportation options not only for the people who choose to bike, walk, or take transit, but also for those who drive.

⁶⁷ See www.completestreets.org.

⁶⁸ See <http://www.arlingtonva.us/Departments/EnvironmentalServices/dot/planning/implan/MasterPlans.aspx> for a copy of the master plan.

⁶⁹ Arlington Master Transportation Plan – Second Draft, Transportation Demand Management Element – November 2006, p. 9.

7.3.5. Invest in Civic Engagement and Education

Engage and Educate Citizens in Visioning Exercises, and Require Opportunities for Meaningful Citizen Participation in Development Decision-Making

For plans to be as successful as possible, the people who will be living and working in the community must be involved in creating them. This means that residents have to have opportunities to learn about the issues and give their input on decision-making. Education might mean public meetings, gathering and publishing data and maps in an easily understood format that's relevant to people's lives, or keeping a Web site up to date on local development issues. With a foundation of basic knowledge about these issues, people are better equipped to participate in development decisions and in guiding the future of their community. When residents are engaged in the decision-making process from the beginning and feel like their concerns and ideas are being heard and considered, they are less likely to fight new development. The extra money spent on these education and engagement efforts pays off in the long run in better development projects that move through the process more smoothly.

One popular form of engagement is a visioning exercise, usually held on a regional or local scale. Participants review various scenarios for the future of the region or community and choose the one that they prefer. Usually there is a "business as usual" scenario that shows how continuing along the current path will affect open space, traffic congestion, development, air and water quality, and other quality of life issues. Other scenarios illustrate what the future could look like with denser development, more transportation options, and development directed to certain areas to preserve open space.

Visioning exercises have been conducted all over the country. One of the best examples is the Sacramento Region's *Blueprint Transportation and Land Use Study*, which used an extensive public outreach process, cutting-edge Internet-accessible planning software, and a detailed business-as-usual baseline growth forecast to help participants to explore alternative growth scenarios through 2050. The adopted preferred scenario features sophisticated infill development and transportation investments that will produce 12.3 fewer daily vehicle-miles of travel per household by 2050, a 27 percent reduction below the baseline. Other well-known examples include Envision Utah, which began in 1997 and was the first large-scale scenario planning exercise in the nation, as well as Louisiana Speaks, which was launched to help coastal communities craft redevelopment plans after the devastation from Hurricanes Katrina and Rita and attracted over 27,000 participants.

Visioning exercises create general principles and strategies for development, but the public should also be engaged in making decisions on specific development projects. They need to be involved from the beginning for their input to be meaningful, and they need to know that their ideas and concerns are being listened to and taken seriously, even if they don't end up being incorporated into the project. Some of the tools communities use to get citizen input are design workshops, charrettes, public surveys, or public meetings.

In a planning ordinance approved in 2001, the town of Davidson, North Carolina, requires new development projects to hold a charrette to get public input. These workshops allow the developer and the town's residents to understand each other's concerns and goals and to work together to make sure the development meets the community's needs. The process gives citizens

the chance to have their voices heard, and it lets developers deal with problems before they can hold up the project in the approval process. Gathering public support at this early stage makes the approval process smoother for developers. Davidson has found that holding these *charrettes* helps preserve its small-town character and makes it easier to achieve its goal of making bicycling and walking safer and more pleasant.

7.4. Developing a Comprehensive Policy Package

Such a comprehensive overhaul of America's development processes will be a mighty challenge. But it is on the same ambitious scale as other proposals that are being considered in the climate change debate, including efforts to switch to renewable fuels, dramatically increase vehicle efficiency, end oil imports from hostile nations, or renew investment in nuclear power.

The fact is, no gigaton of reduction will come very easily, and few methods are likely to take advantage of consumer demand as much as those discussed in this book. In fact, many of the reforms discussed here focus on making government rules and regulations more flexible to give people more of what they want. Also, most of the communities that have adopted these reforms have done so for a wide variety of self-interested reasons, like traffic management or financial rewards, and not because they wished to reduce greenhouse gas emissions. We are confident that these improvements to the built environment can offer tremendous win-win benefits, and hope that these types of policies do get implemented across the nation and the world. They should become a sensible complement to any other climate policies that focus on energy, vehicles, power plants, or other strategies.

8. Conclusion

With regard to urban development and travel demand management, this publication asks and answers three critical questions facing the urban planning profession, land development community, and federal, state, and local policy makers:

- What reduction in vehicle miles traveled (VMT) is possible in the United States with compact development rather than continuing urban sprawl?
- What reduction in CO₂ emissions will accompany such a reduction in VMT?
- What policy changes will be required to shift the dominant land development pattern from sprawl to compact development?

The answer to the first question is a 20 to 40 percent reduction in VMT for each increment of new development or redevelopment, depending on the degree to which best practices are adopted (see Chapter 3). The answer to the second question is a 7 to 10 percent reduction in total transportation CO₂ emissions by 2050 relative to continuing sprawl (see section 1.7). The answer to the third question is a set of dramatic policy changes at all three levels of government (see Chapter 7).

Unlike other vehicle emissions, CO₂ emissions have never been regulated. Given the difficulty of changing longstanding policies, development patterns and, ultimately, lifestyles, is the 7 to 10 percent reduction in CO₂ emissions worth the effort? The answer, we believe, is “yes,” for three primary reasons:

- The U.S. transportation sector cannot reach a sustainable level of CO₂ emissions through vehicle and fuel technology improvements alone. It also needs to reduce VMT, as the third leg supporting the policy stool (see Chapter 2).
- The shift from sprawl to compact development will have many other economic, environmental, and quality-of-life benefits, so any “costs” of this CO₂ reduction strategy will be offset by additional quantifiable benefits (see sections 1.5 and 1.6).
- Reductions in VMT and CO₂ emissions with compact development are sizable and long lasting compared to reductions achievable with other available actions (see section 1.7 and Chapter 3).
- Compact development provides an insurance policy against the worst effects of climate change and oil price spikes. In the worst case, current or future residents of compact development will have a variety of viable transportation options, while the residents of sprawl will not.

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Chapter 1: Introduction

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