

**Transportation and Land Use Technical Work Group  
Initial Quantification of “VMT Reduction Bundle”**

**CCS recommends that the GHG impacts of Options 5, 6, 7 and 10 be quantified as a bundle.** These policy options are currently distinct because they work on different parts of the transportation-land use system. The policy designs proposed under each TLU policy option are for the most part distinct. There is some apparent overlap because the same policy tools can be applied in different places and in different ways. However, while the policy tools can be applied individually, they are mutually supportive and in many cases interdependent. Transit-oriented Development (TLU-6) requires transit (TLU-10). Quantification of the GHG impacts this bundle of policy options is easier, and the results more robust, if the options are bundled. The quantification of costs is still in progress. The detailed policy descriptions are appended here for reference.

The literature on these strategies suggest that they can result in a range of reduction in vehicle-miles-traveled (VMT) of 2%-11%, on a statewide basis. Applying this range to New Mexico’s projected VMT (per the GHG Inventory and Reference Case Projections prepared for the CCAG) results in the GHG savings in the table below for 2012, 2020, and cumulative for 2007-2020. The first year of impact was assumed to be 2010.

**Estimated GHG Savings and Costs Per Ton:**

	<b>2012</b>	<b>2020</b>	<b>Cumulative 2007-2020</b>	<b>Units</b>
GHG Emission Savings (2% case)	0.21	0.24	2.46	MMtCO <sub>2</sub> e
(11% case)	1.16	1.34	13.51	
Net Present Value (2006-2020)			In progress	\$ million
Cost-Effectiveness			In progress	\$/tCO <sub>2</sub> e

Key questions include:

- Can this bundle create savings prior to 2010?
- Is this a reasonable range of impacts, or could it be higher?
- Savings could start small but grow over time. What is the most realistic pattern over time?
- What is the best “point estimate” for any given year?

## Policy descriptions for TLU 5, 6, 7, 10

### TLU-5 Infill, Brownfield Re-development

**Option Category:** To Be Quantified

**Policy Description:** Reuse land already developed but is now vacant, underused, or even mildly polluted. Meet the growing demand by a larger number of households comprised of singles, working parents and single parents seeking housing located close to services, jobs and transit. Reduce emissions by reducing both number of automobile trips per household as well as their length.

**Policy Design:** Implementation level(s) beyond baseline: Use fiscal, tax and other financing mechanisms to remove barriers to / support recycling of existing buildings and underused land, and to give infill and brownfield sites priority for development over sprawling sites at the edges of communities.

**Implementation Mechanism(s):**

*Information and education:* Require all municipalities to engage in a visioning process, often done through comprehensive planning, to agree on long-range goals and a vision for itself. Goals might include addressing housing shortages, adding open space and parks, or kick starting economic development in overlooked areas of town. Require that infill/brownfield redevelopment be considered first to absorb growth.

Educate about the public benefits of infill and brownfield redevelopment.

*Technical assistance:* Target and map potential sites and districts where infill/brownfield cleanup is needed or appropriate, and set quantifiable goals for the number of units desired for target areas. Those areas can then be rezoned for residential or light commercial uses that are compatible with residential infill.

Local governments (with state support) can prepare codes for required performance (in energy, accessibility, parking, etc.) but allow for more flexibility in methods of achieving that performance. In addition, government can streamline entitlement/permit processes for smaller projects.

NM Environment Department has a “Targeted Brownfields Assessment Program; see [www.lgd.state.nm.us/PLAN/PDF/ENV2.PDF](http://www.lgd.state.nm.us/PLAN/PDF/ENV2.PDF)

Support community land trusts, such as Albuquerque’s Sawmill Land Trust or a local government such as Santa Fe’s city program, to purchase empty land and establish equity controls.

*Funding mechanisms and or incentives:* The state works with MPOs and local jurisdictions to establish and fund (where necessary) local infill and Brownfields recycling programs, including, for example:

- Location efficient mortgage programs recognize that infill housing allows consumers to choose more efficient transportation options, increasing their house purchasing power.
- Tax increment financing: a city-designated and voter-approved redevelopment district sets up a TIF district to finance improvements to public space. Debt is repaid over a 20-year period

from the increment of new property and gross receipts taxes from private development in the district.

- Development (or impact) fees can be set to strongly encourage infill and discourage sprawl, by making the differential fees for infill development drastically less. For instance, Albuquerque through its Planned Growth Strategy has established a variable rate impact fee system. Projects located within the close-in areas pay a minimal percentage of total fees, while projects near the edge of the urbanized area pay maximum fees. This fee reduction helps level the playing field between infill and outer-edge sprawl sites.
- Other funding mechanisms and incentives include:
  - Offer Predevelopment grants and loans to explore project feasibility on tough sites;
  - Assist with land acquisition and assemblage, write-downs and loans;
  - Advance loans against committed, but not funded, equity or debt

*Codes and standards:* State supports development of local urban design codes, tied to the local government’s comprehensive plan.

*Market based mechanisms:* Offer a variety of developer incentives and disincentives to encourage infill and brownfield redevelopment, such as fee waivers, fast track planning, exactions, and no or low impact fees. Construct infill liner buildings to obscure off street parking lots, while waiving off street parking requirements.

*Pilots and demos:* Offer incentives to reduce traffic congestion and parking demand, such as Commuter Benefits (pre-tax and employer-paid transit passes), live-where-you-work home mortgages, location efficient mortgage, cash-out parking, and complete shower facilities for bicyclists

Reserve five percent of a city’s capital improvement program pay for needed upgrades and repairs to sidewalks, so that existing and new residents and employees can easily navigate neighborhoods and downtown by foot.

**Related Policies/Programs in place:**

**Types(s) of GHG Benefit(s):** (indicate which GHGs to be reduced)

**Estimated GHG Savings and Costs Per MMTCO<sub>2</sub>e (for quantified actions):**

- **GHG potential in 2012, 2020**
- **Net Cost per MMTCO<sub>2</sub>e in 2012, 2020**

**Data Sources, Methods and Assumptions (for quantified actions):**

- **Data Sources:**
- **Quantification Methods:**
- **Key Assumptions:**

**Key Uncertainties:**

**Contributing issues, if applicable:**

- **Human and social issues**
- **Environmental issues**
- **Economic issues**
- **Political and regulatory issues**

**Feasibility Issues, if applicable:**

**Status of Group Approval:** (Pending or Completed)

**Level of Group Support:** (Unanimous Consent, Supermajority, Majority, or Minority)

**Barriers to consensus (if less than unanimous consent):**

**TLU-6 Transit-Oriented Development [Lead: Will]**

**Option Category:** To Be Quantified

**Policy Description:** Support shifts to lower emitting mode choices by building compact development around transit stops to meet daily needs by foot, bicycle, or transit and/or by clustering employment centers around transit stops. TOD requires transit; this option is ideally paired with TLU-10, Multi-modal Transportation Bundle.

“What makes TODs relevant now is that New Mexico is embarking on one of the most exciting and extensive transportation revolutions in its history. The Governor’s commuter rail project soon will be running through downtown Albuquerque between Belen and Bernalillo in its first phase, and continuing on to Santa Fe in its second phase.

“In addition, the City of Albuquerque recently started a rapid transit bus system, going east and west on Central through the city. The intersection of First and Central in downtown Albuquerque will be the best-served transit location in New Mexico by the end of 2005 when the commuter train starts rolling.

“There are numerous opportunities for TODs in New Mexico, including a number that are being started now before the commuter rail system is operational.”<sup>1</sup>

**Policy Design:** Continue to implement, and expand, the TOD-supportive policies in recommended by The Report of the Governor’s Task Force on Our Communities, Our Future:<sup>2</sup>

**1. Tax Increment Financing (TIF) Districts.** The state holds the key to implementation of TIF programs through the extension of its credit resources.

<sup>1</sup> “Livability! The Report of the Governor’s Task Force on Our Communities, Our Future”, January, 2005, p. 16. <http://www.state.nm.us/clients/dfa/Files/LGD/PLAN/PDF/livability.PDF>.

<sup>2</sup> “Livability! The Report of the Governor’s Task Force on Our Communities, Our Future”, January, 2005. <http://www.state.nm.us/clients/dfa/Files/LGD/PLAN/PDF/livability.PDF>.

**2. State Funding Programs.** Provide state funds for affordable housing and parks, both of which help make TODs successful.

**3. Support of Local Governments**

Amend local government enabling laws to give local governments modern, effective tools they need to make their communities better, more resource-efficient, and more livable.

**4. Location of State Facilities.** Locate state facilities near transit facilities.

**5. State Targeting of Infrastructure Investments**

Legislatively appropriated capital outlay funds, the State Public Project Revolving Loan Fund, and other state-funded infrastructure initiatives should be used for projects that encourage walkable and traditional communities, and are supportive of transit.

These goals from the Governor’s Report can be further developed to become implementable. For example: State and municipalities establish priority funding areas to target state and local public funds to TOD districts as appropriate for growth. Redirect at least [25] percent of new housing and other development assistance to TOD districts.

- **Goals:** IP
- **Timing:** There are no barriers to beginning to implement each of these recommendations immediately. [What is the status of the “Livability Grants for Communities, Regions, and the State” and other recommendations in the Governor’s report?]
- **Parties:** State [which agencies?], MPOs, local jurisdictions

**Implementation method(s):** [What is the status of the “Livability Grants for Communities, Regions, and the State” and other recommendations in the Governor’s report?]

**Related Policies/Programs in place:** [What is the status of the “Livability Grants for Communities, Regions, and the State” and other recommendations in the Governor’s report?]

**Types of GHG Benefits:** All GHG exhaust emissions through reduced fuel consumption. Additional benefits from reduced building energy use, from more compact development.

**Estimated GHG Savings and Costs Per Ton:**

**Data Sources, Methods and Assumptions:**

- **Data Sources:**
- **Quantification Methods:**
- **Key Assumptions:**

**Key Uncertainties:**

**Contributing Issues:**

**Feasibility Issues, if applicable:**

**Status of Group Approval:** (Pending or Complete)

**Level of Group Support:** (Unanimous Consent, Supermajority, Majority, or Minority)

**Barriers to consensus (if less than unanimous consent):**

**TLU-7 Smart Growth Planning, Modeling, Tools [Lead: Will]**

**Policy Description:** The components of this option are some of the most effective policies promoting Smart Growth. These policies reduce GHG emissions by shifting development patterns and reducing vehicle trips and total vehicle miles traveled.

**Policy Design:**

1. Inform and educate developers on the state's building code for the rehab of older buildings (New Mexico adopted an international rehabilitation code).
2. Make maintenance of infrastructure a priority (Fix it First). Revise any state infrastructure programs (transportation, water, sewer) that fund new systems but not maintenance or upgrades for existing systems.
3. Replace "average cost pricing" for utility services with rate structures that charge full marginal costs for both new infrastructure and for water, sewer, electricity, and telephone service delivery. **[Including roads?]**
4. Use the broad set of state discretionary funding to reward localities that plan, zone and build for higher density development
5. Establish regional service agreements that assign responsibility to a single regional agency for major public services (transportation, water, sewers) in ways that reduce costs, improve intergovernmental coordination and support Smart Growth.
6. Require municipalities to designate areas for development where public infrastructure will be provided, and limit development outside these areas or requiring developers to pay the incremental costs for infrastructure in non-designated areas.
7. Encourage and/or incentivize localities to adopt zoning practices, such as Form Based Codes (FBC), that result in compact mixed-use, walkable communities.
8. Abolish or reduce minimum parking requirements in zoning codes, and allow localities to establish parking maximums.
9. Reduce or eliminate acreage standards for K – 12 schools

[Note: Some are similar to policy design elements in TLU-6, TOD, but would be applied more broadly in this TLU option.]

**Goals:** IP

**Implementation method(s):** In general, same as in TLU-6.

**Related Policies/Programs in place:** [What is the status of the "Livability Grants for Communities, Regions, and the State" recommended by the Governor's report?]

**Types of GHG Benefits:** All GHG exhaust emissions through reduced fuel consumption.

**Estimated GHG Savings and Costs Per Ton:**

**Data Sources, Methods and Assumptions:**

- **Data Sources:**
- **Quantification Methods:**
- **Key Assumptions:**

**Key Uncertainties:**

**Contributing Issues:**

**Feasibility Issues, if applicable:**

**Status of Group Approval:** (Pending or Complete)

**Level of Group Support:** (Unanimous Consent, Supermajority, Majority, or Minority)

**Barriers to consensus (if less than unanimous consent):**

**TLU-10 Multimodal Transportation Bundle [Lead: Will]**

**Policy Description:** The New Mexico 2025 Statewide Multimodal Transportation Plan establishes objectives and implementation strategies that aim to shift the State’s focus from roads to an integrated, multimodal system. This option lays out several key actions required to realize the potential for GHG reductions implicit in the State’s plan and that further promote a multimodal transportation systems.

Support shifts in passenger transportation mode choice (auto, bus, rail, bike, pedestrian, etc.) to lower emitting choices, and ensure that transportation serves smart growth development (see TLUs-5, 6, 7).

**Policy Design:** Includes:

1. Make GHG-optimal use of CMAQ funds;
2. Expand transit infrastructure (rail, bus, BRT);
3. Improve existing transit service,
4. Improve transit promotion and marketing (including tax-free and employer-paid Commuter Benefits, and Parking Cash Out);
5. Improve bike and pedestrian infrastructure;
6. Explore additional commuter rail using existing rail corridors;
7. Review all proposed transportation projects for multi-modal flexibility (e.g., add or reserve room for BRT or light rail if feasible);
8. Conduct research into new transportation technologies and urban planning techniques.

- **Goals:** IP

- **Timing:** There are no barriers to beginning to implement each of these recommendations pre-2010.

- **Parties:** Department of Transportation, Regional Transportation Districts, Metropolitan Planning Organizations, Regional Planning Organizations, municipalities.

**Implementation method(s):**

*Information and education:* Expand the State’s use of Intelligent Transportation Systems (2025 Plan, p. 21)

*Technical assistance:* Provide ample technical assistance to MPOs, RPOs, and RTDs for implementation of all aspects of the plan, including application of site assessment tools identifying multimodal needs and opportunities within the Strategic Transportation Corridors identified in the plan. (2025 Plan, p. 14)

Promote transportation performance measures that explicitly balance mobility and access. Discourage measures based solely on speed-based level of service. (*not explicit in plan, but balance of mobility and access results in less sprawl and VMT*)

*Funding mechanisms and or incentives:*

**RTDs** – Aggressively support and aid the creation of Regional Transportation Districts (RTDs). New Mexico has authorized created of RTDs that are a critical means of expanding mass transit. RTDs can sell bonds for capital projects, and member governments can levy taxes for operation and maintenance (subject to voter approval). (2025 Plan, p. 9, 37)

**Expand Rail Service** – secure funding for rail passenger service to central New Mexico (within Albuquerque metro area and between it and Santa Fe) by the end of 2008. (2025 Plan, p. 9)

**Non-Motorized Facilities** - Improve and expand transportation facilities with pedestrian, bicycle, and transit-oriented features. (2025 Plan, p. 9)

**Mode Shift** – Integrate needs analysis, planning, and funding to promote the shift of long distance freight from roads to rail or airfreight, including rail initiatives in Governor Richardson’s Investment Partnership (GRIP) (2025 Plan, p. 9, 15)

**Related Policies/Programs in place:**

**Types of GHG Benefits:** All GHG exhaust emissions through reduced fuel consumption.

**Estimated GHG Savings and Costs Per Ton:**

**Data Sources, Methods and Assumptions:**

- **Data Sources:**
- **Quantification Methods:**
- **Key Assumptions:**

**Key Uncertainties:**

**Contributing Issues:**

**Feasibility Issues, if applicable:**

**Status of Group Approval:** (Pending or Complete)

**Level of Group Support:** (Unanimous Consent, Supermajority, Majority, or Minority)

Barriers to consensus (if less than unanimous consent):