RSG INC.
RESOURCE SYSTEMS GROUP, INC.

Documentation for:

VT LONG RANGE TRANSPORTATION BUSINESS PLAN

Working Paper 3: Financial Analysis

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VT LONG RANGE TRANSPORTATION BUSINESS PLAN
Working Paper 3: Financial Analysis

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INTRODUCTION

The Vermont Agency of Transportation (VTrans) is currently updating its Long Range Transportation Business Plan (LRTBP). The LRTBP establishes the vision, goals, and objectives that guide how VTrans maintains, operates, and builds the state's transportation system. The current plan was adopted in 2002. It built upon the findings and recommendations of modal policy plans (aviation, bike/pedestrian, highways, transit and rail), transportation plans completed at the regional level, and public opinion surveys and outreach. It refined the three major objectives of the 1995 Long Range Plan, and emphasizes system management[1].

This working paper, one of many to be prepared in support of the plan[2], was prepared by the University of Minnesota's Hubert H. Humphrey Institute of Public Affairs, which specializes in innovative financing, including the use of public/private partnerships. It provides an overview of transportation funding in Vermont, describes federal and state sources of revenue, explains how transportation funds are spent, compares need to revenue, and identifies different options for funding transportation. It should be noted that the report is a long-range plan and therefore it is likely that current assumptions and projections used in the report could change over a period of time due to many external factors.

OVERVIEW OF TRANSPORTATION FUNDING

TRANSPORTATION'S SHARE OF STATE BUDGET

During state fiscal year (SFY) 2005, Vermont's transportation costs were 7.08 percent of the state's total expenditures of about $3.83 billion. Figure-1 shows the relationship of transportation to components of the state's budget.

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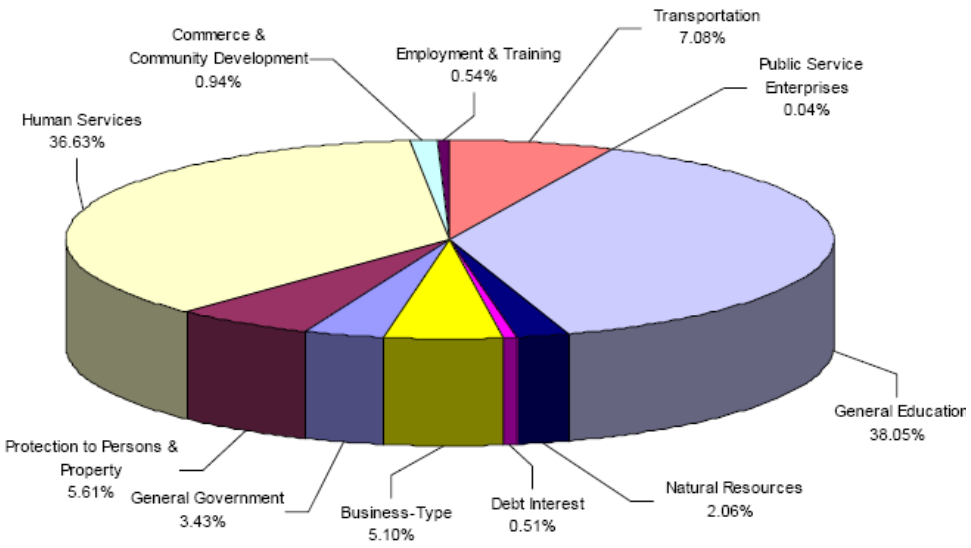
[2] Visit the VT Long Range Transportation Business Plan web site at http://www.rsginc.com/vtplan/vermontplan/tasks.htm for a complete list of all working papers to be produced and for an overview of the entire planning process.

Figure-1

Vermont Government Expenditures

Fiscal Year 2005



Source: Vermont Agency of Administration - Finance & Management, Budget summary for 2005, http://finance.state.vt.us/Fin%20Publications/2005_cafr.pdf

For fiscal year (SFY) 2006, transportation appropriations amounted to about $354 million or 8.35 percent of a total state budget of $4.23 billion.

Vermont's transportation infrastructure improvements depend largely on the continued availability of funds from both state as well as federal sources. Though the federal transportation reauthorization legislation - Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users

(SAFETEA-LU) - authorized $244.1 billion[1] in funding for surface transportation projects through 2009, there is a high possibility that the Federal government may not be able to fully fund it due to anticipated Federal Highway Trust Fund (HTF) shortfalls as early as 2009. As a consequence, Vermont's transportation revenue stream could be significantly impacted. Vermont is also faced with the challenge of preserving its existing infrastructure which has deteriorated over the years. Vermont's 'Road to Affordability' program hopes to address this issue by reprioritizing projects that will enable it to free up money so that it could be used for preservation and maintenance. However, this could mean that new projects - new road segments - such as the Bennington Bypass and Chittenden County Circumferential Highway could get delayed.

Transportation Revenues

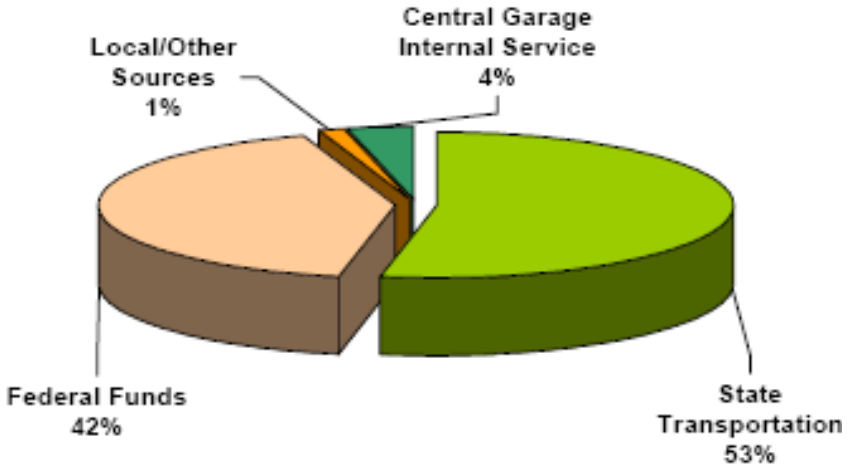
Vermont's transportation system is mainly funded through federal and state taxes and fees. Federal funds, collected primarily through the federal motor fuel tax, are apportioned to the states on a formula basis through SAFETEA-LU. Federal funds have been a crucial part of Vermont's transportation funds, contributing about 40-45 percent of transportation revenues in recent years, and have played a major role in supporting Vermont's transportation system. In addition to federal funds, state funds are generated primarily through taxes on the sale of motor fuels and by fees and taxes on the sale and use of motor vehicles. In 2005, Federal funds contributed about 42 percent of Vermont's transportation funding needs, while state funds have contributed 53 percent, and the balance 5 percent coming from local and other sources and Central Garage Internal Service. Figure-2 shows the contributions from federal and state sources to Vermont's transportation funding.

[1] SAFETEA-LU: http://www.fhwa.dot.gov/safetealu/safetea-lu_summary.pdf

Figure-2

Vermont Transportation Funding Sources

Fiscal Year 2005



Source: VTrans 2005 Performance Report,

www.aot.state.vt.us/Documents/05PrfRpt.pdf

Federal Funds

SAFETEA-LU Authorization

With the passage of SAFETEA-LU in 2005, Vermont expects to receive about $1 billion in transportation funding through the life of the bill which runs through 2009. Though Vermont has been authorized $1 billion, federal appropriations processes will result in less dollars actually being appropriated. The appropriated amounts, or Obligation Limitation, are the real amounts that will be available for transportation uses. Historically, the obligation limitation has been about 90 percent of the authorized amount, and if this trend continues, Vermont can expect to get about $900 million through 2009. (In FFY 2005 federal obligation authority was capped at 85.5 percent and in 2006 federal obligation

authority was capped at 87.1 percent. This has meant a reduction in anticipated federal fund to all states; however, part of that reduction has been offset by federal redistribution of obligation authority in FFY 2005 of $7.13 million and in FFY 2006 of $11.53 million to the State of Vermont.) If the amount made available would remain at the 90 percent level, the estimated FHWA funds, including earmarks, available to Vermont over the five year life of SAFETEA-LU will average about $188 million/year. This is an increase of about $61 million/year over previous allocations.

Earmarks

An earmark is a requirement that all or a portion of a source of revenue be devoted towards spending on specific programs or projects. Congress designates these funds to be spent on specific named projects, which differs from the appropriations process where lump sum grants are provided to an agency to allocate according to its internal budgeting process. Earmarks come to the state due to the efforts of Congress. Vermont's high levels of earmarks is mostly due to Sen. Jeffords seniority position as a Senate member, however, the same level of earmarks cannot be expected in the future. Earmarks are over and above what the state would otherwise expect to receive under normal authorizations. A portion of the obligation limitation is reserved for allocation to special program categories: high priority, transportation improvements, bridge discretionary and annual formula. The first three categories represent the earmark categories, while the annual formula is discretionary and can be allocated to construction, reconstruction, rehabilitation, paving, bridges, safety, enhancement and other eligible programs. Under SAFETEA-LU Vermont is the 2nd largest recipient state for earmarks on a per capita basis, behind only Alaska.

The SAFETEA-LU earmarks for high priority projects in Vermont total $137.8 million to be spent on 30 projects over five years. If an obligation limitation of 90 percent is made available, $24.8 million/year would be available through the life of the bill. In 2005, Vermont received $27.5 million for high priority projects. Some of the high priority projects include: various interstate projects, Bennington Bypass, Brandon-Pittsford, Connect VT, US-2 in Danville, Burlington Church Street & Waterfront, and Lamoille Valley Rail Trail. The bill also includes earmarks from the Federal Transit Administration (FTA).

Transportation Improvement earmarks for Vermont constitutes $120 million over 5 years with the following allocations: 10 percent in 2005, 20 percent in 2006, 25 percent in 2007, 25 percent in 2008, and 20 percent in 2009. Considering an obligation limitation of 90 percent, $21.6 million will be available on

average each year through the life of the bill. Some of the transportation projects included are improvements to VT interstates, western corridor rail improvements, Bennington welcome center, Hartford rest areas, VT small bridges, and VT covered bridges.

Bridge Discretionary will contribute $50 million from 2006-09, with an average of $11.25 million/year assuming a 90 percent obligation limitation. Projects that are to be funded are: $18 million for Missisquoi Bay Bridge and $32 million for nine state maintained bridges (includes several Town Highway bridges).[2]

Federal Highway Administration Funds (Highways)

The Federal Highway Administration (FHWA) administers the Federal Highway Trust Fund (HTF), which derives funds from user-fees on motor fuels, tires, and heavy trucks. In FFY 2005, Vermont had contributed about $74 million into the highway account; with motor fuels contributing $66.58 million, and the balance $7.62 million from federal use tax, taxes on trucks and trailers, and tires. Vermont was apportioned $133.32 million for FFY 2005 and $136.68 million for FFY 2006. The obligation limitation was $110.79 million in FFY 2005 and $115.67 million in FFY 2006.[3]

The FHWA administers various programs including: Interstate Maintenance, National Highway System, Surface Transportation Program, Bridge, Congestion Mitigation and Air Quality Improvement, Recreation Trails, Safe Routes to School, Highway Safety Improvement Program, and Rail Highway Crossing Program. Table-1 identifies apportionments of federal funds administered by FHWA by program category in FFY2005 and FFY 2006.

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[2] VTrans: SAFETEA-LU

[3] SAFETEA-LU: http://www.fhwa.dot.gov/legsregs/directives/notices/n4520184a1.htm
http://www.fhwa.dot.gov/legsregs/directives/notices/n4520188a1.htm

Table-1 FHWA Apportionment by Program Category, Vermont FFY2005 & FFY2006

Program	FFY2005 (Millions)	FFY2006 (Millions)
Interstate (Maintenance)	$15.65	$16.02
National Highway System	$31.89	$35.47
Surface Transportation Program	$32.34	$29.83
Bridge	$34.50	$31.86
Congestion Mitigation and Air Quality	$7.89	$8.08
Recreational Trails	$0.71	$0.81
Metropolitan Planning	$1.47	$1.43
Coordinated Border Infrastructure	$5.17	$6.07
Safe Routes to School	$1.00	$0.99
Highway Safety Improvement Program	3.17* (* Includes Rail Highway Crossing Program)	$5.03
Rail Highway Crossing Program	-	$1.09
Total FHWA Fund Apportionment	**$133.79**	**$136.68**

Source: http://www.fhwa.dot.gov/safetealu/fundtables.htm

Federal Transit Administration Funds (Transit)

The Federal Transit Authority (FTA) provides funding for Vermont's transit systems through numerous programs under authorization of SAFETEA-LU. In FFY2005 and FFY2006 those programs included:

- Metropolitan & Statewide Transportation Planning Program (Section 5303 & 5304)

- Large Urban Cities program (Section 5307)
- Bus and Bus Facilities Allocation Program (Section 5309)
- Transportation for Elderly Persons and Persons with Disabilities (Section 5310)
- Rural and Small Urban Areas (Section 5311 & 5340)
- Rural Transit Assistance Program (RTAP) (Section 5311 ((b)(3)))
- Job Access and Reverse Commute Program (JARC) (Section 5316)
- New Freedom Program (Section 5317)

SAFETEA-LU authorizes specific grant amounts annually for each program, which are provided through legislative formulas or discretionary authority. While FTA provides 80 percent of the funds, the 20 percent balance is matched with state and local funds for these transit programs. However, since the state does not have a dedicated fund source, generating revenues to support public transit is a challenge since transit competes for funds provided from the General Fund. Vermont was apportioned nearly $8 million in FFY2005 and nearly $10 million in FFY2006. Table-2 identifies the respective FTA grants for FFY 2005-06.

Table-2 FTA Grants to Vermont FFY 2005-2006

FTA Program Category	Location/Facility	FY 2005 ($Millions)	FY 2006 ($Millions)
Metropolitan Planning (Section 5303)	Statewide	$0.25	$0.31
Metropolitan Transportation Improvement Program (Section 5304)	Statewide		$0.08
Large Urban Cities program (Section 5307)	Burlington	$1.09	$1.35
Bus and Bus Facilities Allocation Program (Section 5309)	Bellows Falls multi-modal facility and statewide bus facilities; Brattleboro Intermodal Center; Burlington Transit Facilities; Chittenden County Transportation Authority (CCTA) Bus, facilities and equipment; State of Vermont buses, facilities & equipment	$3.89	$3.12 $0.59 $0.99 $0.30 $0.25
Transportation for Elderly Persons and Persons with Disabilities (Section 5310)	Statewide	$0.30	$0.33
Rural and Small Urban Areas (Section 5311 & 5340)	Statewide	$1.40	$2.19
Rural Transit Assistance Program (RTAP) (Section 5311 ((b)(3)))	Statewide	$0.07	$0.08
Job Access and Reverse Commute Program (JARC) (Section 5316)		$0.91	$0.19
New Freedom Program (Section 5317)	Statewide		$0.12
State Planning and Research (Section 5313)	Statewide	$0.06	
Total FTA Grants		$7.97	$9.90

Source: http://www.fta.dot.gov/documents/apportionments_by_state_2005.pdf

http://www.fta.dot.gov/documents/06-961.pdf

Federal Aviation Administration Funds (Aviation)

The Federal Aviation Administration (FAA) provides funding for commercial and general aviation airports in Vermont through the Airport & Airway Trust Fund. The fund receives revenues from aviation excise taxes on airline tickets and other taxes paid by airport and airway users. Appropriations are authorized from this fund to meet the obligations for the airport improvement grants, facilities and equipment, engineering and development, research, and a portion of operations. Funding is made available through the Aviation Investment and Reform Act for the 21st Century (AIR-21) legislation. The National Plan of Integrated Airport Systems (NPIAS) identifies the development needs of general aviation airports for a five year period and AIR-21 provides the entitlement grants.

Capital improvements for state-owned airports in Vermont are funded by FAA Airport Improvement Program (AIP) State Apportionment Funds and FAA AIP Discretionary funds. Vermont receives approximately $750,000 annually through AIP State Apportionments for large projects such as runway reconstruction or new taxiway systems. However, since these projects usually cost above $750,000, the state must combine consecutive apportionments over a period of time until sufficient funds are available for construction. In addition, Vermont can also pursue discretionary funds from FAA through the same program. Though funds are not set aside for Vermont for discretionary projects, FAA may provide a discretionary grant above and beyond the state apportionment if a project meets certain criteria, typically safety reasons. FAA grants require matching funds; FAA provides 90 percent of an approved project's total cost while state match is to be provided for the remaining 10 percent. To be eligible for FAA funding, the projects must be on a federally approved Airport Layout Plan (ALP). The ALP is a detailed drawing of the airport and its surrounding environs and depicting proposed developments. FAA provides grants on a case-by-case basis with priority given to safety enhancement projects. These funds can be expended only on the approved project and cannot be transferred.

Burlington International Airport (BIA) receives the bulk of FAA capital aid provided to Vermont. Capital improvements for BIA are funded by FAA AIP Entitlement Funds, FAA AIP Discretionary Funds, State Appropriation Funds (6 percent of FAA grant), local funding (4 percent of FAA grant), and Passenger Facility Charges (PFC's). The AIP grant program is identical for both the State-Owned Airports and BIA, in addition, Burlington has specific set-aside entitlement funds based on its designation as a commercial service airport. BIA receives approximately $2.2 million annually as entitlement appropriations.

Federal Railroad Administration Funds (Railways)

Unlike other programs, rail does not have a dedicated funding source; rather all funds provided are discretionary. The state does not have a dedicated funding source for rail and funds for transit are made available by transferring funds from the State Transportation Fund. Also, Vermont owns almost 50 percent of the railroads in the state, which is very unique, and generating funds to meet the needs for rail is a big challenge for the state. State governments have limited flexibility to use federal funds from SAFETEA-LU for rail projects. Typically federal funds for rail have been provided through Congestion Mitigation and Air Quality Improvement (CMAQ), Transportation Enhancements, High Speed Rail Development, Rail-Highway Crossing Program (Section 130), and other programs. The Transportation Improvement Program and the High Priority Programs are earmarks that provide dedicated funding for specific projects identified in SAFETEA-LU. Though one additional rail program – Capital Grants for Rail Line Relocation Projects – was added to SAFETEA-LU, it did not bring about any major change to the funding pattern.

Congestion Mitigation and Air Quality Improvement (CMAQ) funding may be used for freight and passenger rail projects that meet CMAQ goals. Transportation Enhancement funds are made available from the state STP funds, normally 10 percent is set aside, which are used for a broad range of environmentally-related activities including rehabilitation and operation of historic transportation buildings, structures or facilities and preservation of abandoned railway corridors. Under High-Speed Rail Corridor Development, SAFETEA-LU reauthorized the Swift Act and expanded eligible expenses from planning to development of high-speed rail corridors. The Rail-Highway Crossing Program, known as Section 130 program, provides funding for improving safety at public railroad crossings. High-Speed Rail Crossing Improvement Program funds are provided to eliminate hazards at highway-rail grade crossings in designated high speed corridors.

High Priority Programs provide designated funding for specific programs identified in SAFETEA-LU. Vermont receives earmarks for the following projects:

- St. Lawrence and Atlantic Railroad Upgrades in Northeastern Vermont $5 million

- Lamoille Valley Rail Trail for the Vermont Association of Snow Travelers $5.8 million
- Transportation Improvements to Bellows Falls Tunnel $2 million

Transportation Improvement Programs are also earmarks, providing funding for specific projects. Vermont receives funding for the following projects:

- Western Corridor Rail Improvements $30 million
- Improvements to East Alburg Railroad Trestle Swing Span $5 million
- Improvement to Green Mountain Rail Line between Rutland and-

  Bellows Falls $2.5 million

Capital Grants for Rail Line Relocation Projects provides financial assistance for rail line relocation or grade separation of track that is interfering with a community's motor vehicle traffic flow, its quality of life, or its economic development. Vermont's rail system also received specialized benefit through the Gateway Rural Improvement Pilot Program (GRIPP) in establishing a pilot program to demonstrate the benefits to rural rail corridors from a freight transportation gateway program. In addition, SAFETEA-LU also authorizes two credit assistance programs – Rail Rehabilitation and Improvement Financing (RRIF) and Transportation Infrastructure Finance and Innovation Act (TIFIA). New Starts Program funds are provided by FTA which supports transit 'guideway' capital investments.

State Funds

Vermont has a dedicated State Transportation (STP) Fund to provide for transportation appropriations. Receipts from the Motor Fuel Tax, and the purchase, use and registration of motor vehicles are deposited in the Transportation Fund. Figure-3 shows the proportion of Vermont's transportation revenue sources.

Figure-3

State Transportation Revenue Sources

Fiscal Year 2005

Source: VTrans 2005 Performance Report,

www.aot.state.vt.us/Documents/05PrfRpt.pdf

In SFY 2005, the transportation fund received $210 million in revenues after all out-transfers made to general fund operations The 19 cents per gallon gasoline tax and the 25 cents per gallon diesel fuel tax contributed 38 percent of the total revenue for the Transportation Fund. Of the 38 percent, gasoline tax contributed 31 percent and diesel tax contributed 7 percent. The six percent tax on the purchase and use of motor vehicles contributed 27 percent to the Transportation Fund. The motor vehicle fees; which includes operator license, registration fee for cars and the registration fee for trucks, raised 27 percent of the revenue while other taxes and fees raised 8 percent.

TRANSPORTATION EXPENDITURES

Transportation Fund Appropriations

In 2006, of a total VTrans budget of $354 million, federal funds made up $164 million, state transportation fund appropriations (after all transfers) were $173 million, and the balance from local and other sources. The VTrans budget in 2007 as passed by the legislature is for $454 million, an increase of $100 million over SFY2006 appropriations.[4] Vermont is to get an increase of $80.7 million in federal funds in 2007 over 2006. The 2007 allocation is higher since the obligated 2005 earmarked funds were not available for expending in 2005, allowing some of the funds to be allocated for 2007.

Transportation Expenditures 2005

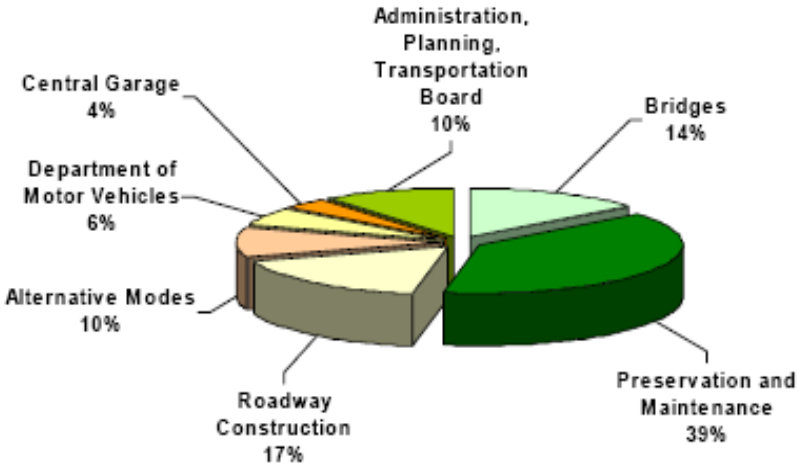
Of the $327 million expended by the state on transportation in 2005, preservation and maintenance constituted 39 percent, roadway construction constituted 17 percent, bridges constituted 14 percent, alternative modes and administration and transportation board constituted 10 percent respectively. The Department of Motor Vehicles constituted 6 percent, and the balance 4 percent was expended on the Central Garage. Figure-4 illustrates the relationship and proportion of the 2005 state transportation expenditures in Vermont.

[4] Vermont Agency of Transportation – Appropriation History FY2006 & FY2007

Figure-4

Vermont Total Transportation Expenditures

Fiscal Year 2005



Source: VTrans 2005 Performance Report,

www.aot.state.vt.us/Documents/05PrfRpt.pdf

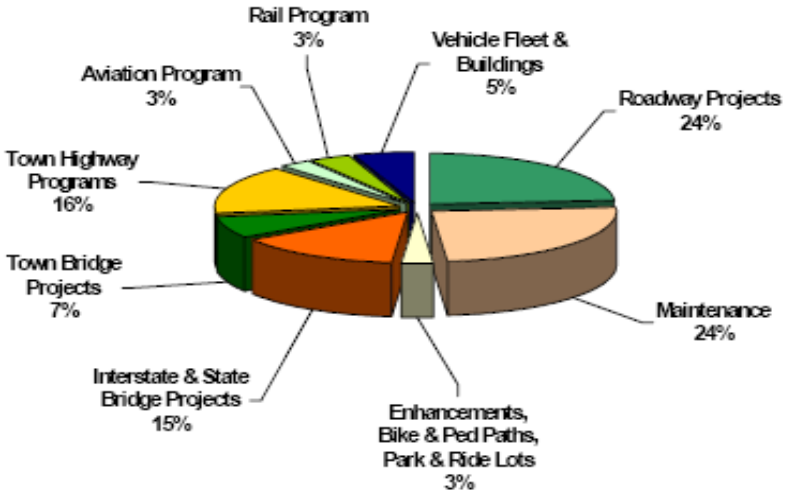
Capital (Infrastructure) Expenditure

In 2005, a total of $217.9 million of state transportation funds was spent on infrastructure with the largest portion being spent on maintenance and roadway projects. Of the total infrastructure expenditures, 24 percent was spent on maintenance and roadway projects respectively, 16 percent spent on Town Highway programs, 15 percent spent on Interstate and State Bridge projects, 7 percent on Town Bridge projects, 5 percent on vehicle fleet and buildings, and 3 percent on rail program, aviation program, and enhancements, bike & pedestrian paths, park & ride lots respectively.[5] Figure-5 shows the relative percentage of expenditures on transportation infrastructure.

Figure-5

Vermont Transportation Infrastructure Expenditure

Fiscal Year 2005



Source: VTrans 2005 Performance Report,

www.aot.state.vt.us/Documents/05PrfRpt.pdf

[5] VTrans FY2005 Budget

NEEDS VS. REVENUES

NEEDS

Federal Match Funds

A significant challenge facing Vermont in the short term is the ability to match the new federal transportation funding that will become available. It is estimated that $12.3 million of state funds will be needed to match federal funds in 2007; $14.6 million in 2008; $14.4 million in 2009; and $11.5 million in 2010, assuming that all new federal dollars are matched.[6] The total state funds needed to match federal funds over the next four years is $52.8 million. A state match on federal projects is typically 20 percent, 10 percent, or 0 percent depending on the category. The amount of state funds estimated to be available for fiscal years 2007 to 2010 is $ 28.6 million. Therefore, the state needed to identify new revenue sources to come up with $24.2 million in additional funding to provide for federal match.

State Transportation Fund

Existing and projected State revenues pose serious challenges for Vermont's Transportation Fund, which has been growing at an average rate of 2 percent per year since 2000. Following are the main reasons for the Transportation Fund not meeting expectations:

1. Motor fuel tax revenues are down because people are driving less;
2. Motor vehicle fees have only recently begun generating more funds, after recent fee increases; and,
3. Motor vehicle purchase and use taxes are down as a result of people buying smaller cars that use less fuel, as a result of improved vehicle fuel efficiency, and also due to non-taxed propulsion systems.
4. Fixed tax rates - fuel tax revenues have not been indexed to accommodate inflation as a result, inflation of roadway construction costs have frequently exceeded general inflation over the years.

In addition to these challenges, Transportation revenues in Vermont have been transferred from the Transportation Fund to fund the state's general fund operations. From SFY 2002 to 2006, a total of $250 million, or $50 million annually, has been transferred from the Transportation Fund to fund other state operations, as shown in Table-3.

Table-3 'Non Transportation' Appropriations from the Transportation Fund (in Millions)

General Description	Specific Area	2002	2003	2004	2005	2006
General Government	Building & General Services, Use Tax Reimbursement Fund, Legislature, Human Resources, Finance & Management etc.	11.3	9.5	10.1	9.3	10.0
Protection to People and Property	Public Safety, Judiciary, Defender General, Sheriffs, State Attorneys etc.	30.3	27.8	29.0	27.7	28.0
Human Services	Correction Services, Aging & Disabilities – Advocacy etc.	2.0	2.0	2.0	1.6	1.6
Education	Property Tax Assistance and Education Department	4.2	4.5	5.0	4.0	2.9
Natural Resources	Forests, Parks & Recreation, Environmental Conservation, Fish & Wildlife etc.	1.1	1.1	1.1	1.3	1.2
Debt Service	Principal	2.9	2.8	2.5	2.4	2.1
Miscellaneous		-	6.2	0.1	1.4	1.3
Total		**51.8**	**53.9**	**49.8**	**47.7**	**47.2**

Source: http://www.leg.state.vt.us/jfo/Fiscal%20Facts%20&%20Fiscal%20Focus/2006%20Fiscal%20Facts.pdf

Historically, Vermonters have had a willingness to collect and spend tax dollars when needed. This is evidenced today as Vermont is ranked among the highest taxed states in the U.S. With this ranking, further increases in taxes or fees in the near future are likely to meet with serious resistance, which could result in continued decline in revenues. In addition to declining revenues, Vermont, like many states, is

[6] VTrans: Vermont Transportation Funding and SAFETEA-LU

also facing significant cost pressures and an aging infrastructure. Among the most significant driving forces affecting transportation funding decisions in Vermont are the impacts of:

- Inflation on construction costs;
- Large and expensive projects expected in the next 7-10 years; and,
- Deferred maintenance of the existing network adding to the costs of construction in the coming years.

Base Needs

The Transportation Fund is also not growing fast enough to meet the increased costs of the transportation base needs - such as fuel, materials, salaries, and benefits, etc. - which together are growing at a rate of 5.6 percent annually.[1] The base needs growth (5.6 percent) is substantially higher than the Transportation Fund growth (2 percent), which would result in less funds actually being available for projects. The growths in the transportation fund and the base needs can be calculated by applying the transportation fund growth percentage and the base needs growth percentage to SFY 2006 appropriation amount of $220 million. Table-4 shows the expected shortfall of funds between the estimated growths in the Transportation Fund in comparison to the base needs growth over a 20-year period.

Table-4 State Transportation Fund Growth, Base Needs, and Projected Shortfall

Year	Transportation Fund Growth	Base Needs Growth	Projected Shortfall
	($Millions)		
2006 - 2010	$24.6	$68.9	$44.3
2011 - 2015	$32.3	$90.5	$58.2
2016 - 2020	$42.4	$118.8	$76.4
2021 - 2025	$55.7	$156.0	$100.3
		Total	**$279.2**

[1] VTrans: SAFETEA-LU, http://www.aot.state.vt.us/presentations/SAFETEALU/Slide18.htm

Projected Needs

The current needs as of 2006 were estimated at $513 million. This figure was arrived at by making adjustments to internal working documents of VTrans.[1] A needs analysis can be calculated for a 20-year period by applying a projected inflation rate factor of 5 percent, which is the most likely to be experienced and relevant, to the current needs. However, since the inflation rate is likely to fluctuate over time, it would be appropriate to apply a series of inflation rates to show the estimated needs. As shown in Table-5, the projected needs for Vermont over a 20-year period would be: $12.4 billion with a 2 percent inflation rate, $13.7 billion with a 3 percent inflation rate, $15.2 billion with a 4 percent inflation rate, $16.9 billion with a 5 percent inflation rate, and $18.8 billion with a 6 percent inflation rate.

Table-5 Projected Transportation Needs Under Various Inflation Assumptions

Year	2%	3%	4%	5%	6%
			($ Millions)		
2006 - 2010	$2,670	$2,724	$2,779	$2,835	$2,892
2011 - 2015	$2,948	$3,157	$3,381	$3,618	$3,870
2016 - 2020	$3,254	$3,660	$4,113	$4,617	$5,179
2021 - 2025	$3,593	$4,243	$5,004	$5,893	$6,930
Total	**$12,465**	**$13,785**	**$15,276**	**$16,963**	**$18,871**

Under these projections and in spite of the large increase in federal funding, there may be many unmet needs across most programs including paving, bridges, rail and public transit that would not be addressed. Unmet needs create additional pressure on state funds that will be required to close the funding gap.

[1] VTrans Funding Projection

REVENUES

Forecast of Federal Highway Funds

The Congressional Budget Office (CBO) generates a 10-year forecast for the HTF revenues, with the most current update done in 2005. The CBO growth estimate for 2006 is 4.7 percent – largely due to the legislation that affects the tax treatment of kerosene and hence receipts from the tax on diesel – and 2.8 percent from 2007-09, and 2.1 percent from 2010-16.[8]

The expected Federal Highway Funds, excluding earmarks that would be available over the next 20 years can be calculated by applying the respective HTF growth percentages to the FFY 2006 federal appropriation amount of $115.6 million. Since the HTF growth is estimated only up to 2016, while calculating values beyond 2016, the same HTF growth estimate of 2.1 percent has been applied. As shown in Table-6, the amount available to Vermont over a 20-year period is expected to be $2.9 billion.

Table-6 Anticipated Federal Funds 2006-2025

Years	Funding ($Millions)
2006 - 2010	$620
2011 - 2015	$700
2016 - 2020	$777
2021 - 2025	$862
Total	**$2,959**

National Transportation Funding: SAFETEA-LU created two commissions: the National Surface Transportation Policy and Revenue Commission (section 1909) was created to study and report on current conditions and future needs of the surface transportation system, and potential funding to meet such needs; the National Surface Transportation Infrastructure Financing Commission (Section 1142)

[8] http://www.cbo.gov/ftpdocs/71xx/doc7123/04-04-HighwayRevenues.pdf

was created to study the Highway Trust Fund revenues and the impacts of the these revenues on future highway and transit needs.

Forecast of Earmarks

Vermont's earmarks from SAFETEA-LU authorization average about $57.7 million/year through the life of the bill. The expected earmarks over the next 20 years can be calculated by using the SAFETEA-LU earmarks for 2006-10, and applying a projected inflation rate of 5 percent to an estimated earmark average of $20 million, for 2011-2025. A constant earmark value has been applied considering that earmarks would not remain the same as in previous years and also that a decrease or absence of future earmarks would likely be offset by an increase in federal appropriations. As shown in Table-7, the projected earmark revenues for Vermont over a 20-year period would be: $721 million.

Table-7 Projected Earmark Revenues 2006-2025

Year	Total Earmarks
	($Millions)
2006 - 2010	$289
2011 - 2015	$111
2016 - 2020	$141
2021 - 2025	$180
Total	**$721**

Forecast of Federal Transit Administration Funds

The expected FTA Funds over the next 20 years can be calculated by applying the same HTF growth estimates, 4.7 percent in 2006, 2.8 percent from 2007-09, and 2.1 percent from 2010-25, since 80 percent of FTA funds come from the Mass Transit account of the Highway Trust Fund. FFY 2006 allocations have been taken as base value for the respective sections. As shown in Table-8, Vermont can expect to receive $99.0 million from the FTA fund over a 20-year period.

Table-8 Anticipated FTA Funding 2006-2025

Year	S.5307 Urban	S.5310 Elderly and Disabilities	S.5311 Rural	Total
		($Millions)		
2006 - 2010	$7.2	$1.7	$11.8	$20.7
2011 - 2015	$8.2	$2.0	$13.3	$23.5
2016 - 2020	$9.1	$2.2	$14.7	$26.0
2021 - 2025	$10.1	$2.4	$16.3	$28.8
Total	**$34.6**	**$8.5**	**$56.1**	**$99.0**

Forecast of State Transportation Funds

The State Transportation Fund, excluding federal sources, has been growing at an average rate of 2 percent from SFY 2000. The revenues that would be available from the transportation fund over the next 20-years can be forecast by applying the State Transportation Fund growth rate to the SFY 2005 Transportation Fund revenue of $225 million. However, since revenues from the Transportation Fund are expected to continue to decline, it is appropriate to forecast future revenues by applying a series of growth rates to the SFY 2005 base revenue. As shown in Table-9, Vermont can expect to receive the following revenues over a 20-year period: $5.2 billion if the Transportation Fund's growth rate declines to 1.5 percent, $5.3 billion if the Transportation Fund growth rate declines to 1.75 percent and $5.4 billion if the Transportation Fund continues growing at the current rate.

Table-9 State Transportation Fund Forecast 2006-2025

Years	1.5%	1.75%	2.0%
		($ Millions)	
2006 - 2010	$1,159	$1,165	$1,171
2011 - 2015	$1,249	$1,271	$1,293
2016 - 2020	$1,345	$1,386	$1,427
2021 - 2025	$1,449	$1,511	$1,576
Total	**$5,203**	**$5,333**	**$5,467**

The revenues that would be available to Vermont for transportation purposes through 2025 would be the total of federal funds, earmark revenues, FTA funds, and State Transportation Fund revenues. Table-10 shows the total revenues that would be available from 2006-2025. Together all sources would generate $9.2 billion in revenue provided all revenues are allocated for transportation. However, if the current trend of transferring transportation funds for non-transportation purposes continues, and considering that the current average of $50 million is transferred annually to the general fund then, only $8.2 billion would be available through 2025.

Table-10 Available Transportation Revenues 2006-2025

Sources	Before Out-Transfers	After Out-Transfers
	($ Millions)	
Federal Funds, Earmarks, FTA Funds and STP Fund	**$9,246**	**$8,246**

GAP ANALYSIS

The table below shows the revenue shortfall relative to the estimated overall needs over a 20 year period. The most relevant value that is likely to be experienced for the needs is the 5 percent inflation rate values from Table-5 (Projected Transportation Needs Under Various Inflation Assumptions). However, for calculation purposes, the 2 percent inflation rate and the 5 percent inflation rate from the needs in Table-5 is compared to show the shortfall in each scenario. Revenues have been calculated using values from Table-6, 7, 8 and the 2 percent values from Table-9. As shown in Table-11, over a 20 year period, Vermont's transportation revenue shortfall is estimated to be $3.2 billion if the needs grow at 2 percent inflation rate, and $7.7 billion if needs grow at 5 percent inflation rate. The revenues shown in the table are before any out-transfers, however, if out-transfers are made, it would increase the shortfalls proportionately.

Table-11 Vermont's Transportation Revenue Shortfall Analysis 2006-2025 (Before Out-Transfers)

Years	Needs		Revenues	Shortfall	
	2%	5%		2%	5%
			($ Millions)		
2006 - 2010	$2,670	$2,835	$2,101	$569	$734
2011 - 2015	$2,948	$3,618	$2,127	$821	$1,491
2016 - 2020	$3,254	$4,617	$2,371	$883	$2,246
2021 - 2025	$3,593	$5,893	$2,647	$946	$3,246
Total	**$12,465**	**$16,963**	**$9,246**	**$3,219**	**$7,717**

Table-12 shows Vermont's transportation revenue shortfall over a 20 year period after out-transfers. It is estimated that the shortfall would be $4.2 billion if the needs grow at 2 percent inflation rate, and $8.7 billion if needs grow at 5 percent inflation rate.

Table-12 Vermont's Transportation Revenue Shortfall Analysis 2006-2025 (After Out-Transfers)

Years	Needs		Revenues	Shortfall	
	2%	5%		2%	5%
			($ Millions)		
2006 - 2010	$2,670	$2,835	$1,851	$819	$984
2011 - 2015	$2,948	$3,618	$1,877	$1,071	$1,741
2016 - 2020	$3,254	$4,617	$2,121	$1,133	$2,496
2021 - 2025	$3,593	$5,893	$2,397	$1,196	$3,496
Total	**$12,465**	**$16,963**	**$8,246**	**$4,219**	**$8,717**

VERMONT TRANSPORTATION COMPARED TO OTHER STATES

Four states – Idaho, Montana, New Hampshire, and North Dakota, that have similar demographic characteristics as that of Vermont were selected for comparison. Various transportation criteria, as shown in Table-13 and 14, were analyzed and compared against Vermont's transportation.

State Gross Domestic Product

Table-13 shows the GDP comparison among the selected states. Vermont has the lowest GDP, $23,065 million, while New Hampshire with $55,061 million has the highest GDP. The contribution of transportation to GDP is also the lowest in Vermont, with $484 million, but the contribution of

transportation as a percentage to total state GDP, at 2.1 percent, is higher than New Hampshire's 1.6 percent. However, Vermont's transportation is not contributing as much to GDP. Also Vermont and New Hampshire are in the lower percentile because transportation related spending is less and therefore resulting in lower change.

Table-13 Gross Domestic Product and Growth Comparison Among Selected States

State	Total GDP – FY2005 (in millions)	Contribution of Transportation to GDP (in millions)	Transportation GDP as a percentage of total GDP	Average Annual GDP Growth rates in percentage (FY 1997-2004)	Percentage GDP Change (2004-2005)	Contribution to percentage change from transportation (2004-05)
Vermont	$23,065	$484	2.1	4.1	2.7	0.03
Idaho	$47,189	$1,336	2.8	5.0	7.4	0.16
Montana	$29,885	$1,333	4.5	2.7	5.2	0.26
New Hampshire	$55,061	$885	1.6	4.1	3.2	0.01
North Dakota	$24,397	$992	4.1	2.3	5.3	0.20

Source: http://bea.gov/bea/newsrel/gspnewsrelease.htm

Table-14 shows the comparison of transportation budget and other sources among the selected states. In 2005, Vermont received $111 million in SAFETEA-LU appropriations (excluding earmarks), as compared to a high of $246 million for Montana and $195 for Idaho. Just as in Vermont, the comparison states also generate state transportation revenues through motor fuel taxes and motor vehicle taxes. While Vermont generated $225 million, in 2005, from the state transportation fund, New Hampshire generated $374 million. The proportion of transportation to state budget for all states is between 8-10 percent. Though Vermont received the least federal appropriation, the federal transportation revenue per capita, at $178 is higher than New Hampshire's $98 and Idaho's $136. However, Vermont's state

transportation revenue per capita, at $361, is the highest among all the states. Vermont also has the highest revenue per capita, when federal and state transportation revenues are combined, at $539, which is higher than New Hampshire's $383. While Montana receives the highest federal funds, at 60 percent, Vermont receives 42 percent.

Vermont's contribution to the HTF is almost twice as less compared to other states; however, it receives more than twice the allocation from the fund. While Vermont contributed $74 million to the HTF in 2004, it received $171 million. Comparatively, North Dakota and Montana receive higher allocations. Vermont's state GDP per capita is $37,000 which is higher than the GDP's of Idaho and Montana. In 2005, Vermont was the highest taxed state in the country. Vermont's state tax revenue per capita is $3600 compared to New Hampshire's $1544 and a national average of $2189. Vermont also stands first in personal income tax per capita with $803 as compared to New Hampshire's $52 and a national average of $744.

While Vermont generates $86 million through motor fuel taxes, it is still the lowest among comparison states, but revenues from motor vehicle and motor-carrier taxes, $125 million, are almost on par with New Hampshire's $126 million, and higher than North Dakota's $67 million and Montana's $115 million. Vermont's gas tax rate of 20 cents is one of the lowest, only marginally higher than New Hampshire's 19.6 cents, compared to Montana's 27 cents, Idaho's 25 cents, and North Dakota's 23 cents. Vermont's highway use of gasoline is 343 million, which is slightly higher than North Dakota's 300 million and almost twice as less than what Idaho, Montana, and New Hampshire consume. Vermont's highway vehicle miles traveled (VMT) is 7.8 million compared to Idaho's 14.7 million, New Hampshire's 13.2 million, Montana's 11.2 million, and North Dakota's 7.6 million, but Vermont's VMT at 12,641 is the highest among all other states.

All states however, face a similar challenge; the need to generate additional transportation revenues to meet their growing transportation needs. It has become critical for each state to take some steps to address these burgeoning transportation needs.

Table-14 Transportation Budget and Source Comparison

	Vermont	Idaho	Montana	New Hampshire	North Dakota
SAFETEA-LU appropriations (2005) [i] *excluding Earmarks*	$111 million	$195 million	$246 million	$128 million	$154 million
State revenue sources	State Transportation Fund -Motor Fuel Tax, and the purchase, use and registration of motor vehicles.	Highway Distribution Account (HDA) - motor fuel tax, vehicle registration, truck registrations, and miscellaneous fees – property tax, local funds, federal aid, National forest reserve, user funds, and others	Highways State Special Revenue Account - motor fuel tax, Gross Vehicle Weight (GVW) fees, and other revenues. The Department of Transportation receives about 80% allocations from the Highways State Special Revenue Account for transportation related expenditures.	State Highway Trust Fund – gas tax and vehicle fees - and Turnpike Funds.	Highway Tax Distribution Fund - motor fuel tax and motor vehicle registration
State Transportation Fund revenues	FY2005: $225 million	FY2006: $296 million[ii]	FY2006: $211 million[iii]	FY2005: $374 million ($255 from State Highway Trust Fund, $88 million from Turnpike funds, and $31 million from other sources)[iv]	FY2005-07: $335 million[v]
Proportion of Transportation share to state budget	8.35 percent of a total budget of $4.2 billion (FY2006) $354 million	10 percent of total state revenues (FY 2006)[vi]		9 percent of total state budget of $4.7 billion (FY2005) $423 million	16.6 percent of the total budget appropriation of $5.75 billion (FY2005-07) $954 million
Federal Transportation revenue per capita	$178	$136	$262	$98	$241
State Transportation revenue per capita	$361	$207	$219	$285	$525 (biennium)

Resource Systems Group, Inc.; Snelling Center for Government; TransManagement; Center for Rural Studies; Hubert H. Humphrey Institute

	Vermont	Idaho	Montana	New Hampshire	North Dakota
Transportation revenue per capita (Federal & State)	$539	$343	$481	$383	$504* * State transportation revenue per capita calculated on annual basis
Proportion of Federal funds to state transportation budget	42%	58%	60%	44%	34%
HTF account receipts [vii] *(FY2004)*					
- Payments into fund	$74 million	$174 million	$148 million	$146 million	$103 million
- Percent of total	0.22	0.53	0.45	0.44	0.31
-Apportionments and allocations from fund	$171 million	$274 million	$360 million	$173 million	$266 million
-Percent of total	0.45	0.73	0.95	0.46	0.70
State GDP per capita	$37,000	$33,000	$32,000	$42,000	$38,000
State tax revenue per capita [viii] (FY2005 - National tax per capita: $2189)	$3,600	$2,053	$2,003	$1,544	$2,202
Rank among all states	1st	30th	33rd	48th	21st
Personal income tax per capita (FY2005: National personal income tax per capita: $744)	$803	$728	$762	$52	$380

	Vermont	Idaho	Montana	New Hampshire	North Dakota
Highway-user revenue [ix] (FY2005)					
-Motor fuel tax	$86 million	$215 million	$171 million	$155 million	$108 million
-Motor vehicle and motor-carrier tax	$125 million	$134 million	$115 million	$126 million	$67 million
Gas tax rate (per gallon)	20 cents	25 cents	27 cents	19.6 cents	23 cents
Highway use of motor fuel [x] (2004) gallons					
-Gasoline	343 million	604 million	466 million	698 million	300 million
-Special fuels	62 million	239 million	223 million	112 million	157 million
-Percentage of total national use	0.23	0.48	0.40	0.46	0.28
Highway vehicle miles traveled(VMT)	7.8 million	14.7 million	11.2 million	13.2 million	7.6 million
VMT per capita (2004)	12,641	10,572	12,091	10,170	11,971
State ranking in size and population					
-Size	45th	14th	4th	46th	19th
-Population (2005)	49th (623,000)	39th (1,429,000)	44th (936,000)	41st (1,310,000)	47th (637,000)

FUTURE REVENUE CHALLENGES

EARMARKS

Earmarking of transportation projects by Congress during the authorization of Federal-aid highway acts has increased significantly during the last two decades. In 1982 only 11 projects worth $700 million were earmarked which represented 1.4 percent of the total amount authorized. The number of projects increased to 152 in 1987, 539 in 1991, 1850 in 1998 and ballooned to 5700 in 2005 in the reauthorization named SAFETEA-LU. The percentage also increased to 1.6 in 1987, 6.0 in 1991, 6.3 in 1998 and eventually 10.6 percent in 2005.

Earmarks have become the subject of significant controversy in recent years. The earmarked money is allocated to the states by Congress rather than using the normal formula. Vermont has performed well in recent years by receiving a substantial amount of earmarked funds due to the favorable placement of its congressional representatives. Vermont was the recipient of the second highest per capita amount of earmarked dollars authorized under SAFETEA-LU. Though revenue projections in this report have taken earmarks into consideration, the same levels as authorized under SAFETEA-LU are not expected to be available to Vermont in future reauthorizations.

DEVOLUTION

The current federal transportation financing system was developed in the 1950s with a major mission of constructing the interstate system. The fund distribution to states was mostly based on the need to construct that infrastructure. Now that the mission is complete, it is evident that revenues are not keeping up with the demand to maintain the built infrastructure. In addition, ever increasing congestion in the urban areas is causing severe problems for motorists and business. The words "donor" and "donee" states and regions have become common as some states complain that they are not getting their fair share of the transportation fund. They feel that their share of the fund should be related to the amount of monies they collect and contribute to the Highway Trust Fund. TEA-21 and SAFETEA-LU attempted to respond to the concerns of the donor states by establishing increasing minimum percentage that every state will receive. Because Vermont is a "donee" state, devolution will impact the state adversely.

CHANGING DEMOGRAPHICS

The following table portrays a snapshot of population trends in Vermont since the 1990 census. It is clear that Vermont's population is growing much more slowly than the US population and also it is aging faster than the nation in general. Most of these trends can be attributed to the fact that Vermont is not the destination of immigrants to this country. The majority of the population increase in the US can be attributed to the higher birth rates among immigrant population, who are usually younger in age.

The U.S. Census Bureau projects that over 20 percent of the national population will be age 65 or over by 2030. Considering other factors, it is safe to say that the Vermont percentage will be higher than 20 percent. This aging population poses a serious challenge for Vermont. Access to transportation is essential to individuals as they age, as it allows them to stay independent and allows them access to goods and services. It also allows them to keep strong social contact which is important for quality of life. As the population continues to age, a higher number of people stop driving. This can increase isolation unless mobility assistance is provided to these seniors. Providing this mobility is challenging in Vermont due to its lower population density and the resulting high cost of addressing this need. A more detailed discussion of demographic changes is available in Working Paper - 4.

Table-15 Demographic Comparisons: Vermont and the U.S.

	Vermont	USA
Population, 2005 estimate	623,050	296,410,404
Population, percent change, 2000 to 2005	2.3%	5.3%
Population, percent change, 1990 to 2000	8.2%	13.1%
Persons under 18 years old, percent, 2004	21.7%	25.0%
Persons 65 years old and over, percent, 2004	13.0%	12.4%
White persons, not Hispanic, percent, 2004	96.0%	67.4%
Foreign born persons, percent, 2000	3.8%	11.1%
Persons per square mile, 2000	65.8	79.6

Source: U.S. Census Bureau

FINANCING OPTIONS

TRADITIONAL TOOLS

State governments have generally funded their transportation needs through revenues from motor fuel taxes, vehicle registration taxes, license and other fees. However, the costs of infrastructure construction and maintenance have increased compared disproportionately to revenues due to inflation. The traditional sources of revenues to fund transportation have not been sufficient to meet increased costs, forcing governments to resort to innovative financing mechanisms to generate the required revenues.

Motor Fuel Tax

This is the most commonly used tax to support transportation projects. It is a tax on motor fuel, charged per gallon of usage. The revenue from this tax is usually dedicated to transportation. Historically, governments have been relying on this tax to support transportation projects, but in recent years, revenues from this source alone have not been sufficient to meet the costs of projects. Federal and state fuel tax revenues have been rising slower than vehicle miles of travel (VMT) and transportation costs, and fuel taxes have not been raised to match inflation and increases in fuel efficiency, resulting in declining revenue per vehicle mile. All states use revenues from motor fuel tax to support transportation.

The purchasing power of the gas tax, both federal and state, when equated against the Consumer Price Index (CPI) has been steadily decreasing over the years. Figure-6 and 7 show the federal and state gas tax purchasing power decline respectively, with '82 as the base year. As shown in both graphs, increases in the gas tax purchasing power have been noticed whenever the gas tax rates were increased.

Figure-6: Federal Gas Tax Purchasing Power

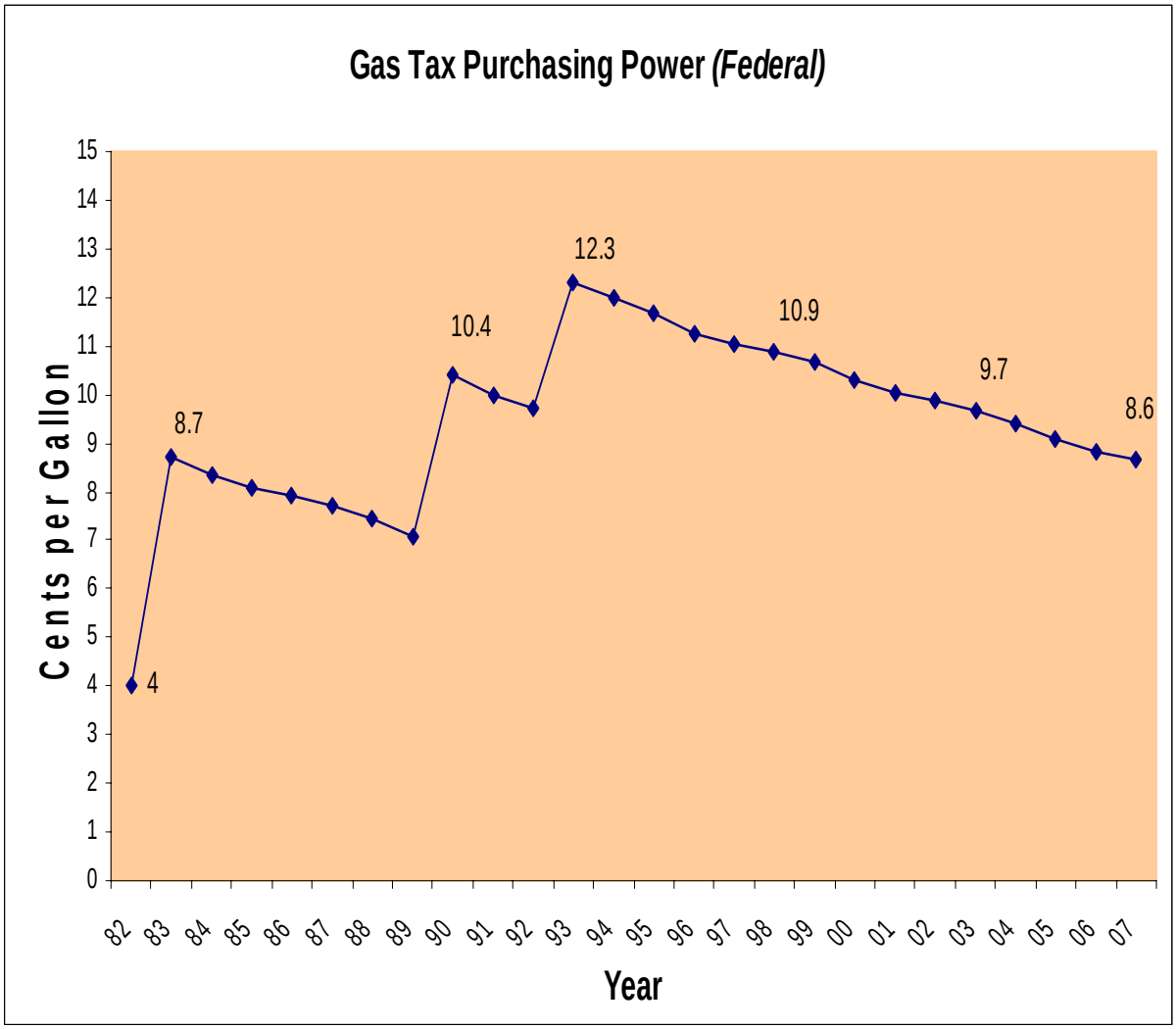
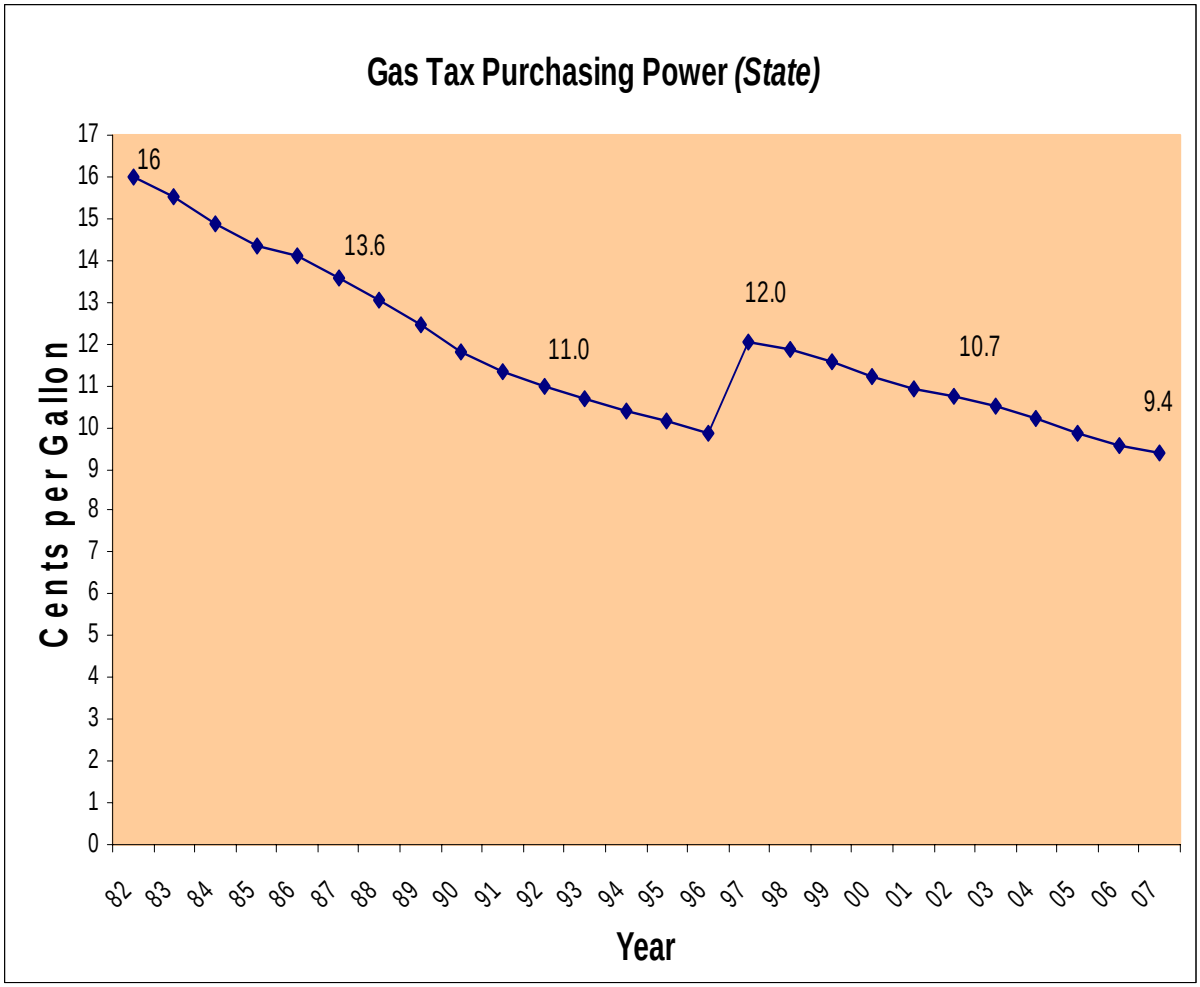


Figure-7: State Gas Tax Purchasing Power

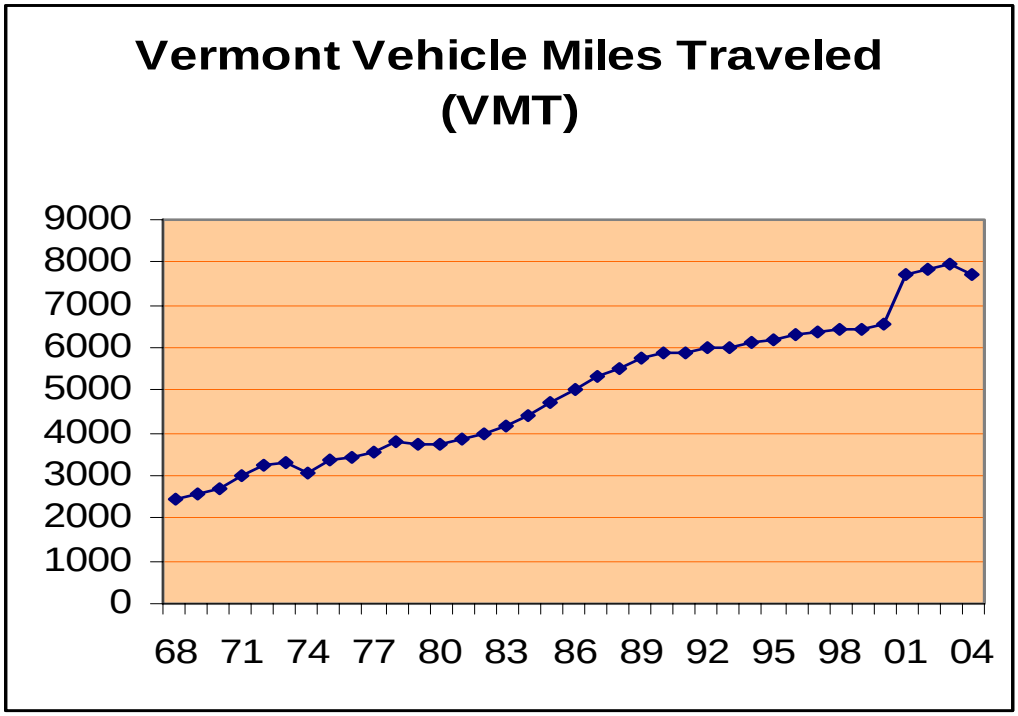


Most of Vermont's travel takes place on roads where vehicle miles traveled (VMT) has increased significantly over the years. Nationally, VMT has been increasing twice that of population increase and Vermont follows this same trend. Since the fuel tax has not been adjusted for inflation, additional fuel

consumption due to higher VMT does not result in a comparable growth in revenues for the state. As a result, the fuel tax is not sufficient to meet the increased transportation costs incurred by the state. Figure-8 shows Vermont's annual VMT increase over the years.

Figure-8

Annual VMT in Millions of Miles

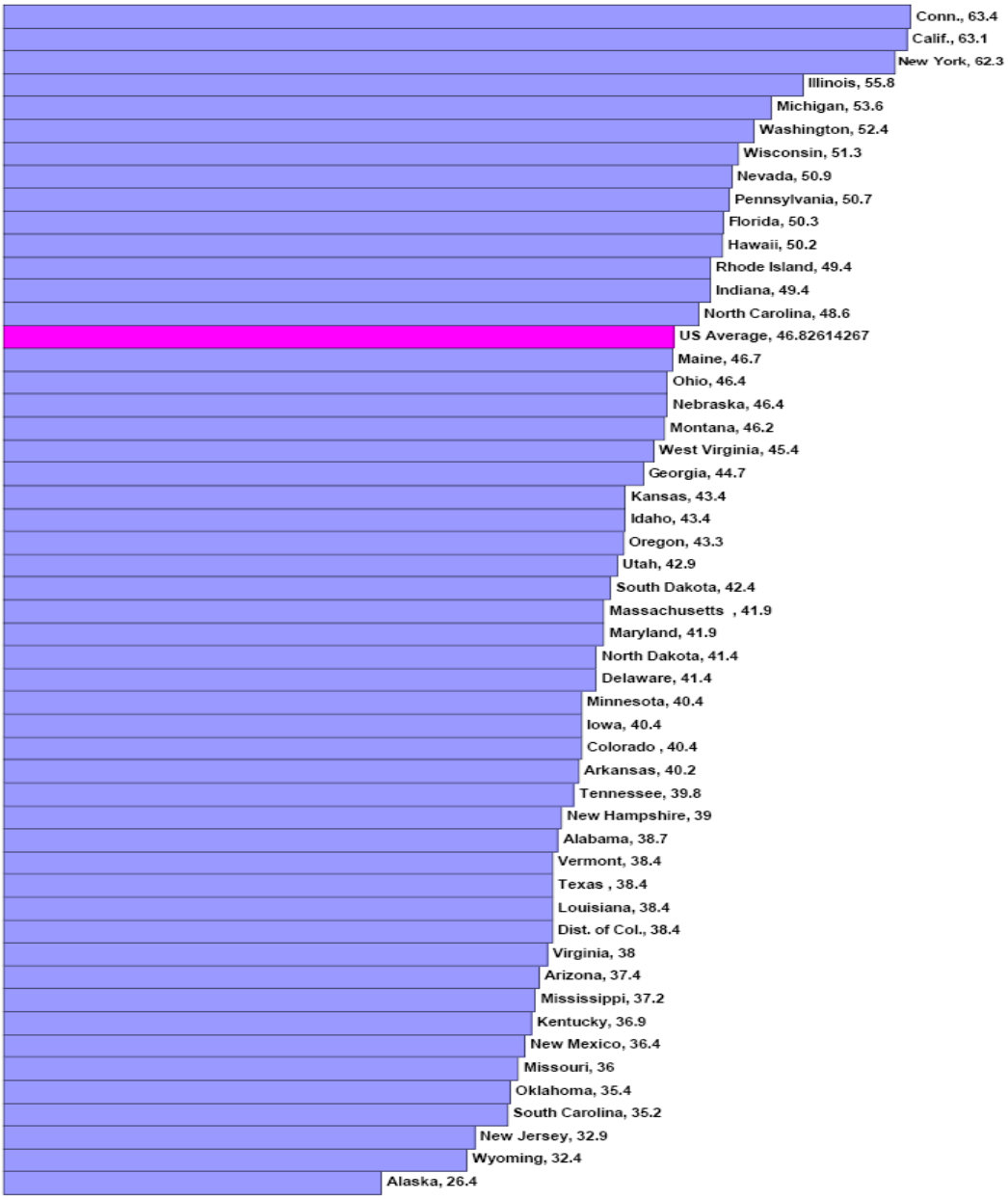


Source: http://www.aot.state.vt.us/planning/documents/highresearch/publications/avmthist.pdf

The motor fuel tax is a potential source for generating additional revenues for the state. The current tax of 19 cents (excluding the 1cent dedicated to Petroleum Cleanup) per gallon is expected to generate $67 million in 2007. At current consumption levels, a penny increase in the motor fuel tax can generate an additional $3.6 million annually for Vermont.

Figure-9 compares the combined federal and state gas tax rates of all fifty states in the nation. The gas rates shown include the 18.4 cents federal tax. While the national average is 46.8 cents per gallon, Vermont's rate is 38.4 cents per gallon, which places it 37th among all states.

Figure-9: Federal and State Gasoline Taxes as of July 2006 (cents per gallon)



Source: http://www.api.org/statistics/fueltaxes/upload/Motor_Gasoline_Taxes_1918_2006.pdf

Motor Vehicle Tax

Some governments use motor vehicle or registration taxes to fund transportation. This tax is charged in such ways as registration fees, insurance fees, annual taxes, license fees, sales or use fees, age-based fees or rental vehicle taxes.

Vermont's current motor vehicle purchase and use tax of 6 percent is expected to generate $86.3 million in 2007, and an increase of 1 percent would generate an additional $14.4 million.

INNOVATIVE TOOLS

Some of the innovative financing mechanisms that are in use include: indexing of motor fuel taxes; local option sales taxes; property taxes; impact fees; highway and general fund bonding; metro area sales taxes and local option sales tax, motor vehicle violation surcharges, transportation utility fees, metro payroll taxes, and state lotteries. Transportation financing innovations are also occurring in the development of toll facilities, high occupancy toll lanes and optional express lanes, sometimes through public-private partnerships. A vehicle miles of travel (VMT) tax is widely being considered as a replacement or supplement to the motor fuel tax. And while it is being tested in Oregon and Washington State, it has not yet been adopted by any jurisdictions in the U.S. Among states using innovative financing, some are using a single type of tax or a combination of taxes to fund transportation while other states earmark taxes exclusively to fund transportation projects. Transportation funding trends, on a national level, have shown a shift towards innovative financing initiatives to solve local transportation problems.

Sales Tax Rate

This form of tax has been a more recent phenomenon and is being increasingly adopted by governments. Legislative action is necessary to make local option taxes available as a funding source. In many instances sales tax has been favorably accepted instead of property taxes. Some local governments levy sales taxes that are used to fund specific transportation projects and are called Special Purpose Local Option Sales Tax (SPLOST). Localities with a large retail base or with high travel and tourism flow benefit from this form of tax, as non-residents also share the tax burden. Local residents prefer this form of tax to property or other forms of taxes as it is spread across the population and is less of a burden since it is

paid in small increments. Generally, local option sales taxes are passed by the local government commission and require voter approval before implementation. Some of the states that have implemented this tax are Arizona, Colorado, Florida, Georgia, and South Carolina.

Local Option Sales Tax (LOST) is also permitted in Vermont under certain situations. Some communities such as Burlington and Williston currently raise revenues with LOST, although the funds are not used for transportation. The sales and use tax is also a potential revenue generator. The current general sales and use tax of 6 percent in Vermont is expected to generate $341 million in 2007. An increase of 1 percent of the sales tax can generate an addition $56.9 million.

Property Tax

State governments use property taxes to fund transportation projects, especially transit. This form of tax however, funds only a portion of transportation costs, and residents generally do not favor increases in property taxes to fund transportation. Florida and Illinois have used revenues from property taxes to fund transportation. The property tax burden in Vermont is significant. Most local and state officials today are looking for ways to reduce, not add to, property taxes. Therefore, it is an unlikely source of transportation revenues.

Impact Fee

This has been a more recent development and some state governments, such as Florida and Illinois, levy impact fees in new development areas. Since these developments increase the demand for public services, governments levy a development impact fee on developers of the area. Developers also pay for transportation improvements related to a specific development project. Revenue from impact fees is generally used to fund roads serving these new development areas, but in some cases have been used to fund larger projects. A key step to increased emphasis on Impact Fee is local and regional planning to determine impacts and proportionate shares. It is an important issue since many communities in Vermont do not have the planning capability.

Highway Bonds

This financing option allows the department of transportation to transfer money from the general fund to the highway fund, or authorize spending from the highway fund, up to the amount of the anticipated receipts from the sale of bonds. When bond proceeds are received they are required to be returned to the general fund or replaced in the highway fund.

General Fund Bonds

Some states use general obligation bonds as an innovative financing initiative to fund transportation projects.

Metro Sales Tax

This innovative financing option is a sales tax that is levied in metro areas to fund specific, local transportation projects.

Sales Tax on Gasoline Sale

Gasoline is currently exempt from sales tax. Imposing sales tax on gasoline has the potential of generating significant revenue.

Vehicle Trade-in Exemption

Elimination of exemption of trade-in value from sales tax is another source of income.

Motor Vehicle Violation Surcharge

This is an innovative financing mechanism wherein a surcharge is levied on various traffic offenses, such as drunk driving and speeding. Funds collected from this source can be used as an additional revenue source to support transportation.

Transportation Utility Fee

This is a fee similar to a water or sewer fee that is collected on a monthly basis from residential and businesses within a city's corporate limits. Funds from this source have traditionally been used for transportation maintenance and operations.

Metro Payroll Tax

Some states use payroll tax to support transportation, mainly transit. This form of tax is charged directly on the employer. Usually salaries, commissions, fees, etc. paid to employees within the tax jurisdiction are taxed.

State Lottery

State lottery funds have been used to support transportation projects or to provide additional revenues to state government transportation funds.

Vehicle Miles of Travel (VMT) Tax

This innovative financing option is a mileage-based fee. Under this system a per-mile charge is collected for every mile driven within specified areas. A GPS unit in the vehicle measures the miles traveled and a charge is levied based on each mile of travel. Although this form of tax has been gaining interest with transportation authorities as a possible future replacement or supplement for the motor fuel tax, the system technology and architecture is still under development. However, Oregon is undertaking a pilot program that allows volunteer drivers to pay a flat fee for in-state miles traveled instead of the gas tax. Washington State has also recently tested a similar program. In 2005, Germany successfully implemented a nationwide mileage-based tax on foreign and domestic trucks using the federal motorway. The tax charged is based on number of axles and vehicle emission levels.

A New Approach to Assessing Road User Charges

Minnesota initiated a pooled fund study which was funded by FHWA and 15 states from all regions of the country. This study resulted in a number of reports including "A New Approach to Assessing Road User Chargers" in 2002. One of the driving forces for the study was the realization that the present fuel tax system provides a weak relationship to the relative costs of specific trips: some vehicle operators pay charges that are higher than the costs they impose on the system, while others pay much less than their cost. This leads to inefficient use of the transportation infrastructure. Sponsors were also concerned with the long term viability of the fuel tax system. The study resulted in a proposal calling for a road user charge system that could be implemented nationally but is also flexible enough to allow each state or community to develop its own fee structure.

SAFETEA-LU (Section 1919 and 1934) provided 16.5 million dollars for the field trial of the technical proposal of the New Approach to Assessing Road User Charges. The following are the main elements:

1. Each vehicle will have an onboard computer with a data file containing boundaries of taxing authorities (federal, state and local) and tax rate. This computer will coordinate this information with a GPS receiver and the vehicle odometer.
2. In its simplest implementation form, there would be a flat fee schedule for miles traveled in each jurisdiction.
3. The vehicle will be able to communicate periodically with a collection center through wireless connection so that fees can be calculated.

It is expected that this system will be able to support a more complex system in the future. Such a system could, for example, charge fees based on the time-of-day travel, type of vehicle and type of road. The field trial is expected to last three years.

An important consideration for this project is that for some time there will be a transition period during which there will be two parallel fee collection systems. This is necessary because for some period not all vehicles will be equipped with technology to implement a new road user charging system.

Oregon Road User Fee Task Force

In 2001, the Oregon Legislature created a Road User Fee Task Force with the charge to design a revenue collection strategy that can effectively replace the fuel tax in order to provide a long term, stable source of funding for maintenance and improvement of Oregon's road system. The need to search for a fuel tax replacement stems from two causes. First, there is a growing sense that fuel taxes have little to do with road use, and is therefore, "just another tax." Second, the fuel economy of new vehicles is soon expected to dramatically improve. This will cause fuel tax revenue, along with road program funding, to plummet. The Task force was charged to find a solution for these concerns before the problem becomes an emergency.

After examining a number of ideas for replacing the fuel taxes, the Task Force and the Oregon Department of Transportation (ODOT) decided to pilot-test one potential concept for implementing a distance-based fee, which includes a distance-based congestion pricing component. The Task Force

stated that the only broad-based revenue source which could ultimately replace the fuel tax is a mileage fee. In the opinion of the Task Force, the other revenue sources would address specific problems related to road revenue and are designed for certain geographical areas, certain road projects, or certain road users.

One of the requirements of the pilot-test was to safeguard the privacy of the vehicle user. They proposed that only the minimum summary data required to compute the charges would be transmitted outside the vehicle; this information would be insufficient to allow reconstruction of the routes and times of travel of the vehicle. The pilot test is scheduled to run for about one year ending in 2007.

Tolling

Highway tolling has been used as an innovative financing option by some states to fund transportation projects. Revenues generated through tolling have also been used for maintenance and repair of the toll highway system.

Congestion Pricing

Congestion pricing is used either within city limits or on highways to prevent traffic build-up during peak hours. Commuters traveling in designated areas or on specified highways during peak travel hours, pay a variable fee for using the roads. To manage congestion, the highest prices are set during the peak hours. The variable fee reduces congestion by encouraging some travel to occur outside of the peak periods or to use other modes. Washington and New Jersey are among several states that are studying the possibility of implementing this form of user fees

High Occupancy Toll Lanes

High occupancy vehicle (HOV) lanes are specially marked lanes for use by motorists who carry multiple – generally two or more - passengers in their vehicles. Transportation authorities around the country have considered ways to better use excess HOV capacity during peak periods when adjacent general purpose lanes were congested. A tool that has been successfully used in several locations around the country is to convert HOV lanes to High Occupancy Toll (HOT) lanes which allow solo drivers the opportunity to buy into those lanes for a fee. Tolls are varied based on the time of day, with the highest

charges occurring in the peak periods. The variable tolling feature ensures that the lane is managed for free flow. California, Texas, Florida, Minnesota and Colorado have successfully implemented this optional tolling system.

Privatization and Public-Private Partnerships

In recent years, this innovative method has been gaining support from some governments as a result of increased transportation funding needs and the increasing recognition that the capital value of these assets cannot be captured without this shift. Responsibility for highway operations is transferred to private enterprises under long-term contracts.

One of the first private toll roads in the United States in more than half a century was SR -91 which was built in early 90s in California. This road was eventually acquired by the public sector in 2003. However, recently there has been a rash of proposals and actions to privatize public roads. It started dramatically when the City of Chicago in 2005 leased the Chicago Skyway toll road for 99 years and received $1.8 billion dollars from private vendors. In the spring of 2006, Indiana followed suit and leased its 157-mile toll road for 75 years. Indiana received $3.8 billion dollars. The success of these transactions has many other states looking at the possibilities of leasing their toll roads to private enterprises.

Privatization is not limited to existing toll roads. California SR-15, which is already open for traffic, and the Texas SH 130 proposal are examples of private "Greenfield" roads. Proponents of these initiatives point out that private concessionaire are able to fund roads at a much higher level than public sector toll authorities. In the case of SH 130, TxDOT reports that through a conventional public toll road model they could raise around $600 million dollars for 40 miles of SH 130. A private enterprise however offered to come up with not only 1.3 billion dollars of the cost of the road, but also offered to pay TxDOT about $245 million dollars over the 50-year term of the concession. Considering Vermont roads have a lower volume and rate of growth, the potential for generating significant private investment is low.

Grant Anticipation Revenue Vehicles (GARVEE)

A GARVEE is a designation applied to a debt-financing instrument that has a pledge of future Federal-aid for debt service and is authorized for Federal reimbursement of debt service and related financing

costs. This financing mechanism generates up-front capital for major highway projects that the state may be unable to construct in the near term using traditional pay-as-you-go funding approaches.

Transit agencies are using similar mechanisms to borrow against future Federal-aid funding. While transit financings are quite similar to the GARVEE type instruments, the transit debt mechanisms are known as Grant Anticipation Notes (GANs).

Transportation Infrastructure Finance and Innovation Act (TIFIA)

The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA), enacted as part of the Transportation Equity Act for the 21st Century (TEA-21), established a new Federal program under which the U.S. Department of Transportation (USDOT) provides credit assistance to major surface transportation projects of national or regional significance.

SAFETEA-LU continues the TIFIA credit program established under TEA-21. However, it made it more user-friendly by lowering the threshold so that projects with costs as low as $50 million dollars are eligible. Intelligent Transportation project thresholds were reduced to $15 million.

State Infrastructure Bank (SIB)

SIB is a revolving loan and credit enhancement program consisting of a federal-funded SIB account and a state-funded SIB account. The federal-funded SIB is capitalized with federal money matched with state money as authorized under Section 1511 of TEA-21, while the state-funded SIB is capitalized with state money only. SIB can leverage funds through loans and credit enhancement assistance to improve project feasibility.

GARVEE, TIFIA and SIB financing do not generate new revenue for the states. These are debt-financing tools which allow earlier completion of larger expensive projects which can take many years to build under normal pay-as-you-go approach of financing. Supporters of these tools point out that by completing projects sooner, instead of waiting to accumulate funds, the public starts benefiting more quickly and, better yet, by building projects quicker, delays and disruption of traffic for longer periods of time are avoided.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Vermont, like nearly all other states, is facing the challenge of revenue not keeping up with the demand to maintain and improve transportation infrastructure. Motorists continue to demand better, safer, and less congested roads. Vermont is also confronted with the need to maintain and improve transportation infrastructure in other transportation modes as well. Current transportation user fees and taxing systems, however, are not generating enough revenues to meet such demands and taxpayers are increasingly reluctant to take on additional taxes. Cumulative transportation revenue shortfalls for Vermont could be as high as $8 billion over the next 20 years (depending on the rate of inflation).

Raising the per-gallon charge on the motor fuel tax, which has long been the "workhorse" for transportation, is increasingly unpopular all over the country. The problem is further exacerbated by the fact that neither the state nor federal motor fuel taxes are indexed for inflation, which means that the "buying power" of this tax is reduced each year by the amount that inflation increases. Although increasing VMT (which has meant increasing consumption of motor fuels and hence more tax collection) has tended to make-up for that loss, it has not, and will not in the future meet revenue needs for the state. This is largely the result of improvement in vehicle efficiencies, which will increase even more in the future, as will the introduction of alternative fuel and propulsion systems.

Motor vehicle registrations fees and sales tax are also important components of Vermont's transportation revenue. The potential exists to increase these taxes as well, but nationally this has also proven difficult in recent years.

Although the current taxing system has served the state and nation well in the past, many experts believe that it will soon require a major overhaul. This overhaul is going to take time and the transition will be challenging. SAFETEA-LU recognized this trend, and established and funded a number of commissions and tests to explore, develop, and recommend new taxing mechanisms. The National Surface Transportation Policy and Revenue Commission (section 1909) was created to study and report on current conditions and future needs of the surface transportation system, and potential funding to meet such needs; the National Surface Transportation Infrastructure Financing Commission (Section 1142) was created to study the Highway Trust Fund revenues and the impacts of the these revenues on future

highway and transit needs. Most experts believe new system is likely to resemble some form of a mileage-based tax – in all probability weighted by vehicle type and the relative cost imposed on the system - described in this report. A mileage-based tax has the advantage of being able to charge users in a manner more closely related to road usage and the costs they impose on the system. By some estimates, it will take one or two or more reauthorizations before a new taxing system will be in place. In other words, it will take at least another three to eight years before a credible new system could come to fruition. It will likely be longer.

There are a wide variety of taxes, tolls, fees and partnerships described in this analysis that could assist the state closing the transportation funding gap. Many of these tools are best suited for specialized application rather than general transportation revenue. Analysis of such transportation financing tools as bonding, GARVEE, TIFIA and SIBs, show that, while potentially important in their application, do not generate new revenues for the state.

RECOMMENDATIONS

Vermont today must deal with existing short-mid-and long-term funding shortfalls. The following are options and recommendations for the short-term, three to eight years, and for the long-term, beyond eight years. These time frames relate to the federal re-authorization periods.

Short Term Options (3 to 8 years)

- Increasing the Motor Fuel Tax: An increase in the motor fuel tax could be used as a short-term fix for revenue shortfalls. However, increasing the gas tax has been difficult in recent years for reasons explained earlier.

- Indexing the Motor Fuel Tax: The motor fuel tax could be indexed to some cost and automatically adjusted on a periodic basis. Most common indexes are Cost of living or Cost of Construction. However, indexing the motor fuel tax has been even more difficult than increasing the motor fuel tax.

- Vehicle Tax Increase: A vehicle tax increase can take the form of sales tax, registration and wheelage tax.

- Impact Fees: Traditionally, impact fees have been used by local governments but they can also be used by the state. This fee has the tendency to suppress demand for highway improvements as it requires local beneficiaries to contribute to the cost of improvements.

- Local Option Sales Tax: Normally this tax is used by local jurisdictions but it can also be used to raise revenue for regional improvements.

- Sales Tax Increase: This tax is not normally used for transportation funding but under certain circumstance may be an appropriate funding tool.

Long Term Options (9-20 years)

- Mileage-Based Tax Options: Every indication is that the nation is poised to move toward a mileage-based tax in the long term. With that in mind, Vermont needs to continue to monitor what is going on around the country, and explore the possibility of joining other states in the study and test of various mileage-based options. Vermont should also consider education and outreach to the public so that there is a better understanding of the taxing options.

- Rural State Funding Strategies: Nationally, there is much discussion, research, demonstrations, and special programs addressing transportation, but nearly all of these opportunities are happening in the context of urban areas and congestion. Smaller and rural areas are being generally ignored. Rural states and areas have their own serious financing challenges. These challenges are especially serious for those areas that have a great numbers of bridges and culverts, as these require expensive repairs, maintenance and replacements. It is imperative that these states devise strategies so that their concerns are fully voiced and heard.

- National Transportation Funding: SAFETEA-LU created two commissions: the National Surface Transportation Policy and Revenue Commission (section 1909) was created to study and report on current conditions and future needs of the surface transportation system, and potential funding to meet such needs; the National Surface Transportation Infrastructure Financing Commission (Section 1142) was created to study the Highway Trust Fund revenues and the impacts of the these revenues on future highway and transit needs. It is important that Vermont closely follow the proceedings of these commissions and try to make sure that these commissions fully take into account the interest of smaller and more rural states.

REFERENCES

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[vii] Comparison of Federal HTF Account Receipts Attributable to The States and Federal-Aid Apportionments and Allocations from the Highway Account – FY2004 (Table FE-221)

[viii] http://www.census.gov/govs/www/statetax.html

[ix] State Motor-fuel Taxes and Related Receipts – 2005 (Table MF-1)
State Motor-Vehicle and Motor-Carrier Tax Receipts – 2005 (Table MV-2)

[x] Highway Use of Motor Fuel – 2004 (Table MF-27)

APPENDIX

List of Identified/Planned projects

a) ***State***

VTrans priority is on maintenance and effective operation of the highway system since most travel in Vermont takes place on roads. The three emphasis areas are: paving, bridge, and roadway. In 2007, the proposed funding for the three areas is: $55.3 million for paving; $70.7 million for bridge; and $73.3 million for roadway.

For further information please refer to:

http://www.aot.state.vt.us/CapProg/documents/02-AgencySummary.pdf

http://www.aot.state.vt.us/CapProg/documents/FY07%20Capital%20Program.pdf

b) ***Local*** *(CCMPO and Regional Planning Commissions)*

1. Chittenden County Metropolitan Planning Organization: www.ccmpo.org/MTP/

2. The Northwest Regional Planning Commission: www.nrpcvt.com/nrpcvt/mission.html

3. Two Rivers-Ottauquechee Regional Commission: www.trorc.org/trans_proj.html

4. Chittenden County Regional Planning Commission: www.ccrpcvt.org/index.asp?Type=B_PRGSRV&SEC={7BC065B1-CB8A-4C16-81CE-EF7DC68387AE}&DE={70E87908-35E8-4EFD-A0C6-ECCEAF9D240B}

5. Lamoille County Planning Commission: www.lcpcvt.org/index.asp?Type=B_BASIC&SEC={344D4CC9-7315-49B2-9714-D574C1A85A2D}

5. Windham Regional Commission: www.rpc.windham.vt.us/trans/index.htm

6. Northeastern Vermont Development Association: www.nvda.net/transportation/index.html

7. Central Vermont Regional Planning Commission: www.centralvtplanning.com/Trans.html

8. So. Windsor County Regional Planning Commission: www.swcrpc.org/subpage.php?file=content/transportation.htm

9. Addison County Regional Planning Commission: www.acrpc.org/pages/activities/transportation/transportation.htm

10. Rutland Regional Planning Commission: www.rutlandrpc.org/RRTCWebsite/missionprofile.htm

11. Bennington County Planning Commission: www.rpc.bennington.vt.us/